OFFICE OF THE
COUNTY
COUNSEL

County of Los Angeles

Dawyn R. Harrison
County Counsel

June 25, 2024

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, California 90012

Re: Multi-Family Residential Parking Ordinance
(04/16/24 Board Agenda; Item No. 4)

2045 Climate Action Plan
(04/16/24 Board Agenda; Item No. 5)

Dear Supervisors:

Your Board previously conducted a duly-noticed public hearing regarding the Multi-Family Residential Parking Ordinance ("Ordinance") amending Title 22 – Planning and Zoning of the Los Angeles County Code to revise parking standards for multi-family residential development to remove barriers to construction of affordable multi-family housing in the unincorporated areas of the County and improve access to a multi-modal transportation network for County residents. At the conclusion of the public hearing, your Board indicated an intent to approve the Ordinance.

Further, your Board previously conducted a duly-noticed public hearing regarding the 2045 Climate Action Plan ("2045 CAP") to certify the Final Program Environmental Impact Report has been completed in compliance with the California Environmental Quality Act and approve the 2045 CAP and associated amendments to the General Plan Air Quality Element. The 2045 CAP is the County's plan for meeting greenhouse gas emissions reduction targets in the unincorporated areas of the County by the years 2030, 2035, and 2045. At the conclusion of the public hearing, your Board indicated an intent to approve the 2045 CAP.

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Enclosed is the resolution, which includes General Plan amendments required for the Ordinance and 2045 CAP for your Board's consideration.

Very truly yours,

DAWYN R. HARRISON
County Counsel

By
KATHY PARK
Deputy County Counsel

APPROVED AND RELEASED:

THOMAS J. FAUGHNAN
Senior Assistant County Counsel

KP:ll

Enclosures

c: Fesia A. Davenport
Chief Executive Officer

Edward Yen, Executive Officer
Board of Supervisors

Amy J. Bodek, Director
Department of Regional Planning

A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF LOS ANGELES ADOPTING THE MULTI-FAMILY RESIDENTIAL PARKING ORDINANCE; AND ADOPTING THE CLIMATE ACTION PLAN

WHEREAS, Article 6 of Chapter 3 of Division 1 of Title 7 of the California Government Code ("Government Code") (commencing with section 65350) provides for the adoption and amendment of a jurisdiction general plan;

WHEREAS, on October 6, 2015, the County of Los Angeles ("County") Board of Supervisors ("Board") adopted a Countywide General Plan ("General Plan"), pursuant to Government Code section 65300;

WHEREAS, Article 1 of Chapter 4 of Division 1 of Title 7 of the Government Code (commencing with section 65800) authorizes the County to adopt amendments to the Los Angeles County Code ("County Code"), Title 22 – Planning and Zoning ("Title 22");

WHEREAS, Government Code section 65358 allows for the amendment of all or part of an adopted general plan and specifies that each amendment may include more than one change to the General Plan;

WHEREAS, the Board held a duly-noticed public hearing on April 16, 2024, to consider Project No. R2022-003630-(All Districts), consisting of Advance Planning No. RPPL2023004576-(All Districts), and Environmental Plan Case No. RPPL2023005132-(All Districts), collectively, the Multi-Family Residential Parking Ordinance ("Ordinance");

WHEREAS, the Board held a duly-noticed public hearing on April 16, 2024, to consider Project No. 2019-002015-(All Districts), consisting of Advance Planning No. RPPL2019003630-(All Districts) and final Program Environmental Impact Report ("PEIR") associated with Environmental Assessment No. RPPL2019003635-(All Districts), collectively, 2045 Climate Action Plan ("2045 CAP");

WHEREAS, a General Plan amendment is necessary to implement the Ordinance and 2045 CAP;

WHEREAS, the Board finds as follows:

<u>MULTI-FAMILY RESIDENTIAL PARKING ORDINANCE</u>

1. The Ordinance is a Countywide amendment to Title 22 to revise parking standards for multi-family residential development.

2. Parking has been regulated through the County's Title 22 since the 1940s, and a comprehensive parking ordinance update was adopted in 1983. Except for emergent land uses and affordable housing programs, including the Density Bonus Ordinance, parking minimums for multi-family residential development have not been updated since 1983.

3. An increasing number of local jurisdictions across the United States recently adopted parking reforms to reduce or eliminate parking minimums for certain land uses or for certain geographic areas, such as central business districts. There are varying reasons for parking reforms, which may include, but are not limited to, increasing housing supply and affordability, making more efficient uses of land, addressing air pollution and climate change, and promoting walkability or transit use.

4. The County has a severe housing affordability crisis, as the number of affordable housing produced over the past several decades has not kept pace with demand.

5. The County adopted the 2021-2029 Housing Element ("Housing Element") on May 17, 2022, which included multiple strategies to address the current housing crisis. The Housing Element was certified by the California Department of Housing and Community Development on May 27, 2022.

6. The Multifamily Housing Parking Study ("Parking Study"), listed as Program 11 in the Housing Element, was initiated in 2021 to identify strategies that facilitate production of affordable housing in the unincorporated areas of the County.

7. The Ordinance is informed by the Parking Study, including existing conditions and assessments on off-street parking utilization in multi-family housing, access to transit, the effect of housing costs impacted by parking, community and stakeholder surveys and interviews, and parking reforms enacted by the State and other local jurisdictions. The Parking Study identifies areas of opportunity for reforms of existing parking standards for multi-family housing.

8. The Ordinance is also informed by feedback received during several public outreach events with approximately 150 community stakeholders participating and conducted in two phases during February and October 2022.

9. The Ordinance incorporates Assembly Bill ("AB") 2097 (Friedman), which became effective on January 1, 2023, to eliminate parking for residential and other development located within one-half mile of a transit stop or high-quality transit corridor and makes other minor changes for consistency with State law.

10. The Ordinance reduces parking minimums for multi-family housing of 10 or fewer units outside transit areas and for guests, establishes an incentive to permit a reduction in parking for other multi-family housing by up to 50 percent with the provision of Transportation Demand Management ("TDM") measures on-site, modifies standards for parking stalls and driveways, modifies requirements for securing shared and off-site parking, and eliminates the requirement for a discretionary permit for alternative parking arrangements for multi-family housing.

11. The Ordinance is consistent with the surrounding areas in that parking reductions are mitigated with the provision of TDM measures to increase walkability, bicycle use, car sharing, use of transit, and other community benefits.

12. The Ordinance is in the interest of the public health, safety, and general welfare and is consistent with other applicable provisions of Title 22 by removing financial barriers to produce affordable housing, providing measures to reduce reliance on single-occupancy use of cars for daily trips, encourage use of other modes of transportation, and encourage a mix of residential and commercial land uses in close proximity.

13. The Ordinance is consistent with and supportive of the goals and policies of the General Plan, in that the Ordinance will encourage vibrant, livable, and healthy communities with a mix of land use, services, and amenities, with access to active, efficient multi-modal transportation options; and will support land use planning and transportation management that facilitates the use of transit.

14. In accordance with Government Code section 65352.3, California Native American Tribes, traditionally and culturally affiliated with the project area, which have requested project notification, were notified and invited to request consultation regarding the Ordinance and the California Environmental Quality Act (Public Resources Code section 21000 et seq.) ("CEQA") documentation.

15. Written correspondence were received from Fernandeño Tataviam Band of Mission Indians, Gabrielino Tongva Indians of California, and Yuhaaviatam of San Manuel Nation (collectively, "Tribes"). The Tribes generally indicated that, due to the nature of the Project, further consultation was not necessary at this time; however, they requested to be notified of future projects that may involve ground-disturbing activities in accordance with AB 52.

16. An Initial Study was prepared pursuant to CEQA reporting requirements to analyze the impacts of the Ordinance in its entirety. The Initial Study determined there were no significant impacts to the environment, pursuant to CEQA Guidelines. Revisions made to the Ordinance were not substantial in nature and would result in any new, avoidable significant effect on the environment, so it did not require a new Initial Study or recirculation of the Initial Study. Therefore, a Negative Declaration ("ND") is the appropriate environmental documentation under CEQA.

17. A Notice of Intent to Adopt an ND was released for public review from December 2, 2022, to January 3, 2023, and no public comments were received.

18. Pursuant to Section 22.222.180 of the County Code, a public hearing notice was published in 14 local newspapers. The public hearing notice was sent by mail to interested persons who requested to be notified for all public hearings. The public hearing notice and materials were also posted on the Department of Regional Planning's ("Regional Planning") website.

19. At a duly-noticed public hearing held on March 1, 2023, the Regional Planning Commission ("Commission") reviewed a previous version of the Ordinance that proposed eliminating parking minimums for smaller multi-family developments,

eliminating parking for guests and reducing parking minimums by 25 percent for larger multi-family residential development and joint live-work units, with allowance for an additional 25 percent reduction with provision of TDM measures. The Commission expressed concerns over the proposed eliminations and reductions due to potentially negative impacts to the communities and voted not to recommend the Ordinance to the Board.

20. The Ordinance is different from the previous version in a few key areas. Notably, the elimination of parking is not proposed. Modest reductions are permitted with TDM measures. The Ordinance includes the following provisions:

    A. Updates for consistency with State law.

    B. Minor local policy changes:

        i. Remove separation of residential and commercial parking spaces in commercial zones, mixed use zones, and in mixed use developments;

        ii. Modify ownership requirements for parking spaces;

        iii. Remove covered parking requirement;

        iv. Streamline compact parking allowances; and

        v. Modify dimensions for parking spaces, parallel parking spaces, and driveways.

    C. Major local policy changes:

        i. Streamline allowance of required parking to be off site;

        ii. Modify parking requirement for apartments with 10 or fewer dwelling units to one parking space per dwelling unit;

        iii. Modify guest parking requirement for apartments with 11 or more dwelling units to one parking space per 10 dwelling units;

        iv. Establish a TDM program with a point system allowing reductions in parking for new multi-family housing and joint live-work development with a ministerial review;

        v. Streamline shared parking programs with a ministerial review; and

        vi. Modify Chapter 22.178 (Parking Permit) to remove residential parking from the permit requirement.

21. On November 29, 2023, and December 13, 2023, the Commission held duly-noticed public hearings to consider the Ordinance, took testimony, asked

questions, and moved to recommend the Ordinance to the Board with a vote of 3 to 2.

22. On April 16, 2024, the Board conducted a duly-noticed public hearing to consider the Ordinance. Amy Bodek, Director of Regional Planning, made a presentation and responded to questions posed by the Board. The Board took testimony from 13 members of the public and received public correspondence on the Ordinance.

23. After discussion, on motion of Supervisor Hilda Sollis, seconded by Supervisor Lindsey Horvath, the Board closed the public hearing and took the following actions:

    A. Certified that the ND for the Project was completed in compliance with CEQA and the State and CEQA Guidelines related thereto; certified that it independently reviewed and considered the ND, and the ND reflects the independent judgment and analysis of the Board as to the environmental consequences of the Project; determined on the basis of the whole record before the Board that there is no substantial evidence the Project will have a significant effect on the environment; adopted the ND, in accordance with CEQA, the State CEQA Guidelines, and the Environmental Document Reporting Procedures and Guidelines for the County;

    B. Indicated its intent to approve the Ordinance, Advance Planning Case No. RPPL2023004576-(All Districts), as recommended by the Commission; and

    C. Instructed County Counsel to prepare the necessary final documents to amend County Code, Title 22 – Planning and Zoning, for the Board's consideration.

2045 CLIMATE ACTION PLAN

1. The 2045 CAP was developed as a comprehensive update to replace the Unincorporated Los Angeles County Community Climate Action Plan 2020, an implementing component of the General Plan Air Quality Element.

2. The 2045 CAP requires an amendment to the General Plan Air Quality Element goals and policies to set the policy framework for future implementation of the 2045 CAP's strategies, measures, and actions.

3. General Plan implementation programs for the Air Quality Element are proposed to be amended to remove completed programs, retain ongoing programs, and eliminate redundancies.

4. The 2045 CAP is the County's plan for meeting greenhouse gas ("GHG") emissions reduction targets for unincorporated County by the years 2030, 2035, and 2045. Its purposes include implementing the GHG emissions reduction

policies of the Air Quality Element and ensuring the County contributes its fair share to statewide GHG emissions reductions.

5. The objectives of the 2045 CAP are as follows: identify detailed strategies, measures, and actions to achieve the climate action policies of the General Plan; identify GHG emissions reduction targets tailored to the unincorporated areas of the County that closely align with State and County climate goals; provide a road map for reducing GHG emissions to achieve the County's GHG emissions reduction targets; encourage sustainable housing production at all levels of affordability; and demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide CEQA streamlining process for development projects (serve as a "qualified 2045 CAP") via the 2045 CAP CEQA Streamlining Checklist.

6. The 2045 CAP includes the following: GHG emissions inventory for 2018; emissions forecasts for 2030, 2035, and 2045; GHG emissions targets for 2030, 2035, and 2045; suite of GHG emissions reduction strategies, measures, and actions to reduce GHG emissions from major sectors; technical modeling appendix to explain the 2045 CAP's GHG emissions reduction estimates; consideration of environmental justice and equity concerns; implementation and monitoring measures to ensure successful climate action; and a new voluntary CEQA streamlining checklist to allow future projects to streamline GHG emissions analyses, pursuant to CEQA.

7. The 2045 CAP would be implemented in the unincorporated areas of the County.

8. The Air Quality Element, as proposed to be amended, is consistent with all the other elements of the General Plan as required by State law, in that it does not require any significant changes to the other elements of the General Plan or recommend policies or programs that conflict with goals and policies of other General Plan elements. The Air Quality Element policies, as proposed to be amended, are consistent with other General Plan elements and policies, with particular focus on supporting GHG emissions reductions.

9. In accordance with California Public Resources Code section 21080.3.1 and Government Code section 65352.3, California Native American Tribes, traditionally and culturally affiliated with the project area, which have requested project notification were notified and invited to request consultation regarding the 2045 CAP.

10. A total of five written responses were received from the following tribes: Coastal Band of the Chumash Nation, Juaneño Band of Mission Indians, Morongo Band of Mission Indians, San Manuel Band of Mission Indians, and San Manuel Band of Mission Indians, Santa Ynez Chumash. The representative of the Coastal Band of the Chumash Nation requested consultation under Government Code section 65352.3 but did not respond to multiple attempts to schedule the

consultation meeting. The four other tribes responded that no consultation is requested for the 2045 CAP. After not receiving a response from the Coastal Band of the Chumash Nation to the County's third and final attempt to schedule the consultation meeting, the County concluded the consultation process with the Coastal Band of the Chumash Nation without a consultation meeting.

11. A Program Environmental Impact Report ("PEIR") for the 2045 CAP was prepared in compliance with CEQA and County CEQA Guidelines. The 2045 CAP evaluated in the PEIR includes the 2045 CAP, as well as associated updates to the Air Quality Element and General Plan implementation program for the Air Quality Element. The PEIR Notice of Preparation was available for public review from January 3, 2022, to February 1, 2022.

12. The 2045 CAP considered for approval reflects the further development and refinement that resulted from public review of the draft 2045 CAP analyzed in the draft PEIR and the revised draft 2045 CAP analyzed in the recirculated draft PEIR.

13. Based on comments received on the draft PEIR circulated between May 25, 2022, to July 18, 2022, and the adoption of AB 1279 during that period, the 2045 CAP was revised to include an additional emissions reduction target for 2045, consistent with AB 1279. A new Alternative 3 that includes the minimum targets needed to "align" with California's codified statewide targets for 2030 and 2045 was included in a recirculated draft PEIR, along with other content to address issues raised by public comments on the draft PEIR.

14. The recirculated draft PEIR was released for a 45-day public review period from March 30, 2023, to May 15, 2023. The recirculated draft PEIR concludes the 2045 CAP would result in less than significant impacts after applicable mitigation measures to certain impacts within the following environmental resource areas: Aesthetics, Agriculture and Forestry Resources, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Population and Housing, Transportation, Tribal Cultural Resources, Utilities and Service Systems, and Wildfire.

15. The CEQA Findings of Fact provide a complete summary of environmental resource areas that would have less than significant impact with mitigation measures and environmental resource areas with significant and unavoidable impacts.

16. Certain impacts to Aesthetics, Agriculture and Forestry Resources, Air Quality, Biological Resources, Noise, and Utilities and Service Systems were determined to be significant and unavoidable and would require adoption of a Statement of Overriding Considerations prior to 2045 CAP approval.

17. The County prepared the final PEIR as required by CEQA Guidelines section 15132, consisting of: the recirculated draft PEIR, including revisions; all appendices to the recirculated draft PEIR (Appendices A to G), including revisions; comments received on the recirculated draft PEIR; a list of persons, organizations, and public agencies commenting on the recirculated draft PEIR; County responses to significant environmental issues raised in the recirculated draft PEIR comments; and other information.

18. The final PEIR presents responses to public comments on significant environmental issues received on the recirculated draft PEIR during the March 30, 2023, to May 15, 2023, comment period. A total of 21 correspondence was received in response to the recirculated draft PEIR. None of the comments or revisions made to the recirculated draft PEIR resulted in "significant new information" as defined by CEQA Guidelines section 15088.5 being added to the PEIR. For example, none of the comments or revisions resulted in new significant impacts; resulted in a substantial increase in the severity of an environmental impact identified in the recirculated draft PEIR; or brought forth a feasible project alternative or mitigation measure considerably different from those set forth in the recirculated draft PEIR.

19. The County prepared a Mitigation Monitoring and Reporting Program ("MMRP") to monitor implementation of mitigation measures proposed in the final PEIR, as required by CEQA Guidelines section 15097.

20. As detailed in the Statement of Overriding Considerations, the 2045 CAP has economic, legal, social, technological, environmental, and other benefits that outweigh the significant and unavoidable environmental effects as described. The 2045 CAP will provide benefits to the County and the region as follows: improves regional air quality, increases community resiliency, promotes green jobs, lowers energy costs, fights drought, improves active transportation, improves CEQA streamlining, achieves statewide climate goals, encourages green investment, and promotes environmental and social justice.

21. Regional Planning conducted outreach for the development of the 2045 CAP and engaged various stakeholder groups, community members, and the youth. Regional Planning engaged in a robust and varied outreach strategy attending events and conducting meetings throughout the planning process. Regional Planning organized and/or attended approximately 71 events and workshops for the 2045 CAP.

22. Pursuant to Section 22.222.180 of the County Code, a public hearing notice was published in the following local and regional newspapers between October 5 to 13, 2023: Acton/Agua Dulce News, Antelope Valley News, Gardena Valley News, Glendale Independent, La Opinión, Sentinel, Malibu Times, Pasadena Star-News, San Gabriel Valley News, The Acorn, The Argonaut, The Daily Breeze, The Signal, and Whittier Daily.

23. The public hearing notice was sent by email to 612 interested parties which requested related information and registered for departmental contact lists. Materials were also posted on Regional Planning's website and promoted through social media.

24. On November 15, 2023, the Commission conducted a duly-noticed public hearing to consider the 2045 CAP. Nine individuals testified at the hearing (two in-person, seven virtually), and one person who signed up was unable to provide a testimony due to audio issues. Commissioners Hastings and O'Connor disclosed they received phone calls from labor and building industry groups prior to the hearing, and the statements made during the calls were consistent with the public comment letters submitted by the groups.

25. Representatives from the Las Virgenes Homeowners Federation, Endangered Habitats League, Santa Clarita Organization for Planning and the Environment, and an individual testified in support of the approval of the 2045 CAP. A representative of the Acton Town Council expressed concerns about Measure T5 and how it will impact a local intersection and requested an action be added to ban new gas stations. Representatives from the Building Industry Association, BizFed, Rebuild Socal Partnership, and an individual requested a one-year pause to the 2045 CAP and for the County to conduct an economic analysis of the 2045 CAP. Testimonies from these representatives also included concerns with the performance objective of 300 jobs per acre.

26. The Commission had questions on decarbonization and grid capacity. Regional Planning staff ("Staff") responded that, based on discussions with utility providers, energy providers are already planning for expansion of electrical grid infrastructure. Staff also responded that, with the decarbonization of the freight vehicles, the County already require decarbonization of vehicles used in industrial warehouses through conditions of approval for discretionary permits, and the State of California passed the Advanced Clean Fleets Regulation requiring the sale of zero emissions medium- and heavy-duty vehicles by 2036. Staff explained the 2045 CAP will demonstrate the County is planning for infrastructure upgrades and give the County an advantage when applying for competitive funding opportunities.

27. The Commission asked about the performance objective of 300 jobs per acre in the 2045 CAP. Staff clarified that the performance objective of achieving a job density of 300 jobs per acre by 2030 is an aspirational goal to be achieved by the County in suitable locations, such as transit-oriented districts where high density housing is planned to reduce commuter distances. Development projects are not required to comply with this performance goal when utilizing the 2045 CAP CEQA Streamlining Checklist. The goal of the performance objective is to ensure housing and jobs are located close together and the County's community and area plan planning processes will consider the right balance to help to achieve this performance objective. Staff also responded that an economic impact analysis will not be conducted since the 2045 CAP is consistent with the

General Plan Economic Development Element. Staff further reiterated the 2045 CAP is consistent with the County's Housing Element and fulfills Program Number 3 in the Housing Element, which explicitly directs the update of the 2045 CAP.

28. On April 16, 2024, the Board held a public hearing regarding the 2045 CAP. The Director of Regional Planning, as well as the Deputy Director, Advance Planning Division, and Supervising Planner of Regional Planning, made a presentation and responded to questions posed by the Board. Regional Planning also submitted a written statement. County Counsel also responded to questions posed by the Board. Thirty members of the public addressed the Board, and correspondence from the public was received.

29. After discussion, on motion of Supervisor Kathryn Barger, seconded by Supervisor Janice Hahn, the Board closed the public hearing and took the following actions:

    A. Certified the final PEIR, Environmental Assessment No. RPPL2019003635-(All Districts) for Project No. 2019-002015-(All Districts), Advance Planning No. RPPL2019003630-(All Districts), for the 2045 CAP has been completed in compliance with CEQA and reflects the independent judgment and analysis of the County; made a finding the Board has reviewed and considered the information contained in the final PEIR prior to approving the 2045 CAP, adopted the MMRP, finding the MMRP is adequately designed to ensure compliance with the mitigation measures during the 2045 CAP implementation; and made a determination that the significant adverse effects of the 2045 CAP have either been reduced to an acceptable level or are outweighed by the specific overriding considerations of the 2045 CAP, as outlined in the Environmental Findings of Fact and Statement of Overriding Considerations, which findings and statement are adopted and incorporated by reference;

    B. Approved the 2045 CAP, Advance Planning Case No. RPPL2019003630-(All Districts), consisting of the repeal of the 2015 Community Climate Action Plan to be replaced with the 2045 CAP and amendment to the General Plan Air Quality Element goals, policies, and implementation programs, as recommended by the Commission and additional Regional Planning recommendations, with the following amendments:

        i. Modify Policy AQ 3.1 of the Air Quality Element of the General Plan to read as follows: Facilitate the implementation and maintenance of the Climate Action Plan through future County programs to ensure the County reaches its climate action and greenhouse gas emission reduction goals, and consider projects with an enforceable legal obligation to achieve "net zero" greenhouse gas emissions, including by voluntary agreement to resolve litigation or

with a government agency, to help the County achieve the long-term goals of the Climate Action Plan;

ii. Modify the Purpose and Scope, Section 1.1 of the 2045 CAP, as follows: The 2045 CAP is an aspirational vision to help prioritize, fund, and create a policy framework for future ordinances, plans and policies. The 2045 CAP is not a regulatory document but rather a plan-level framework for the County to implement, and instead sets strategies, goals, and actions to reach emissions reductions targets, which include zero emissions vehicles market share. The County recognizes GHG reduction goals cannot be achieved by individual projects alone, but instead requires a comprehensive Countywide approach that would include the enactment of future plans, changes to existing ordinances, and an integrated and sustainable approach.

C. Instructed County Counsel to prepare the necessary final documents for the 2045 CAP for the Board's consideration.

THEREFORE, THE BOARD OF SUPERVISORS:

MULTI-FAMILY RESIDENTIAL PARKING ORDINANCE

1. Adopts the ND, along with the required findings of fact pursuant to State and local CEQA Guidelines, and determines the Ordinance will not have a significant impact upon the environment;

2. Determines the amendments are consistent with the goals and policies of the General Plan in the interest of the public health, safety, and general welfare and consistent with other applicable provisions of Title 22; and

3. Adopts the Multi-Family Residential Parking Ordinance.

2045 CLIMATE ACTION PLAN

1. Certifies the final PEIR, Environmental Assessment No. RPPL2019003635-(All Districts), by finding, pursuant to CEQA Guidelines section 15090, the final PEIR has been completed in compliance with CEQA; the final PEIR was presented to and reviewed and considered by the Board prior to approving the 2045 CAP; and the final PEIR reflects the County's independent judgment and analysis;

2. Adopts the proposed CEQA Findings of Fact prepared pursuant to Public Resources Code sections 21081 and 21081.5 and CEQA Guidelines section 15091;

3. Adopts the Mitigation Monitoring and Reporting Program;

4. Determines the 2045 CAP's significant and unavoidable impacts are outweighed by specific social, economic, legal, technological, or other considerations through adopting the proposed Statement of Overriding Considerations prepared pursuant to Public Resources Code section 21081(b) and CEQA Guidelines section 15093; and

5. Adopts Advance Planning No. RPPL2019003630-(All Districts), amending the General Plan with the updated Air Quality Element and implementation program amendments; adopts the 2045 CAP, and determines the Air Quality Element, as proposed to be amended, is consistent with and supports the goals and policies of the General Plan.

The foregoing resolution was executed on the ____ day of _____, 2024, adopted by the Board of Supervisors of the County of Los Angeles and ex officio the governing body of all other special assessment and taxing districts, agencies, and authorities for which said Board also acts.

EDWARD YEN
Executive Officer
Board of Supervisors
County of Los Angeles

By _____
Deputy

DAWYN R. HARRISON
County Counsel

By: _____
Starr Coleman
Assistant County Counsel

Attachments

Multi-Family Residential Parking Ordinance
Exhibit A – Title 22 Amendments

Climate Action Plan
Exhibit B – 2045 Climate Action Plan
Exhibit C – Final Program Environmental Impact Report
Exhibit D – California Environmental Quality Act Findings of Fact
Exhibit E – Statement of Overriding Considerations
Exhibit F – Mitigation Monitoring and Reporting Program

EXECUTIVE OFFICE – BOARD OF SUPERVISORS

AGENDA ENTRY

DATE OF MEETING	JUNE 25, 2024
DEPARTMENT NAME:	COUNTY COUNSEL
BOARD LETTERHEAD:	COUNTY COUNSEL
SUPERVISORIAL DISTRICT AFFECTED:	ALL
VOTES REQUIRED:	3
CHIEF INFORMATION OFFICER'S RECOMMENDATION:	☐ APPROVE ☐ APPROVE WITH MODIFICATION ☐ DISAPPROVE

**** * * * ENTRY MUST BE IN MICROSOFT WORD * * * ****

Instructions: To comply with the Brown Act requirement, the reader should fully understand what the department is asking the Board to approve. The recommendation must describe what the action is for, with whom the action is being taken, fiscal impact, including money amounts, funding sources and effective dates. Also, include an instruction for the Chair(man) or Director to sign when such signature is required on a document.

Recommendation: Adopt a resolution: (1) adopting the Negative Declaration along with the required findings of fact for the Multi-Family Residential Parking Ordinance ("Ordinance"), pursuant to State and local California Environmental Quality Act ("CEQA") Guidelines and determining the Ordinance will not have a significant impact upon the environment; determining the General Plan amendments are consistent with the goals and policies of the General Plan in the interest of the public health, safety, and general welfare and consistent with other applicable provisions of Title 22 – Planning and Zoning of the Los Angeles County Code; and approving Advance Planning Case No. RPPL2023004576-(All Districts). (On April 16, 2024, the Board indicated its intent to approve the Ordinance.); and (2) certifying the final Program Environmental Impact Report ("PEIR") for the 2045 Climate Action Plan ("2045 CAP"), Environmental Assessment No. RPPL2019003635-(All Districts), by finding, pursuant to CEQA Guidelines section 15090, the final PEIR has been completed in compliance with CEQA; the final PEIR was presented to and reviewed and considered by the Board prior to approving the 2045 CAP; and the final PEIR reflects the County's independent judgment and analysis; adopting the proposed CEQA Findings of Fact prepared pursuant to Public Resources Code sections 21081 and 21081.5 and CEQA Guidelines section 15091; adopting the Mitigation Monitoring and

Reporting Program; determining the 2045 CAP's significant and unavoidable impacts are outweighed by specific social, economic, legal, technological, or other considerations through adopting the proposed Statement of Overriding Considerations prepared pursuant to Public Resources Code section 21081(b) and CEQA Guidelines section 15093; and adopting Advance Planning No. RPPL2019003630-(All Districts), amending the General Plan with the updated Air Quality Element and implementation program amendments; adopting the 2045 CAP, and determining the Air Quality Element, as proposed to be amended, is consistent with and supports the goals and policies of the General Plan. (On April 16, 2024, the Board indicated its intent to approve the 2045 CAP.) (Relates to Agenda Item No. __)

Exhibit A

ANALYSIS

This ordinance amends Title 22 – Planning and Zoning of the Los Angeles County Code to revise parking standards for multi-family residential development to remove barriers to construction of affordable multi-family housing in the unincorporated areas and improve access to a multi-modal transportation network for Los Angeles County residents.

DAWYN R. HARRISON
County Counsel

By
KATHY PARK
Deputy County Counsel
Property Division

KP:ll

Requested: 05-20-24

Revised: 06-10-24

ORDINANCE NO. _____

An ordinance amending Title 22 – Planning and Zoning of the Los Angeles County Code to revise parking standards for multi-family residential development to remove barriers to construction of affordable multi-family housing in the unincorporated areas and improve access to a multi-modal transportation network for Los Angeles County residents.

The Board of Supervisors of the County of Los Angeles ordains as follows:

SECTION 1. Section 22.14.130 is hereby amended to read as follows:

22.14.130 M.

. . .

Major Projects Review Trust Funds. The following terms ~~is~~are defined solely for Chapter 22.262 (Major Projects Review Trust Funds):

. . .

Major transit stop. As defined in section 21064.2 of the California Public Resources Code, a site containing any of the following:

1. An existing rail or bus rapid transit station;

2. A ferry terminal served by either a bus or rail transit station; or

3. The intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

. . .

SECTION 2. Section 22.14.160 is hereby amended to read as follows:

22.14.160 P.

. . .

Public Health. References to Public Health shall mean the County Department of Public Health, unless otherwise specified.

Public transit area. One-half-mile radius of a major transit stop, which is defined as an existing rail or bus rapid transit station; or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during morning and afternoon peak commute hours; or a high-quality transit corridor, which is defined as a corridor with fixed route bus service with service intervals no longer than 15 minutes during morning and afternoon peak commute hours.

. . .

SECTION 3. Section 22.20.070 is hereby amended to read as follows:

22.20.070 Development Standards for Zone C-MJ.

. . .

B. Development Standards. Premises in Zone C-MJ shall be subject to the following development standards:

. . .

4. Parking. Shared parking for nonresidential uses may be approved with a Minor Conditional Use Permit (Chapter 22.160) application~~, except that parking for commercial and residential uses shall be provided separately and designated by posting, pavement marking, and/or physical separation~~.

. . .

SECTION 4. Section 22.26.030 is hereby amended to read as follows:

22.26.030 Mixed Use Development Zone.

. . .

D. Development Standards. New sensitive uses developed in the permitted zones and located adjacent to existing, legally-established industrial uses, recycling or solid waste uses, or vehicle-related uses listed in Table 22.22.030-B (Principal Use Regulations for Industrial Zones), except for the vehicle sales and rentals sub-category, shall comply with Division 7, Chapter 22.134 (Sensitive Uses) in addition to the standards below. Where standards in Chapter 22.134 and this Section are in conflict, the more restrictive shall apply. All new development projects in Zone MXD shall be subject to the following development standards:

. . .

5. Parking.

a. Parking facilities, including bicycle parking and storage facilities, shall be provided in compliance with Chapter 22.112 (Parking), however the number of required vehicle parking spaces as provided therein may be reduced by up to 25 percent~~ except for required guest parking for residential uses. Parking for~~

~~commercial and residential uses shall be separately designated by posting, pavement marking, or physical separation. These standards may be modified through a Parking Permit (Chapter 22.178) application~~.

. . .

SECTION 5. Section 22.112.020 is hereby amended to read as follows:

22.112.020 Applicability.

. . .

B. Reduction of Required Parking and Loading Spaces. A reduction in the number of required parking or loading spaces may be granted pursuant to any of the following:

1. Section 22.112.110 (Reduction in Required Parking Spaces When Bicycle Parking Provided).

2. Section 22.112.130 (Reduction in Required Parking Spaces When Providing Transportation Demand Management Measures for Multi-Family Residential Developments).

~~2~~3. Chapter 22.176 (Minor Parking Deviations).

~~3~~4. Chapter 22.178 (Parking Permits).

45. Section 22.24.040.F (Vehicle Parking Incentives).

~~5~~6. As otherwise authorized by this Title 22.

. . .

SECTION 6. Section 22.112.050 is hereby amended to read as follows:

22.112.050 Ownership of Required Parking Facilities.

A. General. Parking facilities required by this Chapter shall be owned by the owner of the premises on which the use required to be served by said facility is located.

B. Exemptions. The following shall be exempt from this Section:

1. For Nonresidential Developments, ~~O~~ownership of any parking facility required by Subsection A, above, is not necessary if another alternative is granted pursuant to Chapter 22.178 (Parking Permit).

2. ~~Unless as otherwise provided for by this Title 22.~~For multi-family residential developments, ownership of any parking facility required by Subsection A, above, is not necessary if the applicant provides a legal written agreement or covenant guaranteeing the leased spaces are available for the use of the development. The agreement or covenant shall be signed by the applicant and the owner of the parking facilities, and shall be recorded with the Recorder-Registrar/County Clerk, and shall continue to be valid upon change of ownership. In the event of a dissolution of the written agreement or covenant, the multi-family residential development shall remain in compliance with parking requirements if one of the following is satisfied:

a. A comparable agreement for required parking spaces is provided in a parking facility in compliance with this Chapter 22.112 (Parking), and recorded by the owner of the multi-family residential development and the property providing the parking facility;

b. The total parking requirement is reduced through Section 22.112.130 (Reduction in Required Parking Spaces When Providing Transportation Demand Management Measures for Multi-Family Residential Developments) and allows the development to meet its requirement without the spaces that had been provided by the dissolved agreement or covenant; or

c. The reduction in required parking is approved through Section 22.176 (Minor Parking Deviation) or Section 22.178 (Parking Permit).

3. Unless as otherwise provided for by this Title 22.

SECTION 7. Section 22.112.060 is hereby amended to read as follows:

22.112.060 On-Site Parking.

A. General. Every use shall provide the number of required parking spaces on the same lot on which the use is located. For the purposes of this Section, transitional parking spaces separated only by an alley from the use shall be considered to be located on the same lot.

B. Exemptions. The following shall be exempt from this Section:

1. Density—Controlled Developments (Section 22.140.170), where off-site parking is specifically approved by the Commission or Hearing Officer;

2. Off-site parking, when granted pursuant to a Parking Permit (Chapter 22.178); or

3. ~~Unless as otherwise provided for by this Title 22.~~Off-site parking for multi-family residential developments, when the owner of the multi-family residential

development is also the owner of the off-site parking facility, provided off-site parking spaces are secured according to the following restrictions:

a. Up to 100 percent of the required parking may be located off-site if any portion of the lot containing the off-site parking is located within 400 feet of the nearest property line of the lot with the multi-family residential development; or

b. Up to 50 percent of the required parking may be located off-site if any portion of the lot containing the off-site parking is located within 1,320 feet of the nearest property line of the lot with the multi-family residential development.

4. Off-site parking for multi-family residential developments, when the owner of the multi-family residential development is not the owner of the off-site parking facility, provided off-site parking spaces are secured according to the following restrictions, and demonstrated by a covenant between the owner of the residential lot and the owner of the parking property, to be in effect for no less than 20 years from the date of the multi-family property's certificate of occupancy:

a. Up to 50 percent of the required parking may be located off-site if any portion of the property containing the off-site parking is located within 400 feet of the nearest property line of the lot with the multi-family residential development; or

b. Up to 25 percent of the required parking may be located off-site if any portion of the property containing the off-site parking is located within 1,320 feet of the nearest property line of the lot with the multi-family residential development.

5. Unless as otherwise provided for by this Title 22.

SECTION 8. Section 22.112.070 is hereby amended to read as follows:

22.112.070 Required Parking Spaces.

A. Required Parking Spaces Within Public Transit Areas.

1. Except for lodging uses or as provided in Subsection A.2, below, or where required by State law, all uses located within a public transit area, as defined in Section 22.14.160 (P), shall not require parking. Voluntarily provided parking shall comply with all applicable regulations in the County Code.

2. Parking Minimum Required When. If a development project within a public transit area, as defined in Section 22.14.160 (P), shall require parking, such requirements pursuant to this Chapter may be imposed if written findings are made within the period as specified in State law, supported by substantial evidence, that not imposing or enforcing such requirements would have a substantially negative impact on any of the following:

a. The County's ability to meet its share of the regional housing need for low-income and very low-income households;

b. The County's ability to meet any identified special housing needs for seniors or people with disabilities; or

c. Existing residential or commercial parking within one-half mile of a residential project.

3. Findings to impose parking requirements pursuant to Subsection A.2, above, shall not apply to housing development projects that:

a. Set aside at least 20 percent of dwelling units for very low-, lower-, or moderate-income households, students, seniors, or persons with disabilities;

b. Contain fewer than 20 dwelling units; or

c. Are subject to parking reductions under any other law.

~~A~~B. Required Parking Spaces Outside of Public Transit Areas. Table 22.112.070-A, below, identifies the minimum number of parking spaces required to establish each use.

TABLE 22.112.070-A: MINIMUM REQUIRED PARKING SPACES		
Use		Number of Spaces
. . .		
Residential uses[4]		
. . .		
	Apartments[5, 10]	
	Apartments with 10 dwelling units or less, irrespective of the number of bedrooms	1 standard space per dwelling unit.
	Bachelor[14]	1 ~~covered~~ standard space per dwelling unit.
	Efficiency and one-bedroom[14]	1.5 ~~covered~~ standard spaces per dwelling unit.
	~~Junior accessory dwelling units~~	~~No spaces required.~~
	Two or more bedrooms[14]	~~1.5 covered~~2 standard spaces per dwelling unit~~and 0.5 covered or uncovered standard spaces per dwelling unit~~.
	Guest parking for apartment houses with at least 11 units[6]	1 standard space for guests per 4~~10~~ dwelling units of the total number of dwelling units.
. . .		
	Joint live and work units[14]	2 ~~uncovered~~ standard spaces per joint live and work unit.
	Junior accessory dwelling units	No spaces required.
	. . .	

Notes:

. . .

5. ~~Parking spaces shall be standard in size unless compact size spaces are granted pursuant to Chapter 22.178 (Parking Permits). At least one parking space shall be assigned to each dwelling unit~~Compact spaces may be provided in accordance with Subsection E, below.

. . .

14. Apartments with 11 or more dwelling units and all developments with 11 or more joint live and work units seeking reduction in required parking spaces shall provide Transportation Demand Management measures, as provided in Section 22.112.130, below.

~~B~~C. Uses ~~n~~Not ~~s~~Specified—Number of ~~s~~Spaces ~~r~~Required. Where parking requirements for any use are not specified, parking shall be provided in an amount that the Director finds adequate to prevent traffic congestion and excessive on-street parking. Whenever practical, such determination shall be based upon the requirements for the most comparable use specified in this Chapter.

~~C~~D. Fractions. If the number of on-site parking spaces for a use required by this Chapter contains a fraction, that fraction shall be rounded to the nearest whole number. Any such fraction equal to or greater than 0.50 shall be rounded up to the nearest whole number and any such fraction less than 0.50 shall be rounded down to the nearest whole number. For example, "Use A" requires 9.7 spaces, and "Use B" requires 9.4 spaces. "Use A" rounds up and requires 10 spaces and "Use B" rounds down and requires 9 spaces. A total of 19 spaces would be required for the two uses.

~~D~~E. Parking as a Transitional Use. Where parking as a transitional use is allowed by this Title 22, it shall comply with all locational and design standards of Section 22.140.440 (Parking as a Transitional Use).

~~E~~F. Compact Spaces. A maximum of 40 percent of the number of parking spaces required by this Chapter may be compact automobile parking spaces, except as otherwise provided in this Chapter. Compact spaces shall be distributed throughout the parking area. Any ~~compact~~ parking spaces provided in excess of the number of parking spaces required by this Chapter ~~shall be excluded from this Subsection~~ Emay be compact.

SECTION 9. Section 22.112.080 is hereby amended to read as follows:

22.112.080 Parking Design.

. . .

B. General Standards for Parking Spaces and Maneuvering Aisles.

1. Parking Spaces.

a. Standard. Standard parking spaces shall have a minimum width of 8.5 feet and a minimum depth of 17.5 feet for parking facilities serving multi-family residential or mixed use development and of 18 feet for parking facilities serving other development, based on a 90-degree parking layout.

b. Compact. Compact parking spaces shall have a minimum width of eight feet and a minimum depth of 15 feet, based on a 90-degree parking layout.

c. Tandem.

i. Tandem Parking Spaces for Residential Uses.

(1) When two or more parking spaces are reserved or required for a dwelling unit, such spaces may be developed as tandem parking spaces.

(2) Standard tandem parking spaces shall have a minimum width of 8.5 feet and a minimum depth of ~~36~~35 feet to accommodate two vehicles.

(3) Compact tandem parking spaces ~~are allowed for apartment uses when granted pursuant to Chapter 22.178 (Parking Permit).~~

~~Compact tandem parking spaces~~ shall have a minimum width of eight feet and minimum depth of 30 feet to accommodate two vehicles.

ii. Tandem Parking Spaces for Nonresidential Uses. Tandem parking spaces for nonresidential uses are allowed when granted pursuant to Chapter 22.178 (Parking Permits).

d. Parallel. Parallel parking is subject to the following standards, also illustrated in Figure 22.112.080-B, below:

i. Standard parallel parking spaces shall have a minimum width of eight feet and a minimum length dependent on the location of the standard parallel parking space as follows:

(1) A standard parallel end-space with direct, pull-in access shall have a minimum length of 17.5 feet;

(2) A standard parallel middle space shall have a minimum length of 22 feet; and

(3) A standard parallel end-space without direct access shall have a minimum length of 26 feet. If the end-space does not have a maneuvering aisle that continues beyond the space, it shall have a minimum length of 27 feet and nine inches.

ii. Compact parallel parking spaces shall have a minimum width of eight feet and a minimum length dependent on the location of the compact parallel parking space as follows:

(1) A compact parallel end-space with direct access shall have a minimum length of 15 feet;

(2) A compact parallel middle space shall have a minimum length of 19 feet and six inches; and

(3) A compact parallel end-space without direct access shall have a minimum length of 23 feet or 27 feet if the maneuvering aisle does not continue beyond the space.

2. Maneuvering Aisles.

a. Standard. Maneuvering aisles that provide access to standard parking spaces shall have a minimum width of 24 feet for parking facilities serving multi-family residential or mixed use developments and 26 feet for parking facilities serving other developments.

b. Compact. Maneuvering aisles that provide access to only compact parking spaces shall have a minimum width of 23 feet, except where a 26-foot-wide access road is required by the Fire Department.

c. Parallel. Maneuvering aisles that provide access to only parallel parking spaces shall have a minimum width of 12 feet for one-way aisles or 24 feet for two-way aisles. Figure 22.112.080-B, Parallel Parking Dimensions, below, identifies the dimensions for maneuvering aisles and parallel parking spaces subject to this Chapter.

FIGURE 22.112.080-A: MINIMUM PARKING SPACE DIMENSIONS

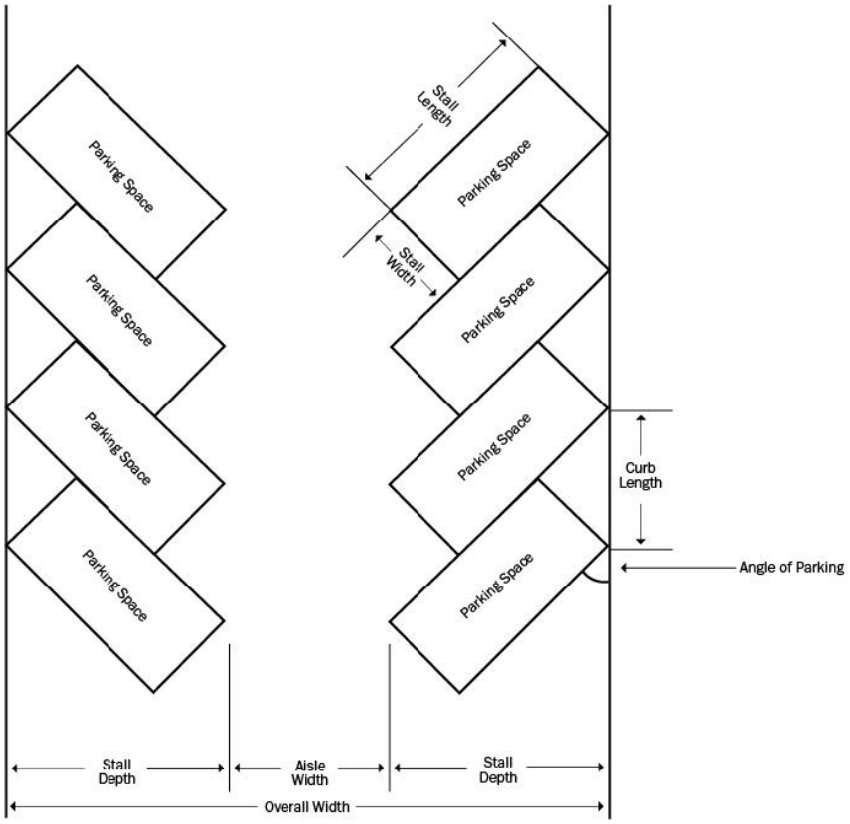
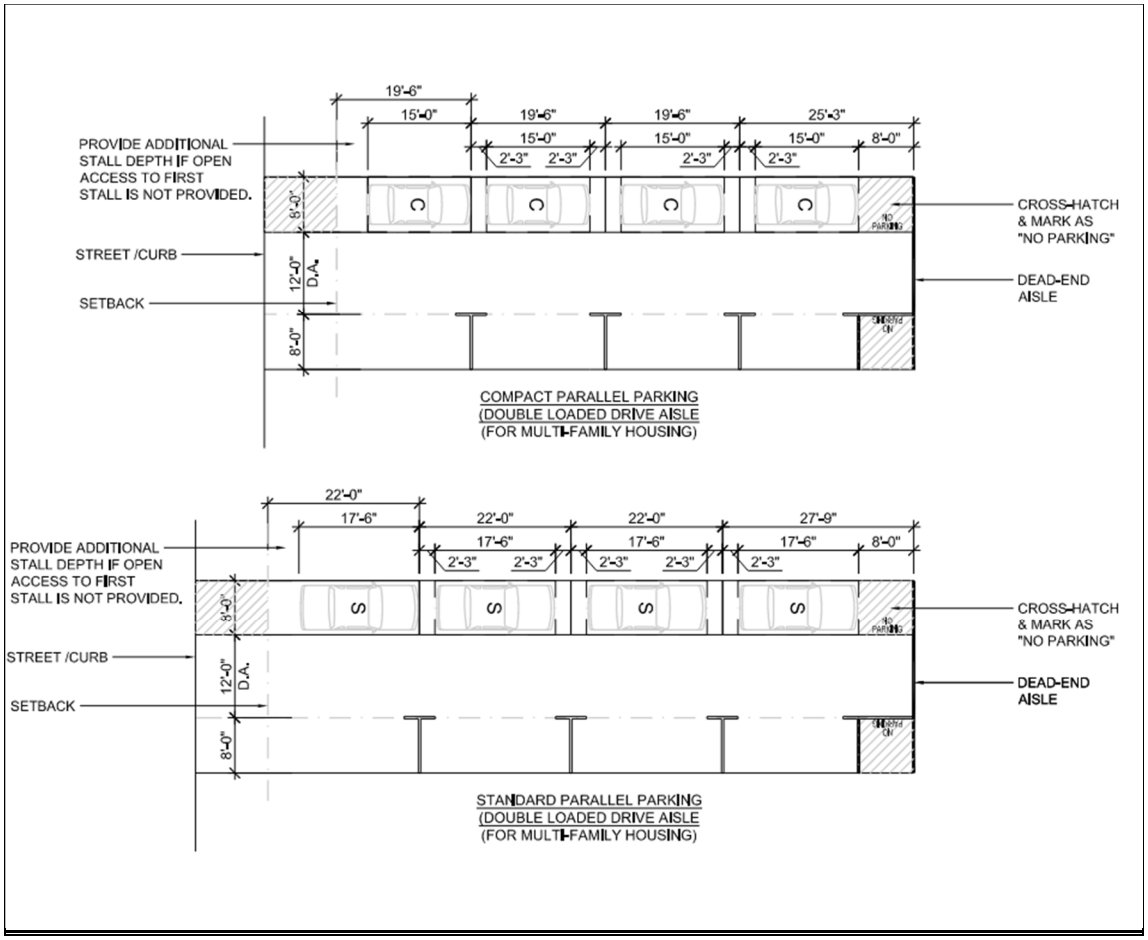


TABLE 22.112.080-A: MINIMUM PARKING DIMENSIONS					
Angle of Parking (Degrees)	Stall Depth (feet)	Aisle Width (feet)	Overall Width (feet)	Stall Length (feet)	Curb Length (feet)
Standard Parking Serving Multi-Family Residential or Mixed Use Developments					
90	18	24 [1]	62 [1]	17' 6"	8' 6"
60	20	14' 7" [2]	60 [2]	17' 6"	9' 10"
45	19	12' 8" [2]	52 [2]	17' 6"	12
30	16	12 [2]	44 [2]	17' 6"	17
Standard Parking Serving Other Developments					
90	18	26 [1]	62 [1]	18	8' 6"
60	20	20 [2]	60 [2]	18	9' 10"
45	19	14 [2]	52 [2]	18	12
30	16	12 [2]	44 [2]	18	17
. . .					

TABLE 22.112.080-A: MINIMUM PARKING DIMENSIONS					
Angle of Parking (Degrees)	Stall Depth (feet)	Aisle Width (feet)	Overall Width (feet)	Stall Length (feet)	Curb Length (feet)
Notes: 1. Two-way aisle. 2. One-way aisle, double-loaded parking.					

FIGURE 22.112.080-B: PARALLEL PARKING DIMENSIONS



. . .

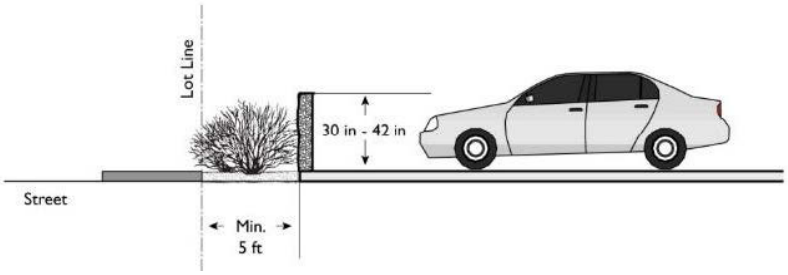
F. Walls.

1. Front Yards. Where parking facilities are located adjacent to the front lot line, a solid masonry wall not less than 30 inches nor more than 42 inches in

height shall be established parallel to and not nearer than five feet to the front lot line, except that:

a. The required wall shall be set back at least to the line of the front or side yard line required in any adjacent Residential or Agricultural Zone for a distance of 50 feet from the common boundary line. For example, see Figure 22.112.080-~~B~~C, below.

FIGURE 22.112.080-~~B~~C: SCREENING WALL – FRONT YARD

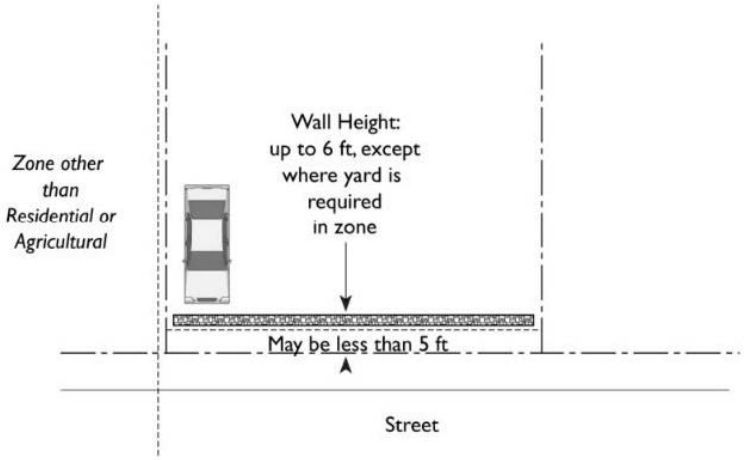


b. Where abutting and adjacent property is in a zone other than a Residential or Agricultural Zone, the Director may approve the establishment of the required wall:

i. Closer than five feet to the front property line; or

ii. To a height not exceeding six feet, except where a yard is required in the adjacent nonresidential zone. For example, see Figure 22.112.080-~~C~~D, below.

FIGURE 22.112.080-~~C~~D: SCREENING WALL ADJACENT TO A NON-RESIDENTIAL OR NON-AGRICULTURAL ZONE

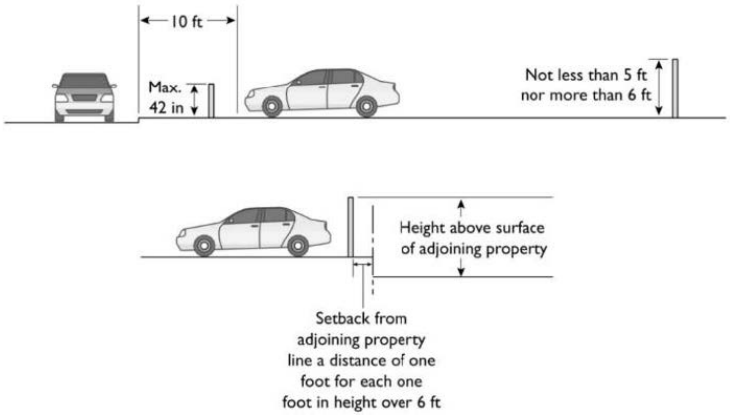


2. Side and Rear Yards. Where parking facilities are located on land adjoining a Residential or Agricultural Zone, a solid masonry wall not less than five feet nor more than six feet in height shall be established along the side and rear lot lines adjoining said zones except that:

. . .

b. Such wall shall not be less than four feet in height above the surface of the adjoining property. If said wall is more than six feet in height above said adjoining property, it shall be set back from the adjoining property line a distance of one foot for each one foot in height above six feet. For example, see Figure 22.112.080-~~D~~E, below.

FIGURE 22.112.080-~~D~~E: SCREENING WALLS—SIDE AND REAR YARDS



. . .

SECTION 10. Section 22.112.130 is hereby added to read as follows:

22.112.130 Reduction in Required Parking Spaces When Providing Transportation Demand Management Measures for Multi-Family Residential Developments.

A. Eligibility Requirements for a Parking Reduction. For multi-family residential developments, the parking requirements for residential uses in accordance with Section 22.112.070, above, may be reduced by 25 percent if the site plan includes multiple on-site Transportation Demand Management (TDM) measures selected from Table 22.112.130-A, below, with a combined point value of five or greater, or reduced by 50 percent with a combined point value of 10 or greater. A TDM-based parking reduction shall require approval of a Ministerial Site Plan Review (Chapter 22.186) application.

TABLE 22.112.130-A: APPLICABLE ON-SITE TDM MEASURES		
TDM Measure	Metric	Point Value
Development Location		
Proximity to transit	Any portion of the development is within one mile of a major transit stop, as defined in Section 22.14.130 (M), and there is unobstructed access to the public transit area from the development. "Unobstructed access to the public transit area" means a resident is able to access the public transit area without encountering natural or constructed impediments, including, but not limited to, cul-de-sacs without pedestrian access; freeways without overpasses or underpasses to guide pedestrians and cyclists across the freeway, rivers, mountains; and bodies of water, but not including residential structures, shopping centers, parking lots, or rails used for transit.	3
Proximity to Commercial Uses	Less than 0.5 miles from: 1. A commercial or retail development consisting of three or more retail or service uses; or 2. Three separate retail, restaurant, service, public park, school, fitness center uses.	1
	Less than 0.5 miles from a supermarket or general merchandise retailer of at least 8,000 square feet that sells fresh food.	2
Proximity to bicycle facilities	Less than 0.5 miles from existing or proposed bicycle path, lane, route, or boulevard designated in the County of Los Angeles Bicycle Master Plan.	2
Development Design		
Provision of affordable housing units	Provide a minimum 20% of the total units as affordable housing set-aside, as defined in Section 22.14.010 (A).	2
Unreserved resident and guest parking	Set aside at least 50% of parking spaces as unreserved. Unreserved parking spaces are defined as those not for the sole use of individual residents but can be available to residents of more than one residential unit.	3
	Set aside at least 25% of parking spaces as unreserved.	1
Pedestrian entrance	Orient the building such that the main building entrance faces the street/sidewalk and is at or within four feet of ground-level.	2
Location of parking	Locate the parking spaces such that they are away from the street or highway with the greatest right-of-way width, such as behind the building or underneath the building, or are obscured by landscaping.	1

TABLE 22.112.130-A: APPLICABLE ON-SITE TDM MEASURES		
TDM Measure	Metric	Point Value
Pedestrian-scale lighting	Install and maintain ground-mounted ornamental light fixtures of no more than three feet in height for pedestrian paths and entrances to the property. Ensure pedestrian walkways are illuminated. Lighting affixed to the building exterior should illuminate the sidewalk along the main building façade oriented toward the street or highway with the greatest width, with an average of one foot-candle along the sidewalk for the length of the property along said street.	3
Pedestrian-scale amenities	Install and maintain pedestrian-scale amenities on or adjacent the property consisting of no less than three benches of at least five feet in length and no less than three structures for the purpose of providing shade to pedestrians or seated individuals of no less than eight feet in diameter or 64 square feet per structure.	2
Transparent windows and doors on the ground level	Provide transparent windows and doors on at least 50 percent of the building's ground floor façade oriented towards the street or highway with the greatest right-of-way width shall be composed of entrances.	1
Public art	Install and maintain a static public art piece, such as a mural or sculpture visible to the public.	1
Preferred Land Uses		
Healthy food retail	Construct and maintain a commercial space (minimum of 1,000 square feet) that can be readily occupied and is reserved for a healthy food facility within the development. A healthy food facility includes a facility providing for daily needs and can include fresh fruits, vegetables, whole grains, and dairy products, as is identified as a bodega, in some communities, to remain open for at least eight hours per day, six days per week. The additional commercial square footage shall be exempt from any requirement for parking, as it will be considered an auxiliary use of the residential property.	5
On-site childcare provider	Construct and maintain a commercial space that can be readily occupied and is reserved for a licensed childcare center within the development. Preference should be made for the children of building residents. The additional square footage will be exempt from any requirement for parking, as it will be considered an auxiliary use of the residential property.	5

TABLE 22.112.130-A: APPLICABLE ON-SITE TDM MEASURES		
TDM Measure	Metric	Point Value
Fitness center (resident only)	Construct and maintain an indoor or outdoor fitness center at the property. The fitness center shall be available to residents at least 12 hours per day and seven days per week and provide a minimum of four workout stations. The additional square footage will be exempt from any requirement for parking, as it will be considered an auxiliary use of the residential property.	2
Fitness center (public)	Construct and maintain an indoor or outdoor fitness center at the property. The fitness center shall be available to the public at least 12 hours per day and seven days per week and provide a minimum of four workout stations.	3
Public art and cultural spaces	Construct and maintain an indoor or outdoor space dedicated to public art and culture, such as, but not limited to, gallery, museum, theater studio, and community workshop spaces. Hard art, such as a sculpture or mural, is not eligible.	3
Car Share		
Car share parking	Designate spaces for car share parking according to the number of residential units and offer the spaces to a car share company at no cost. A car share is defined as a service provided through which licensed drivers may rent a vehicle for personal transportation and return the vehicle to the same location at the end of the trip. Car share space requirements shall be as follows: 5-100 units: 1 car share space 101-300 units: 2 car share spaces Each additional 200 units: 1 additional car share space A parking permit is not required to attain TDM points for providing car share parking.	2
Bicycle Amenities		
Provision of electric bicycle docking and charging stations	Provide and maintain a Los Angeles Metro or other shared electric bicycle docking and charging station on-site with a minimum of five publicly available electric bicycles.	2
	Provide electric charging outlets within the parking facility or common area for at least 10 percent of the required long-term bicycle parking spaces.	2

TABLE 22.112.130-A: APPLICABLE ON-SITE TDM MEASURES		
TDM Measure	Metric	Point Value
Provision of required bicycle parking spaces	Provide the required bicycle parking spaces, pursuant to this Title 22: Short-term bicycle parking: 1 space per 10 units (minimum 2 spaces) Long-term bicycle parking: 1 space per 2 units	1
Provision of bicycle parking spaces beyond the requirements	Provide at least 25 percent more bicycle parking spaces (long-term or short-term) than the minimum required under this Title 22.	1
Provision of an on-site bicycle repair station	Provide and maintain in working order a bicycle repair station that includes tools and supplies designed to maintain bicycles, at a minimum those necessary for fixing a flat tire, adjusting a chain, and performing other basic bicycle maintenance.	1
Transportation Information Provision		
Transportation information center, kiosk, or screen	Install and maintain an on-site kiosk or information center with multi-modal wayfinding information and transit information on a display with dimensions no smaller than 18 inches by 24 inches. The kiosk or information center shall be in a prominent location easily be seen by residents entering or exiting the development.	1
Real-time transportation information displays	Maintain a real-time information display (e.g., large television screens or computer monitors) in a prominent location easily seen by residents entering or exiting the development. The display should include real-time information which may include, but not limited to: transit arrivals and departures for nearby transit routes, walking times to transit stations/bus stops, and the availability of car share vehicles, shared bicycles, electric bicycles, and shared scooters or comparable modes, as determined by Planning staff.	2
Storage and Delivery		
Child transportation and sports equipment storage	Provide and maintain in working order on-site lockers or another secure storage facility for personal car seats, strollers, child bicycle seats, and sports equipment according to the following: 1. One secure storage location per every 20 dwelling units, with a minimum of two secure storage spaces; and 2. The secure storage spaces shall each have usable interior space at least 35 inches high, 25 inches wide, and 30 inches deep.	2

TABLE 22.112.130-A: APPLICABLE ON-SITE TDM MEASURES		
TDM Measure	Metric	Point Value
Delivery support	Provide a secure area for receipt of deliveries offering at least one of the following: 1. Closed lockers; 2. Temporary storage for packages, laundry, and other deliverables; and/or 3. Temporary refrigeration for groceries.	2

B. Development Standards for Residential Developments with TDM Measures.

1. Each residential development shall post a display of approved TDM measures in a common and accessible space, such as a lobby, where all residents can view the document.

2. A list of the approved TDM measures shall be provided to each owner and/or tenant as part of purchase or leasing documents.

C. In the event an approved TDM measure, which contributes to a multi-family property's minimum TDM points, no longer applies or is in effect, the owner of the multi-family residential development shall substitute another TDM option of equal or greater value in points.

SECTION 11. Section 22.112.140 is hereby added to read as follows:

22.112.140 Shared Parking for Multi-Family Residential Development.

Shared parking requests shall be approved with a Ministerial Site Plan (Chapter 22.186) application if the applicant provides a parking study demonstrating adequate parking availability (not deficit in the number of parking spaces available in the

shared parking facility), during typical peak times for the land uses which the shared parking facility is currently serving and during typical peak parking conditions for the multi-family development the parking facility proposes to serve. Parking adequacy (the number of available spaces) will be defined methodologically by the most recent edition of *Shared Parking* by the Urban Land Institute and International Council of Shopping Centers or another parking demand modeling methodology used by a firm or individual that demonstrates a minimum of five years' experience performing shared parking studies. This methodology may include actual parking occupancy counts for the existing land uses in the shared parking facility during the identified peak times. Shared parking between multiple owners shall require a written covenant, pursuant to Section 22.112.050 (Ownership of Required Parking Facilities). Off-site shared parking may be provided according to the limitations detailed in Section 22.112.060 (On-Site Parking).

SECTION 12. Section 22.120.080 is hereby amended to read as follows:

22.120.080 Parking.

A. Notwithstanding any contrary provisions in this Title 22, Table 22.120.080-A, below, identifies the parking ~~ratios~~requirements for ~~projects~~multi-family residential developments subject to this Chapter:

TABLE 22.120.080-A: PARKING ~~RATIOS~~REQUIREMENTS [1]		
Affordability and Project Type	Proximity to Transit	Number of Spaces [2]
. . .		
All other projects subject to Chapter 22.120		0-1 bedroom: 1 space per dwelling unit [7] 2-3 bedrooms: ~~2~~1.5 spaces per dwelling unit [7] 4 or more bedrooms: 2.5 spaces per dwelling unit [7]
Notes:		
. . .		
7. Alternatively, the standards in Table 22.112.070-A: Minimum Required Parking Spaces may be applied if they yield a lower total parking requirement.		

. . .

SECTION 13. Section 22.140.350 is hereby amended to read as follows:

22.140.350 Mixed Use Developments in Commercial Zones.

A. Mixed Use Development in Zones C-H, C-1, C-2, C-3, and C-M.

. . .

5. Development Standards. The following development standards shall apply:

. . .

d. Parking and Vehicular Access.

. . .

ii. ~~Separate c~~Commercial and residential parking spaces shall be provided in compliance with Chapter 22.112 (Parking). ~~Spaces shall be separately designated by signage, striping, pavement marking, and/or physical separation.~~

. . .

SECTION 14. Section 22.140.360 is hereby amended to read as follows:

22.140.360 Mixed Use Developments in Zone MXD-RU.

. . .

B. Development Standards.

1. Vertical Mixed Use Developments. The following development standards shall apply to vertical mixed use developments in Zone MXD-RU:

a. Parking.

. . .

ii. ~~Separate c~~Commercial and residential parking spaces shall be provided in compliance with Chapter 22.112 (Parking). ~~Spaces shall be separately designated by signage, striping, pavement marking, and/or physical separation.~~

. . .

SECTION 15. Section 22.178.010 is hereby amended to read as follows:

22.178.010 Purpose.

. . .

C. It is the intent to conserve land and promote efficient land use by allowing:

1. The dual or shared use of parking facilities by two or more uses.

2. Tandem parking for nonresidential uses.

3. ~~Compact parking spaces for apartment houses~~Designated spaces for car share or other mobility services, such as bicycle or scooter share.

D. It is the intent to provide greater flexibility and opportunity to meet the parking requirements by allowing:

1. Off-site parking facilities.

2. The short-term or long-term leasing of required parking spaces.

3. Transitional parking for lots with rear lot lines abutting Commercial or Industrial Zones.

SECTION 16. Section 22.178.050 is hereby amended to read as follows:

22.178.050 Findings and Decision.

. . .

B. Findings.

. . .

2. There are no conflicts arising from special parking arrangements allowing shared vehicle parking facilities, tandem spaces, or ~~compact~~vehicle share spaces because:

a. Uses sharing parking facilities operate at different times of the day or days of the week;

b. Parking facilities using tandem spaces will employ valets or will utilize other means to ensure a workable plan; or

c. ~~Apartment houses using compact spaces for a portion of the required parking have a management program or homeowners' association to assure an efficient distribution of all parking spaces~~Parking facilities, including car share or

other vehicle share spaces, will maintain an arrangement with a service provider offering rental vehicles accessible to the public.

. . .

SECTION 17. Section 22.178.060 is hereby amended to read as follows:

22.178.060 Conditions of Approval.

. . .

G. ~~Where compact parking is proposed for apartments, no more than 40 percent of the required spaces shall be for compact automobiles. A program to manage the distribution of parking spaces shall be approved and operated by the apartment management or a homeowners' association~~Where car share or other vehicle share spaces are proposed, there shall be an arrangement with a service provider demonstrating how the rental vehicles will be accessible to the public.

H. If off-site parking facilities are proposed for nonresidential development, such facilities shall be within 400 feet from any entrance of the use to which they are accessory. Parking for employees shall be located within 1,320 feet from the entrance to such use. Directions to such facilities shall be clearly posted at the principal use.

. . .

[2214130KPCC]

Exhibit B

2045 Climate Action Plan

County of Los Angeles

June 2024

Photos by Mayra Beltran Vasquez

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Prepared By:

County of Los Angeles, Department of Regional

Planning 320 W. Temple Street

Los Angeles, CA 90012

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LAND ACKNOWLEDGMENT

The County of Los Angeles recognizes that we occupy land originally and still inhabited and cared for by the Tongva, Tataviam, Serrano, Kizh, and Chumash Peoples. We honor and pay respect to their elders and descendants — past, present, and emerging — as they continue their stewardship of these lands and waters. We acknowledge that settler colonization resulted in land seizure, disease, subjugation, slavery, relocation, broken promises, genocide, and multigenerational trauma. This acknowledgment demonstrates our responsibility and commitment to truth, healing, and reconciliation and to elevating the stories, culture, and community of the original inhabitants of Los Angeles County. We are grateful to have the opportunity to live and work on these ancestral lands. We are dedicated to growing and sustaining relationships with Native peoples and local tribal governments, including (in no particular order) the

- Fernandeño Tataviam Band of Mission Indians
- Gabrielino Tongva Indians of California Tribal Council
- Gabrieleno/Tongva San Gabriel Band of Mission Indians
- Gabrieleño Band of Mission Indians – Kizh Nation
- San Manuel Band of Mission Indians
- San Fernando Band of Mission Indians

To learn more about the First Peoples of Los Angeles County, please visit the Los Angeles City/County Native American Indian Commission website at lanaic.lacounty.gov.

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ACRONYMS

2020 CCAP	*Unincorporated Los Angeles County Community Climate Action Plan 2020*
2022 Scoping Plan	*2022 Scoping Plan for Achieving Carbon Neutrality*
2045 CAP	*2045 Los Angeles County Climate Action Plan*
AB	Assembly Bill
AB 32	Global Warming Solutions Act
AB 118	Air Quality Improvement Program
AB 341	California Department of Resources Recycling and Recovery 75 percent waste diversion initiative
AB 398	Cap-and-Trade Program
AB 1493	Pavley and Advanced Clean Car Standards
AB 1668	Water Conservation and Drought Planning
ACWM	Agricultural Commissioner Weights and Measures Department
AEP	California Association of Environmental Professionals
AFOLU	Agriculture, Forestry, and Other Land Use
AHSC	Affordable Housing and Sustainable Communities Program

AR5	Intergovernmental Panel on Climate Change Fifth Assessment Report
ATP	Active Transportation Program
AV	autonomous vehicle
AVAQMD	Antelope Valley Air Quality Management District
AVL	Automatic Vehicle Locator
BAU	business-as-usual
BEV	battery electric vehicle
BIPOC	Black, Indigenous, and People of Color
BPI	Biodegradable Products Institute
BUILD	Building Initiative for Low Emissions Development
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
Cal. Code Regs.	California Code of Regulations
CAL FIRE	California Department of Forestry and Fire Protection
CalCAP	California Capital Access Program
CALeVIP	California Electric Vehicle Infrastructure Project
CALGreen Code	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
CalSTA	California State Transportation Agency
Caltrans	California Department of Transportation
CAP	climate action plan
CARB	California Air Resources Board
CBO	community-based organization
CCA	community choice aggregation
CCI	California Climate Investments
CCS	capture and carbon and sequestration
CCUS	carbon capture, utilization, or storage
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CDI	commercial direct install

CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	methane
CHP	combined heat and power
Climate Vulnerability Assessment	*LA County Climate Vulnerability Assessment*
CNG	compressed natural gas
CNRA	California Natural Resources Agency
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	County of Los Angeles government
Countywide	Los Angeles County in its entirety, inclusive of both unincorporated areas and all 88 incorporated cities
COVID-19	SARS-CoV-2 or coronavirus disease 2019
CPA	Clean Power Alliance
CPUC	California Public Utilities Commission
CRIS	Climate Registry Information System
CSO	Chief Sustainability Office
CVA	Climate Vulnerability Assessment
CVRP	Clean Vehicle Rebate Project
DER	distributed energy resource
DHS	Department of Health Services
DOE	U.S. Department of Energy
DPH	Department of Public Health
DPR	direct potable reuse
DRP	Department of Regional Planning
DU	dwelling unit
e-bike	electric bicycle
ECAA	Energy Conservation Assistance Act
EGIA	Electric & Gas Industries Association

EIR	environmental impact report
EMFAC2021	EMission FACtors 2021
EO	Executive Order
EO B-55-18	Achieve Carbon Neutrality Statewide by 2045
EO S-01-07	Low Carbon Fuel Standards
EPA	U.S. Environmental Protection Agency
ESAP	Energy Savings Assistance Program
EUI	energy use intensity
EV	electric vehicle
EVCS	electric vehicle charging station
EVSE	electric vehicle supply equipment
FCEV	fuel cell electric vehicle
FHA	Federal Housing Administration
Food DROP	Food Donation Recovery and Outreach Program
FOD	first order of decay
FTA	Federal Transit Administration
GGRF	Greenhouse Gas Reduction Fund
General Plan	*Los Angeles County General Plan 2035*
GHG	greenhouse gas
GPC	Global Protocol for Community-scale GHG Emission Inventories
GPCD	gallons per capita per day
GW	gigawatt
GWP	global warming potential
HCD	U.S. Department of Housing and Community Development
HERO	Home Energy Renovation Opportunity
HFC	hydrofluorocarbon
HOME	HOME Investment Partnerships Program
HQTA	high quality transit area
HUD	U.S. Department of Housing and Urban Development

ICLEI	U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions
II	internal-internal
IPCC	Intergovernmental Panel on Climate Change
IPPU	Industrial Processes and Product Use
ISD	Internal Services Department
IX	internal-external
JWPCP	Joint Water Pollution Control Plant
kBtu	one thousand British thermal units
kW	kilowatt
LACDA	Los Angeles County Development Authority
LACSD	Los Angeles County Sanitation Districts
LADWP	Los Angeles Department of Water and Power
LARC	Los Angeles Regional Collaborative
LASD	Los Angeles County Sheriff's Department
LED	light-emitting diode
LEED	Leadership in Energy and Environmental Design
LFG	landfill gas collection
LiHEAP	Low Income Home Energy Assistance Program
LIWP	Low Income Weatherization Program
LNG	liquefied natural gas
LTF	Local Transportation Fund
MAP-21	Moving Ahead for Progress in the 21st Century
Metro	Los Angeles County Metropolitan Transportation Authority
$MMTCO_2$	million metric tons of carbon dioxide
MRR	Mandatory Greenhouse Gas Reporting Regulations
MSRC	Mobile Source Air Pollution Reduction Review Committee
$MTCO_2e$	metric tons of carbon dioxide equivalent
MW	megawatt
MWD	Metropolitan Water District of Southern California

N_2O	nitrous oxide
ND	negative declaration
NF_3	nitrous trifluoride
NGV	natural gas vehicle
NZEV	near-zero-emission vehicle
Offsite Program	Offsite GHG Reduction Program
OurCounty Sustainability Plan	*OurCounty: Los Angeles Countywide Sustainability Plan*
PACE	Property Assessed Clean Energy
Paris Agreement	2016 Paris Climate Agreement
Parks	Department of Parks & Recreation
PEV	plug-in electric vehicle
PFC	perfluorocarbon
PHEV	plug-in hybrid electric vehicle
PM	particulate matter
PV	photovoltaic
PW	Department of Public Works
RGAP	Ridership Growth Action Plan
RMP	Refrigerant Management Program
RPS	Renewables Portfolio Standard
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SB 32	California Global Warming Solutions Act of 2006
SB 100	Renewable Portfolio Standards
SB 606	Water Management Planning
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Monitoring District
SCE	Southern California Edison
SEA	Significant Ecological Area
SF_6	sulfur hexafluoride

SGC	Strategic Growth Council
SLCP	Short-Lived Climate Pollutant
SoCalGas	Southern California Gas Company
SoCalREN	Southern California Regional Energy Network
solar PV	solar photovoltaic
SOV	single-occupancy vehicle
SP	service population
SWIMS	Los Angeles County Public Works Solid Waste Information Management System
SWIS	California Department of Resources Recycling and Recovery's Solid Waste Integrated System
TAZ	traffic analysis zone
TBD	to be determined
TCC	Transformative Climate Communities
TDA	Transportation Development Act
TDM	transportation demand management
TECH	Technology and Equipment for Clean Heating
TEP	Transportation Electrification Partnership
TIRCP	Transit and Intercity Rail Capital Program
Title 24	California Green Building Standards Code
TOD	Transit Oriented District
tpd	tons per day
TSSP	Traffic Signal Synchronization Program
USD	U.S. dollars
USDA	U.S. Department of Agriculture
U.S. EPA	U.S. Environmental Protection Agency
VMT	vehicle miles traveled
WDACS	County Workforce Development, Aging and Community Services
WUI	wildland urban interface
XI	external-internal

XX	external-external
ZEV	zero-emission vehicle
ZNE	Zero Net Energy

GLOSSARY

AB 1668	A legislative standard enacted in 2018 to guide water conservation and use efficiency for indoor and outdoor uses.
AB 1279	The California Climate Crisis Act. This statute codified Executive Order B-55-18's 2045 carbon neutrality target and established an additional GHG emissions target to reduce anthropogenic emissions 85 percent below 1990 levels by 2045.
AB 1398	A statute that extended the state's Cap-and-Trade Program through 2030. A key strategy for reducing GHG emissions in California, the Cap-and-Trade Program sets total allowable emissions for facilities and creates carbon offset credits through carbon sequestration projects.
AB 32	The Global Warming Solutions Act. This statute codified Executive Order S-3-05 and authorized the California Air Resources Board to implement a comprehensive, multiyear program to reduce GHG emissions from all sources throughout the state.
Active transportation	A mode of transportation that includes walking, running, biking, scootering, skateboarding, and other human-powered forms of transportation. It can also include low-speed electrical devices such as motorized wheelchairs, e-scooters, and electric-assist bicycles.

Adaptation	The effort to adjust practices and development in response to climate change to lessen future impacts.
Anaerobic digestion	A process by which organic matter, such as food waste or sewage, is broken down in the absence of oxygen to produce biogas and biofertilizer.
Biodiversity	The variety and variability of flora, fauna, and ecosystems. Biodiversity can be observed on macro levels, micro levels, and in between. Biodiversity is complex, fragile, and increasingly threatened by urbanization and climate change. Rich biodiversity supports many aspects of human life, from food and medicine to environmental quality.
Biodegradable Products Institute (BPI) certification	A certification for environmentally friendly products that meet high-quality compostable standards, and are proven to compost without toxic or lingering plastic residues.
Biogas	A type of gas, composed primarily of methane, derived from the process of bacterial decomposition of sewage, manure, food, plant crops, or other organic waste products.
Biogenic CO_2	Carbon emissions released through the combustion or decomposition of natural and organic sources (i.e., trees, soil, wood).
Biomass conversion	Thermal conversion of organic materials such as wood waste, lawn clippings, agricultural waste, and nonrecyclable paper, when separated from other waste.
Building decarbonization	The process of creating buildings that contribute zero GHG emissions. For example, a newly constructed building can incorporate reused, recycled, and other low-carbon-intensity materials. Operationally, the building is energy efficient and uses renewable, zero-carbon energy sources for heating, cooling, and power.
Carbon dioxide (CO_2)	A GHG made up of one carbon atom and two oxygen atoms that is released primarily through the burning of fossil fuels, other hydrocarbons, solid waste, and trees and wood products. Changes in land use also play a have an impact. Deforestation and soil degradation add carbon dioxide to the atmosphere, while forest regrowth takes it out of the atmosphere. While carbon dioxide is naturally occurring, the proportion of carbon dioxide in our atmosphere is increasing as a result of human activities. Increasing concentration levels of carbon dioxide and other GHGs contribute to climate change.

Carbon efficient	Contributing fewer carbon emissions compared to a conventional process while still providing the same service. A building, machine, or process is carbon efficient if it can deliver more functions or services for the same amount of carbon emissions, or the same function or service for fewer carbon emissions, compared to a conventional alternative.
Carbon neutral	A system or jurisdiction that has net zero GHG emissions, meaning that GHG emissions generated by sources such as transportation, power plants, and industrial processes are less than or equal to the amount of carbon dioxide that is stored, both in natural sinks and through mechanical sequestration. Strategies to achieve carbon neutrality include renewable energy supply, efficient buildings, low-carbon transportation, sustainable materials choices, and deep retrofits to existing buildings and infrastructure. Carbon neutrality may require carbon sequestration technologies to capture the remainder of GHG emissions.
Car share	An integrated network of passenger vehicles available for short-term rental. Car share can take the form of return systems in which a vehicle must be returned to the parking space from which it was rented. Alternatively, it can take the form of point-to-point systems in which the car can be returned to another space or left anywhere within a predetermined geographic zone.
Chargeback	A usage fee for electric vehicle chargers.
Clean manufacturing	Manufacturing processes that minimize waste and pollution production and limit or eliminate the use of toxic chemicals.
Clean Power Alliance (CPA)	A nonprofit community choice energy program now serving 32 jurisdictions across Los Angeles and Ventura counties. The CPA offers participants the option to increase their share of renewable energy, offering three tiers of electric service: Lean Energy at 36 percent renewable, Clean Energy at 50 percent renewable, and 100 percent Renewable.
Climate vulnerability assessment	An analysis of the extent to which a species, habitat, ecosystem, or civilization is susceptible to harm from climate change impacts. Vulnerability assessments are an integral component of climate adaptation planning.
Cogeneration facility	An energy plant that recovers waste heat from conventional power generation to produce thermal energy. Also called a *combined heat and power (CHP) system.*

Community shared solar facilities	Solar photovoltaic (PV) systems that generate and supply electricity to multiple customers within a specific geographic area. Participants typically make payments to reserve a portion of a solar system or the rights to a portion of its output. As the system generates electricity, all participants receive credits on their energy bill.
Compost	The product, rich in nutrients, that results from the decomposition of organic material. Material used to make compost includes landscape trimmings, agricultural crop residues, paper pulp, food scrap, wood chips, manure, and biosolids. These are typically referred to as *feedstock*.
Cool pavement	A type of paving material that reflects more solar energy, enhances water evaporation, or has been otherwise modified to remain cooler than conventional pavements. Cool pavements include a range of established and emerging technologies that communities are exploring as part of their heat island reduction efforts.
Decarbonization	Reduction in the carbon intensity and GHG emissions of a system or sector, such as buildings or transportation.
Disadvantaged communities	The areas that suffer most from a combination of economic, health, and environmental burdens as defined by the California Office of Environmental Health Hazard Assessment. These burdens typically include poverty, unemployment, health conditions, air and water pollution, and hazardous waste.
Distributed energy resources (DERs)	Decentralized sources of energy that are smaller than utility-scale energy sources and can be aggregated to provide the power necessary to meet regular demand.
Economic opportunity	The potential of someone to realize economic success. Similar to economic mobility, economic opportunity can be influenced by many factors, such as where one lives and goes to school or the availability of jobs.
Ecosystem services	The benefits and services (i.e., water purification, nutrient cycling, raw materials availability, pollination) provided to people directly or indirectly by ecosystems, wildlife, and natural systems.
E-scooters/electric scooters	Scooters with an electric motor that assist with user mobility. See also *micromobility*.

Electric vehicles (EVs)	An umbrella term to describe a variety of vehicle types that use electricity as their primary fuel source for propulsion or as a means to improve the efficiency of conventional internal combustion engine. These generally include battery electric vehicles, plug-in hybrid electric vehicles, and fuel cell electric vehicles.
Embodied carbon	The GHG emissions that result from the manufacturing, processing, transportation, installation, maintenance, and disposal of building materials.
Energy efficiency	The use of less energy to provide the same service. A process, building, machine, or other energy-consuming object is more energy efficient if it delivers more functions or services for the same energy input, or the same function or service for less energy input, than a conventional process.
Energy retrofit	Major changes to the structure or systems of an existing building for the purpose of achieving significant reductions in energy consumption (and operational costs) with the use of more efficient technologies, products, and designs. Energy retrofits may also reduce water consumption and improve occupant amenities.
Energy storage system	Technologies that collect generated energy so that it may be used at another time. Energy storage includes both electric systems such as batteries and thermal systems such as hot and cold water storage tanks. Energy storage can enhance the technical and economic viability of a distributed generation system and can operate critical systems during grid outages or in the case of emergency.
Energy use intensity (EUI)	The amount of energy consumed by a building over a period of time and normalized by another factor, such as per square foot or per person. EUI is most often represented as total energy consumption of one building in one year (typically presented in thousand British thermal units [kBtu]) divided by the total gross floor area of the building. These factors allow for the comparison of building performance across buildings of different types and sizes. See also *kBtu*.
Environmental justice	As defined by Government Code Section 65040.12(e), “the fair treatment of people of all races, cultures and incomes with respect to the development, adoption, implementation and enforcement of environmental laws, regulations, and policies.
Equity	An end state in which all groups have access to the resources and opportunities necessary to improve the quality of their lives.

Executive Order B-30-15	An executive order that established a GHG emissions reduction target of 40 percent below 1990 levels by 2030.
Executive Order B-55-18	An executive order by then-Governor Edmund G. Brown Jr. that set a goal to bring California to carbon neutrality by 2045, five years before the Paris Climate Agreement deadline.
Executive Order S-3-05	An executive order that established the state's first GHG emissions reductions targets: reduction to 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050.
First/last mile	The beginning or end of an individual's trip on transit. Strategies may include bike lanes, bike parking, bike share, sidewalks, and crosswalks, bike share, signage, and wayfinding (e.g., information kiosks and mobile apps).
Fossil fuels	Hydrocarbon fuels formed by natural processes such as the anaerobic decomposition of organic matter. This process is time-intensive and fossil fuels are regenerated on the order of magnitude of millions of years. Typical fossil fuels include coal, oil, and natural gas.
Frontline communities	Marginalized groups of people who have historically experienced a disproportionately high share of environmental impacts, while not necessarily equally benefiting from policies to address the environmental effects. People of color and those earning low incomes tend to be most vulnerable to climate change, yet they tend to have fewer resources to prevent, adapt, or recover from climate disasters.
Gigawatt (GW)	A unit of electric power equal to 1,000 megawatts (MW) or one billion watts.
Global Warming Solutions Act (AB 32)	A law enacted by the State of California in 2006 that established a statewide goal to address climate change by reducing GHG emissions to 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050.
Green chemistry	The design of chemical products or processes that reduce or eliminate the generation of hazardous substances.
Green infrastructure	A method for naturally managing rain and floodwaters. Green infrastructure reduces and treats stormwater runoff while also improving the local environment by mimicking natural processes. Green infrastructure includes strategies such as green roofs, bioswales, and permeable pavements.

Greenhouse gas (GHG) emissions	Gases that trap heat in the atmosphere by absorbing and emitting solar radiation within the atmosphere, causing a greenhouse effect that warms the atmosphere and leads to global climate change. The main GHGs are water vapor, carbon dioxide, methane, nitrous oxide, and ozone.
Gray water	Wastewater generated in homes and offices that is sourced from baths, sinks, washing machines, or kitchen appliances. Gray water may contain amounts of dirt, food, grease, or cleaning products, but does not have fecal contamination.
Global warming potential (GWP)	The cumulative radiative forcing, both direct and indirect effects, over a specified time horizon resulting from the emission of a unit mass of gas related to carbon dioxide.
Habitat connectivity	The degree to which patches of land used as habitat by local plants and animals are connected to each other. Habitat connectivity ensures that species are able to move around freely to mate, hunt, forage, or reproduce. Habitat connectivity also allows species the ability to migrate to preferable areas in case of habitat loss or climate event, avoiding habitat fragmentation.
Habitat linkages	An area of land that poses sufficient cover, food, forage, water, or other essential elements to serve as a movement pathway for species between two or more areas of habitat.
Heat island effect	Measurable elevated temperatures in developed areas, as compared to more rural surroundings. Temperatures in developed areas are affected by absorption of heat by hardscapes and radiation of heat into surrounding areas, resulting in local climate changes. Heat islands are influenced by geographic location and by local weather patterns, with effects changing on a daily or seasonal basis.
High-frequency transit	Transit that has reliable, high-frequency service, often with service every 15 minutes or less.
High-global-warming-potential (high-GWP) refrigerants	Potent GHGs with high global warming potential (i.e., hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) that result in greater emissions from an individual unit relative to carbon dioxide.
High quality transit area (HQTA)	Generally, a walkable transit area that is consistent with the adopted Regional Transportation Plan and is within one half-mile of a well-serviced transit stop or a transit corridor providing service frequency of every 15 minutes or less during peak commute hours.

Intergovernmental Panel on Climate Change (IPCC)	A United Nations body that evaluates current impacts and future risks of a changing climate. The IPCC prepares comprehensive scientific reports on climate change and provides technical and policy-relevant guidelines for reducing the rate at which climate change occurs.
Impermeable areas	Solid surfaces, such as paved roads and parking lots, that do not allow water to penetrate into the ground below.
kBtu	One thousand British thermal units. Often used to calculate the energy use intensity per square foot of buildings.
Life-cycle carbon intensity	The overall GHG emissions associated with all stages of the life cycle of a commercial product, process, or service, including each stage of its production and use. For instance, in the case of a manufactured product, GHG emissions from raw-material extraction and processing (cradle), through the product's manufacture, distribution, and use, to the recycling or final disposal of the materials composing it (grave) are part of the product's life-cycle carbon intensity.
Light-duty vehicle	A passenger vehicle with a maximum gross vehicle weight rating of 8,500 pounds.
Medium-duty vehicle	A passenger vehicle with a maximum gross vehicle weight rating from 8,501 to 10,000 pounds.
Methane (CH_4)	A gas made up of one carbon atom and four hydrogen atoms. Methane is the main component of natural gas, commonly used as a fuel for heating. Methane is released during the production and distribution of natural gas, but also through livestock and other agricultural practices and by the decay of organic waste in landfills. Like carbon dioxide, methane is a GHG and exacerbates climate change. However, methane has a much higher global warming potential than carbon dioxide, meaning that methane has a much larger effect than the same amount of carbon dioxide.
Microgrid	An electrical distribution network that is connected to two or more buildings in a local area that can enter into "island mode" (i.e., operates in isolation from the central or local electricity distribution network) and provide power to buildings without using the central grid.
Micromobility	Transportation options that include personal vehicles meant to carry one or two passengers such as bicycles, small electric cars, or scooters.

Micro transit	Public or private multi-passenger transportation services that serve passengers using dynamically generated routes; they provide transit-like service on a smaller, more flexible scale.
Mode	A particular form of travel such as walking, traveling by automobile, traveling by bus, or traveling by train.
Native population	The indigenous inhabitants who have lived or currently live in the geographic area within the current boundaries of Los Angeles County before and after the arrival of Europeans.
Natural forests	Native trees and related vegetation in natural land areas where there are no clearly visible indications of human activities and where the ecological processes are not significantly disturbed.
Natural gas	A non-renewable hydrocarbon consisting largely of methane, a potent greenhouse gas. See also *fossil fuels*.
Near-zero-emission vehicle (NZEV)	Plug-in hybrid electric vehicles powered by both an internal combustion and battery-electric power train that are capable of operating like a zero-emission vehicle for some distances. NZEVs are considered a bridge technology that will help the development of the full zero-emission vehicle market.
Negative-carbon concrete	A process where carbon is captured during the production of concrete and then emitted over time during the concrete's lifetime, resulting in a carbon-negative effect.
Net Zero Carbon	A system, process, building, or community that mitigates any GHG emissions associated with its resource use or does not use energy sources that contribute to GHG emissions.
Net Zero Waste	A system, process, building, or community that sends no waste to landfills by reducing consumption and maximizing recycling and composting.
Net Zero Water	A system, process, building, or community that reduces water consumption and does not rely on off-site water sources to meet any of its water demand. Instead, alternative on-site sources such as rainwater collection or wastewater treatment and reuse are used.
Non-biogenic CO_2	Carbon emissions from the combustion of fossil fuels.
Ordinance	A piece of legislation enacted by a municipal authority.

Organic waste	Biodegradable waste containing materials from living organisms. Organic waste may include food waste, green waste, landscaping and pruning waste, nonhazardous wood waste, or food-soiled paper waste that is mixed in with food waste. Organic waste can be processed through composting or anaerobic digestion.
OurCounty Sustainability Plan	A regional sustainability plan for the 88 cities and unincorporated areas of Los Angeles County. The OurCounty Sustainability Plan does not supersede the General Plan, but adds to LA County's strategic framework for addressing climate change.
Paris Climate Agreement	A global action plan to avoid the catastrophic impacts of climate change. Adopted in December 2015, the Paris Agreement formalized world leaders' efforts to limit the global average temperature increase to 1.5 degrees Celsius above preindustrial levels. The agreement urged national leaders to join forces with states and local governments to commit to net-zero carbon emissions by 2050.
Particulate matter (PM)	A combination of solid and liquid droplets found in the air. Particulate matter can include dust, dirt, soot, or smoke. Some PM is large enough to be seen, but other types are microscopic (fine particulate matter). Fine particulate matter can travel deeply into the human respiratory tract and can cause health effects such as throat irritation, coughing, or asthma.
Precipitation whiplash	A condition under which the region is likely to experience drier periods than historically experienced followed by much wetter periods with more extreme rain events, which can lead to increased water scarcity, mudslides, and flooding.
Public-private partnership	A collaborative arrangement between public agencies and private-sector companies. These partnerships allow large-scale government projects to be completed with private funding, where the private entities are able to receive operating profits.
Plug-in electric vehicle (PEV)	A vehicle that can be recharged from an external source of electricity, such as a wall socket, and that stores this electricity in rechargeable battery packs that power the vehicle's motion.
Reach code	A local building energy code that "reaches" beyond the state's minimum requirements for energy use in building design and construction.
Regenerative agricultural practices	A holistic land management and agriculture practice that reverses the effects of climate change through rebuilding soil organic matter and restoring degraded soil biodiversity. Practices that support regenerative agriculture include well-managed grazing, the use of compost, or minimal tillage.

Renewable energy	Energy coming from resources that are naturally replenished on a human time scale, such as sunlight, wind, tides, waves, bioenergy, hydrogen, and geothermal.
Residual emissions	The emissions remaining after all technically and economically feasible opportunities to reduce emissions in all covered scopes and sectors have been implemented.
Resilience	The capacity to survive, adapt, and thrive in the face of chronic stresses and acute shocks and to even transform as conditions require. See also *shocks and stresses*.
Resilience hubs	As defined by the Urban Sustainability Directors Network, "community-serving facilities augmented to support residents, coordinate communication, distribute resources, and reduce carbon pollution while enhancing quality of life. Hubs provide an opportunity to effectively work at the nexus of community resilience, emergency management, climate change mitigation, and social equity while providing opportunities for communities to become more self-determining, socially connected, and successful before, during, and after disruptions."
SB 32	A statute that codified a target to reduce California's 2030 emissions by 40 percent below 1990 levels.
SB 535	A statute requiring that 25 percent of all funds allocated pursuant to an investment plan for the use of state monies collected through a cap-and-trade program be allocated to projects that benefit disadvantaged communities, and that at least 10 percent of these be spent on projects located in disadvantaged communities.
SB 606	A statute for water management planning that established water efficiency regulations and reporting requirements, and requires setting urban water use objectives.
Shocks and stresses	*Shocks:* Sudden events that threaten or affect the community's immediate well-being. These can include earthquakes, fires, landslides, public health emergencies, civil unrest, terrorism, chemical emergencies, financial crises, extreme heat, flooding, infrastructure outages or disruptions, or building failures. *Stresses:* Longer term, chronic challenges that weaken natural, built, and economic or human resources. These can include inequity, disparities in employment, health and education, crime and violence, homelessness, economic recession, lack of affordable housing, food insecurity, climate change, air pollution, and the heat island effect.

Significant Ecological Areas (SEAs)	Land identified as holding important biological resources representing the wide-ranging biodiversity of Los Angeles County, based on the criteria for SEA designation established by the General Plan and as mapped in the adopted SEA Policy Map.
Single-occupancy vehicle (SOV) trips	Trips in privately operated vehicles that contain only one occupant.
Source separation	The proper separation of different waste streams for waste collection and treatment; for instance, properly separating and discarding of paper recycling from organic waste.
Sunset strategy	A strategy to manage declining industries, such as the oil and gas industry, and phase them out.
Sustainability	Meeting the needs of the present without compromising the ability of future generations to meet their own needs.
Transit-Oriented District (TOD)	A planning strategy that explicitly links land use and transportation by focusing mixed uses, mixed housing, employment, and commercial growth around bus and rail stations (approximately one-quarter to one-half mile radius of a significant transit facility station). TODs can reduce the number and length of vehicle trips by encouraging more bicycle/pedestrian and transit use and can support transit investments by creating the density around stations to boost ridership.
Transportation demand management (TDM)	Strategies to change travel behavior in an effort to reduce traffic congestion, increase safety and mobility, conserve energy, and reduce GHG emissions. These strategies are intended to reduce the demand for roadway travel and increase the overall efficiency of a local or regional transportation system. Strategies may include ridesharing, telecommuting, park-and-ride programs, pedestrian improvements, and alternative work schedules.
Unincorporated areas	Areas that are not within the boundaries of a city. More than 65 percent of Los Angeles County (2,654 square miles) is unincorporated. For the population of over 1 million people living in these areas, the LA County Board of Supervisors acts as their city council and the supervisor representing a specific area acts as the city mayor. County departments provide the municipal services for these areas. There are approximately 120–125 unincorporated areas in Los Angeles County.
Urban agriculture	Agriculture practices in urban areas that take the form of front-yard, backyard, rooftop, or balcony gardening; community gardening in vacant lots or parks; or roadside agriculture and livestock grazing in available open space.

Urban forests	Trees and related vegetation in urban and near-urban areas, including but not limited to street trees, park trees, residential trees, and other trees on other public or private properties.
Urban heat island effect	A phenomenon in urban cities created by dense concentrations of heat-absorbing surfaces (i.e., dark pavements, roofs, buildings) and lack of vegetation surfaces that results in heat retention and contributes to global warming
Vehicle miles traveled (VMT)	A measurement of miles traveled by vehicles within a specified region for a specified time period.
Vision Zero	The commitment to eliminate traffic-related deaths and severe injuries by a certain date.
Vulnerable populations	The population of Los Angeles County including older adults, people with disabilities, children, people of color, and people with chronic medical conditions who are at elevated risk of climate change impacts such as extreme heat, fire, and flooding. These communities typically lack the resources to protect themselves from climate events or recover quickly from damage or illness.
Waste diversion	The process of managing a waste stream such that waste products do not end up in landfills. Waste can be diverted through strategies such as reuse, recycling, composting, or anaerobic digestion.
Waste generation	The total amount of waste created within a jurisdiction (or by a business or residence), both that which is disposed and that which is diverted.
Watershed	An area of land that drains all the streams and rainfall to a common outlet such as the outflow of a reservoir, mouth of a bay, or any point along a stream channel.
Weatherization	The modification of a building to reduce energy consumption and optimize energy efficiency by protecting the interior of a building from environmental elements such as sunlight, precipitation, wind, and temperature.
Working lands	Farms, ranches, forests, other extractive land uses, and managed natural areas that support economic activity and land-based livelihoods. These areas supply life-sustaining resources including clean water, air, and food.
Zero-emission vehicles (ZEVs)	Vehicles that produce no tailpipe emissions. Generally, ZEVs feature electric powertrains. Technically, ZEVs are still responsible for some GHG emissions, if the GHG content from the electricity generation comes from fossil fuel sources.

Zero net energy (ZNE) building	As defined by the U.S. Department of Energy, “An energy-efficient building where, on a source energy basis, the actual annual delivered energy is less than or equal to the on-site renewable exported energy.”

EXECUTIVE SUMMARY

The County of Los Angeles (County) acknowledges the well-established consensus that human activity, especially the combustion of fossil fuels since the beginning of industrialization, is the primary cause of the climate crisis. Now more than ever, climate change has become a real, urgent, and significant threat, with impacts being felt today in Los Angeles County and around the globe. Climate change has already inflicted harm on Los Angeles County residents, especially its most vulnerable, and has the strong potential to negatively affect the safety, public health, economy, and quality of life of future generations. On September 4, 2018, the County Board of Supervisors adopted a motion supporting the 2016 Paris Climate Agreement (Paris Agreement) and added the County to the *We Are Still In* Declaration. By this action, the County is committed to adapting its programs and services to reduce unincorporated Los Angeles County's greenhouse gas (GHG) emissions and help limit global temperature increases.

This *2045 Los Angeles County Climate Action Plan* (2045 CAP) is the County's path toward meeting the goals of the Paris Agreement and achieving carbon neutrality for unincorporated Los Angeles County. The 2045 CAP builds on previous climate action work from the *Unincorporated Los Angeles County Community Climate Action Plan 2020* (2020 CCAP), adopted in October 2015 as a subcomponent of the Air Quality Element of the *Los Angeles County General Plan 2035* (General Plan). The 2045 CAP identifies strategies, measures, and actions to mitigate GHG emissions from community activities, which may include some municipal operations; however, municipal operations are not the focus of this plan.

Actions to reduce GHG emissions provide multiple co-benefits for residents, employees, and employers. These benefits have not always reached disadvantaged communities. For example, residents of affordable housing and multifamily housing have not been well served by local renewable energy programs, such as rooftop solar, leading to cycles of disinvestment and potentially higher

energy bills. Concurrently, many of these same residents are already extremely rent and utility burdened, and the COVID-19 pandemic has exacerbated these problems. The lack of housing and high cost of living in the region mean that increased household expenses could trigger displacement. New and innovative approaches are needed to bring the benefits of renewable energy to all residents while protecting and increasing affordable housing. The 2045 CAP attempts to address these issues to reduce GHG emissions while encouraging the development of affordable and equitable housing.

Since the adoption of the 2020 CCAP, local, state, and international leaders have established new targets for carbon reductions that seek deep and long-term transformations in emissions-generating sectors. In 2016, global leaders signed the Paris Agreement, a plan to limit the global average temperature increase to 1.5 degrees Celsius above pre-industrial levels. In 2016, then–California Governor Jerry Brown signed Senate Bill (SB) 32, which established a 2030 target to reduce GHG emissions by 40 percent below 1990 levels. In 2018, Governor Brown issued Executive Order (EO) B-55-18, which established a new statewide goal to reach carbon neutrality by 2045 and achieve and maintain net negative emissions thereafter. In September 2022, Governor Gavin Newsom signed Assembly Bill (AB) 1279, which codified EO B-55-18 by requiring that the State achieve net zero GHG emissions no later than 2045. AB 1279 also requires the state to reduce direct anthropogenic GHG emissions 85 percent below 1990 levels by 2045. On December 15, 2022, the California Air Resources Board adopted the *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan), which lays out a path to achieve the statewide goals codified in AB 1279.

The objectives of the 2045 CAP are as follows:

1. Identify detailed programs, actions, and performance goals to achieve the climate action policies of the General Plan.
2. Identify GHG emissions reduction targets tailored to the unincorporated County that closely align with state and County climate goals.
3. Provide a road map for reducing GHG emissions to achieve the County's GHG emissions reduction targets.
4. Encourage sustainable housing production at all levels of affordability, including increasing housing densities near transit to the extent allowed in the General Plan.
5. Demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide California Environmental Quality Act (CEQA) streamlining for development projects (serve as a "qualified CAP") via the 2045 Climate Action Plan CEQA Streamlining Checklist (2045 CAP Checklist).

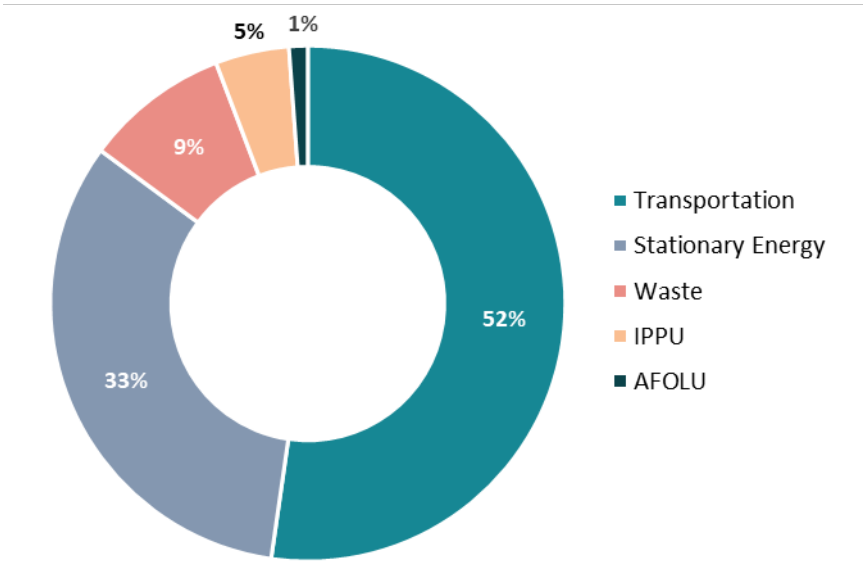
The 2045 CAP is an update to the 2020 CCAP, and it sets new GHG emissions reduction targets beyond the 2020 timeframe that are consistent with state goals pursuant to SB 32, AB 1279, and the 2022 Scoping Plan. The 2045 CAP includes the following elements:

- A GHG emissions inventory from communitywide activities in unincorporated Los Angeles County in 2018, along with a baseline inventory for 2015.
- Projections of future emissions for 2030, 2035, and 2045.
- GHG emissions reduction targets for 2030, 2035, and 2045.
- A long-term aspirational goal for carbon neutrality by 2045.

- Climate strategies, measures, and actions to reduce GHG emissions from major sectors.
- Technical modeling appendix to explain the GHG emissions reduction estimates.
- A consideration of environmental justice and equity concerns.
- Implementation and monitoring measures to ensure successful climate action.
- A new development review checklist to allow future projects to streamline GHG emissions analyses pursuant to the California Environmental Quality Act (CEQA).

Greenhouse Gas Emissions in Unincorporated Los Angeles County

Estimated GHG emissions generated by community activities in unincorporated Los Angeles County in 2018 (the most recent inventory completed) were approximately 5.2 million metric tons of carbon dioxide equivalent ($MTCO_2e$). The largest contributor to these emissions (at 52 percent) is the transportation sector, which consists mostly of on-road vehicles. The second-largest contributor (at 33 percent) is the stationary energy sector, which includes emissions from electricity generation facilities, landfill-to-gas facilities, district energy systems, and the use of natural gas use in buildings. It also includes emissions from fossil fuel extraction and fugitive emissions from oil and natural gas systems. Together, these two sectors constitute approximately 85 percent of all community-scale GHG emissions in unincorporated Los Angeles County. The remaining sources are waste and wastewater generation (9 percent), industrial processes and product use (5 percent), and the agriculture, forestry, and other land use (AFOLU) sector (1 percent). **Figure ES-1** shows a breakdown by sector of 2018 communitywide GHG emissions for unincorporated Los Angeles County.



Abbreviations: AFOLU = agriculture, forestry, and other land use; IPPU = industrial processes and product use

Figure ES-1: 2018 Greenhouse Gas Emissions Inventory for Unincorporated Los Angeles County, by Sector

CAP Strategies to Reduce Greenhouse Gas Emissions

Achieving carbon neutrality will require ambitious climate actions that address GHG emissions from all sectors and sources. To reduce emissions across all sectors, the 2045 CAP establishes three GHG emissions reduction targets and one long-term aspirational goal:

- *Target:* By 2030, reduce GHG emissions by 40 percent below 2015 levels.
- *Target:* By 2035, reduce GHG emissions by 50 percent below 2015 levels.
- *Target:* By 2045, reduce GHG emissions by 83 percent below 2015 levels.
- *Aspirational Goal:* By 2045, achieve carbon neutrality in unincorporated Los Angeles County.

The 2045 CAP includes 10 strategies and 25 measures that, when combined, achieve all three of the GHG emissions reduction targets for 2030, 2035, and 2045. These strategies, measures, and actions also put unincorporated Los Angeles County on an aggressive path toward carbon neutrality and are estimated to reduce annual emissions by more than 1.5 million $MTCO_2e$ in 2030, more than 2 million $MTCO_2e$ in 2035, and nearly 3 million $MTCO_2e$ in 2045. All strategies require that the County employ climate leadership and lead by example, recognizing the County's important role as a convener and leader in the region. Reaching the targets and goals of the 2045 CAP requires regional collaboration and partnerships with various stakeholders, including communities, local governments, and the State of California. The County will continue to foster these partnerships to move toward a low-carbon future.

Energy Supply

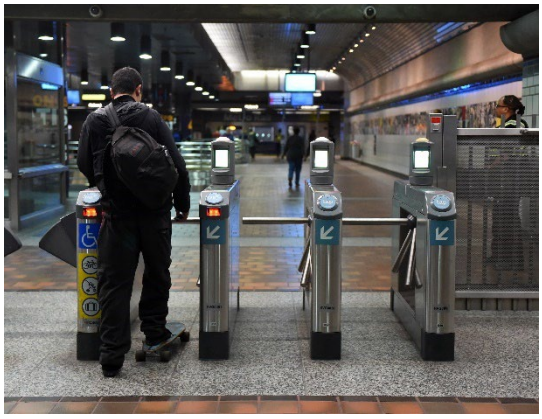
The source of energy used in unincorporated Los Angeles County is essential to the County's goal to reduce GHG emissions associated with energy supply and consumption. This strategy includes a range of measures aimed at decarbonizing the energy used in buildings and energy industries. The approach combines decarbonizing the energy supply, generating energy on-site through renewables, and utilizing load management and peak reductions. The County's participation in the Clean Power Alliance, and its commitment to sourcing 100 percent renewable energy for its electricity supply by 2025, will enable this shift and ensure a low-carbon energy future.

Energy Supply Strategy

- Decarbonize the energy supply.

Transportation

The transportation sector makes up 52 percent of communitywide GHG emissions. Transportation strategies emphasize and promote alternatives to single-occupancy trips, including public transit, active transportation such as biking and walking, and land use planning that better connects housing to jobs and services. Transportation strategies also include the transition to zero-emission vehicles throughout unincorporated Los Angeles County. The success of the transportation strategies will rely on the availability of low-carbon electricity as a fuel source, including expanded electric vehicle infrastructure, as well as the adoption and expansion of zero-emission technologies.



Transportation Strategies

- Increase densities and diversity of land uses near transit.
- Reduce single-occupancy vehicle trips.
- Institutionalize low-carbon transportation.

Building Energy and Water

Buildings are a major source of emissions because of their heating, cooling, and power needs. Efforts to decarbonize building energy use will require a mix of energy efficiency programs and a shift to carbon-free alternatives for fossil fuel appliances.

Building Energy and Water Strategies

- Decarbonize buildings.
- Improve efficiency of existing building energy use.
- Conserve water.

Waste

The County is committed to a sustainable waste future. Creating this future will require programs that both support stakeholder engagement and education and develop the necessary infrastructure to support zero-waste goals. Strategies in the 2045 CAP expand efforts to reduce and reuse waste at the source and divert waste from landfills through participation in recycling programs, and by converting organic waste, which is responsible for the majority of the waste sector's emissions, to compost and fertilizers.

Waste Strategy

- Minimize waste and recover energy and materials from the waste stream.

Agriculture, Forestry, and Other Land Use

The AFOLU sector's strategies focus on conservation and restoration of existing forest lands and urban forests to sequester carbon and support local ecosystems. These strategies promote clean water, air, and food, in addition to a reduced urban heat island effect. Preserving and supporting unincorporated Los Angeles County's forests, parks, and working lands is essential to reducing climate change impacts and protecting the communities, economies, and ecosystems that depend on the land.

Agriculture, Forestry, and Other Land Use Strategies

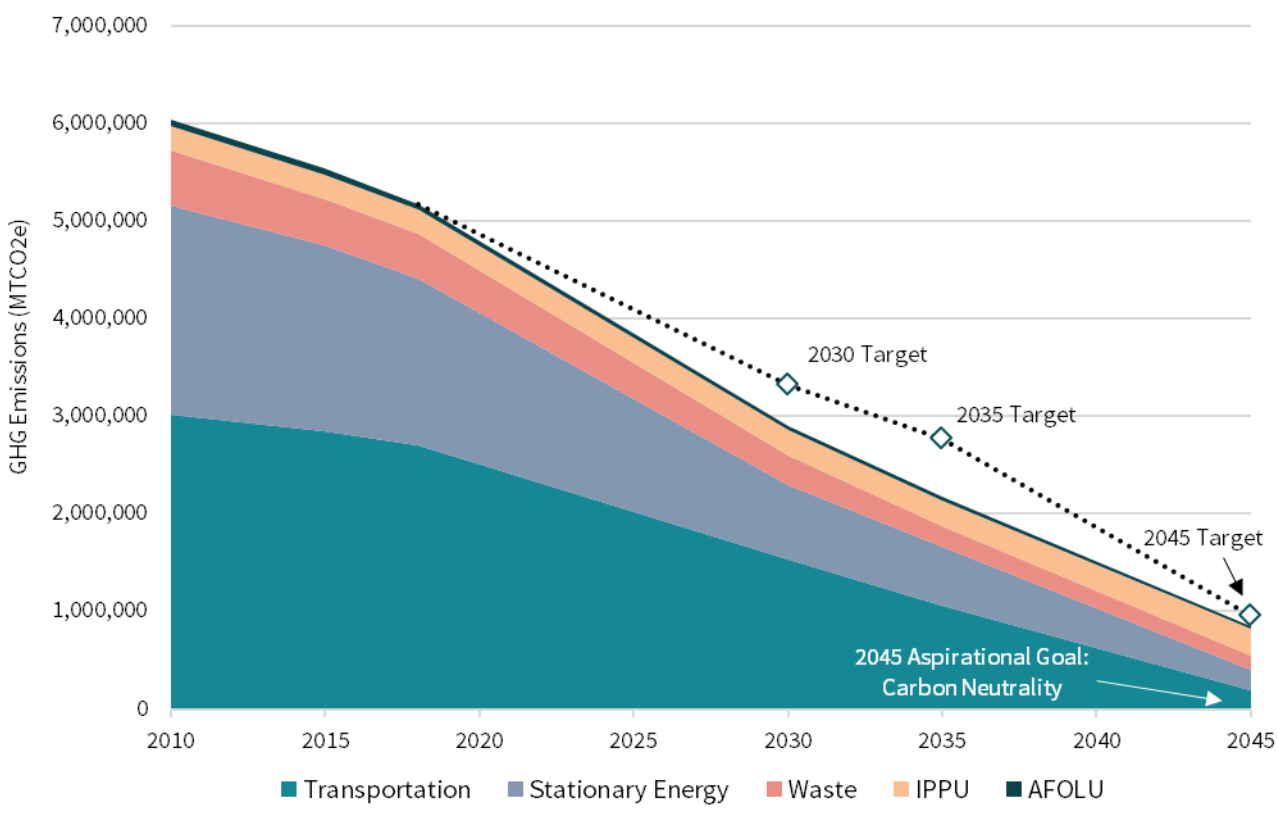
- Conserve and connect wildlands and working lands.
- Sequester carbon and implement sustainable agriculture.

The Path to Carbon Neutrality

The 2045 CAP puts unincorporated Los Angeles County on a path to achieve carbon neutrality by reducing emissions from each sector. **Figure ES-2** shows unincorporated Los Angeles County's path toward the 2045 carbon-neutral goal, representing implementation of the 2045 CAP, which should enable unincorporated Los Angeles County to meet or exceed its 2030, 2035, and 2045 emissions targets, and make substantial progress toward carbon neutrality. As shown, the largest decline in emissions will result from changes to the transportation and stationary energy sectors, including from existing state regulations mandating the use of more fuel-efficient vehicles and requiring that higher percentages of renewable power be provided by electric utilities.

However, a portion of unincorporated Los Angeles County's emissions cannot currently be shown to be fully eliminated by 2045, given existing technology limitations. These remaining emissions, also known as *residual emissions*, include a small amount of natural gas use in buildings as well as emissions from fossil fuel–powered vehicles and off-road equipment, oil and gas industries, manufacturing facilities, landfills, wastewater treatment, fluorinated products, and fertilizer use. Total residual emissions in 2045 are estimated to be approximately 850,000 $MTCO_2e$.
The County expects that new technologies developed over the next 25 years, along with evolving state regulations and financial incentives, will further reduce these residual emissions. The County will continually monitor the state of these technologies and will update the 2045 CAP every five years to adjust policies and programs to take advantage of these advancements.

If residual emissions cannot be eliminated through new technologies or be reduced over time in response to changes in communitywide activities, the County may consider future implementation of carbon removal strategies (such as carbon capture and sequestration and direct air capture), along with future implementation of a carbon offsets/credits program, after the completion of feasibility studies, to achieve carbon neutrality by 2045. Evolving state regulations, programs, and financial incentives will provide new opportunities for the County to counteract any residual emissions. For example, almost $9 billion in carbon capture and sequestration support was included in the $1 trillion Infrastructure Investment and Jobs Act of 2021, which includes funding to establish four direct air capture hubs. As another example, SB 27 of 2001 will provide carbon removal projects via an in-state project registry, which will serve as a database of projects in the state that drive climate action on natural and working lands.



Abbreviations: AFOLU = agriculture, forestry, and other land use; GHG = greenhouse gas; IPPU = industrial processes and product use; $MTCO_2e$ = metric tons of carbon dioxide equivalent

Figure ES-2: Greenhouse Gas Emissions Reduction Path to 2045 Carbon Neutrality and 2045 CAP Targets

CHAPTER 1

Introduction

1.1 Purpose and Scope

There is well-established scientific consensus that human activities are responsible for an increase in heat-trapping greenhouse gas (GHG) emissions in the atmosphere, causing average global temperatures to rise over time. This rise in temperature is changing global climate patterns and increasing the likelihood of weather-related natural disasters, the effects of which are disproportionately felt by the most vulnerable communities in Los Angeles County and worldwide. Climate change has the potential to threaten the safety, public health, economic health, and quality of life of this generation and future generations.

To address climate change and safeguard local communities, in 2006, the State of California adopted Assembly Bill (AB) 32, the Global Warming Solutions Act, which established a statewide goal to achieve 1990 emissions levels by 2020. In turn, local governments throughout the state developed climate action plans (CAPs) to reduce emissions and support the state's goals. In 2015, the County of Los Angeles (County) adopted the *Unincorporated Los Angeles County Community Climate Action Plan 2020* (2020 CCAP) as a component of the Air Quality Element of the *Los Angeles County General Plan 2035* (General Plan) and set a target to reduce emissions in unincorporated Los Angeles County by 11 percent by 2020.

Worldwide, leaders are establishing goals to achieve deep reductions in carbon emissions. In December 2015, world leaders adopted the 2016 Paris Climate Agreement (Paris Agreement), a global action plan to avoid catastrophic impacts of climate change, formalizing their concerted efforts to limit the global average temperature increase to 1.5 degrees Celsius above preindustrial levels. The agreement urged national leaders to join forces with states and local governments to

commit to net zero carbon emissions by 2050. In September 2018, the County Board of Supervisors signed the *We Are Still In* Declaration, affirming the County's continued commitment to uphold the target set by the Paris Agreement. In November 2019, then-Governor Jerry Brown's Executive Order (EO) B-55-18 set a new goal to bring the state to carbon neutrality by 2045, which is five years before the Paris Agreement deadline. In September 2022, Governor Gavin Newsom signed AB 1279, which codified EO B-55-18 by requiring that the State of California achieve net zero GHG emissions no later than 2045, and by requiring the state to reduce direct anthropogenic GHG emissions 85 percent below 1990 levels by 2045. On December 15, 2022, the California Air Resources Board (CARB) adopted the *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan), which lays out a path for achieving the statewide goals codified in AB 1279.

This *2045 Los Angeles County Climate Action Plan* (2045 CAP) builds upon these existing and ongoing efforts and focuses on actions to reduce GHG emissions associated with community activities in unincorporated Los Angeles County (**Figure 1-1**). The 2045 CAP, which replaces the 2020 CCAP and sets new targets and goals beyond 2020, ties together existing climate change initiatives and provides a blueprint for deep carbon reductions.

The objectives of the 2045 CAP are as follows:

1. Identify detailed programs, actions, and performance goals to achieve the climate action policies of the General Plan.
2. Identify GHG emissions reduction targets tailored to the unincorporated County that closely align with state and County climate goals.
3. Provide a road map for reducing GHG emissions to achieve the County's GHG emissions reduction targets.
4. Encourage sustainable housing production at all levels of affordability, including increasing housing densities near transit to the extent allowed in the General Plan.
5. Demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide California Environmental Quality Act (CEQA) streamlining for development projects (serve as a "qualified CAP") via the 2045 Climate Action Plan CEQA Streamlining Checklist (2045 CAP Checklist).

The 2045 CAP achieves unincorporated Los Angeles County's emissions reduction targets for 2030, 2035, and 2045. The 2045 CAP also includes an aspirational goal to achieve carbon neutrality by 2045 to align with the *We Are Still In* Declaration and the State of California's carbon reduction targets and goals.

The 2045 CAP guides County actions through a comprehensive suite of strategies, measures, and actions that are geographically specific to unincorporated Los Angeles County and is to be implemented through County and external agency partnerships. It accounts for GHG emission reduction programs and requirements implemented by the County in recent years that were not included in the 2020 CCAP, while identifying new programs and requirements that may require the development of ordinances. Given the broad reach of climate action, the 2045 CAP pairs with other components of the General Plan such as the Housing and Safety Elements to achieve co-benefits.

The 2045 CAP is an aspirational vision to help prioritize, fund, and create a policy framework for future ordinances, plans and policies. The 2045 CAP is not a regulatory document but rather a plan-level framework for the County to implement, and instead sets strategies, goals, and actions to reach emissions reductions targets, which include zero emissions vehicles market share. The County recognizes that GHG reduction goals cannot be achieved by individual projects alone, but instead requires a comprehensive Countywide approach that would include the enactment of future plans, changes to existing ordinances, and an integrated and sustainable approach. Accordingly, the 2045 CAP serves dual purposes: (i) to provide a policy framework to guide future County actions, which, depending on the goal, policy, or action, would require further approval by the Board to be legally enforceable, as necessary and applicable; and (ii) to allow qualifying future development projects to streamline the GHG analysis component of the project's environmental review by utilizing a voluntary checklist listed in Appendix F of the 2045 CAP.

As an implementation program of the General Plan Air Quality Element, the 2045 CAP identifies County actions for carrying out the policies of the Air Quality Element. The actions identify lead and partner agencies; however, they are not exclusive and new partners can be added as needed. The actions also include general timeframes that assume the availability of adequate funding. Appendix E, *Implementation Details*, lists the aforementioned details and can be administratively updated as implementation of the 2045 CAP advances to reflect changes such as tracking metrics as new data sources are available or new funding sources are identified.

Future development projects are subject to the applicability provisions of the General Plan and are required to meet the goals and policies of the General Plan along with adopted regulatory requirements. The 2045 CAP creates a voluntary opportunity for qualifying future development projects to streamline the GHG analysis component of the project’s environmental review. Appendix F, *2045 Climate Action Plan CEQA Streamlining Checklist*, discusses the opportunity and can be updated administratively as implementation of the 2045 CAP advances to reflect changes that include but are not limited to new ordinances that are adopted.

The 2045 CAP includes a GHG emissions inventory; projections for future emissions; and a road map for addressing emissions from the transportation, stationary energy (used by buildings and other facilities), waste, industrial, agricultural, and land use sectors. GHG emissions reduction strategies, measures, and actions identified in the 2045 CAP will also yield community co-benefits, such as improvements in air quality, public health, mobility, equity, and climate resilience. The 2045 CAP also includes an implementation and monitoring program.

Please note the use of the following terms throughout this document:

- **"Unincorporated Los Angeles County**" refers to the unincorporated areas of Los Angeles County.
- "**Countywide**" refers to Los Angeles County in its entirety, inclusive of both unincorporated areas and all 88 incorporated cities.
- "**County**" refers to County of Los Angeles government.

Strategies are the overall, sector-level goals of the 2045 CAP. These are broad strategies that aim for overarching goals within each emissions sector.

Measures are focused, sub-sector-specific programs and goals that include performance standards that are designed to be quantified for GHG emission reductions.

Actions are the specific policies, programs, or tools that will be implemented to support long-range planning.

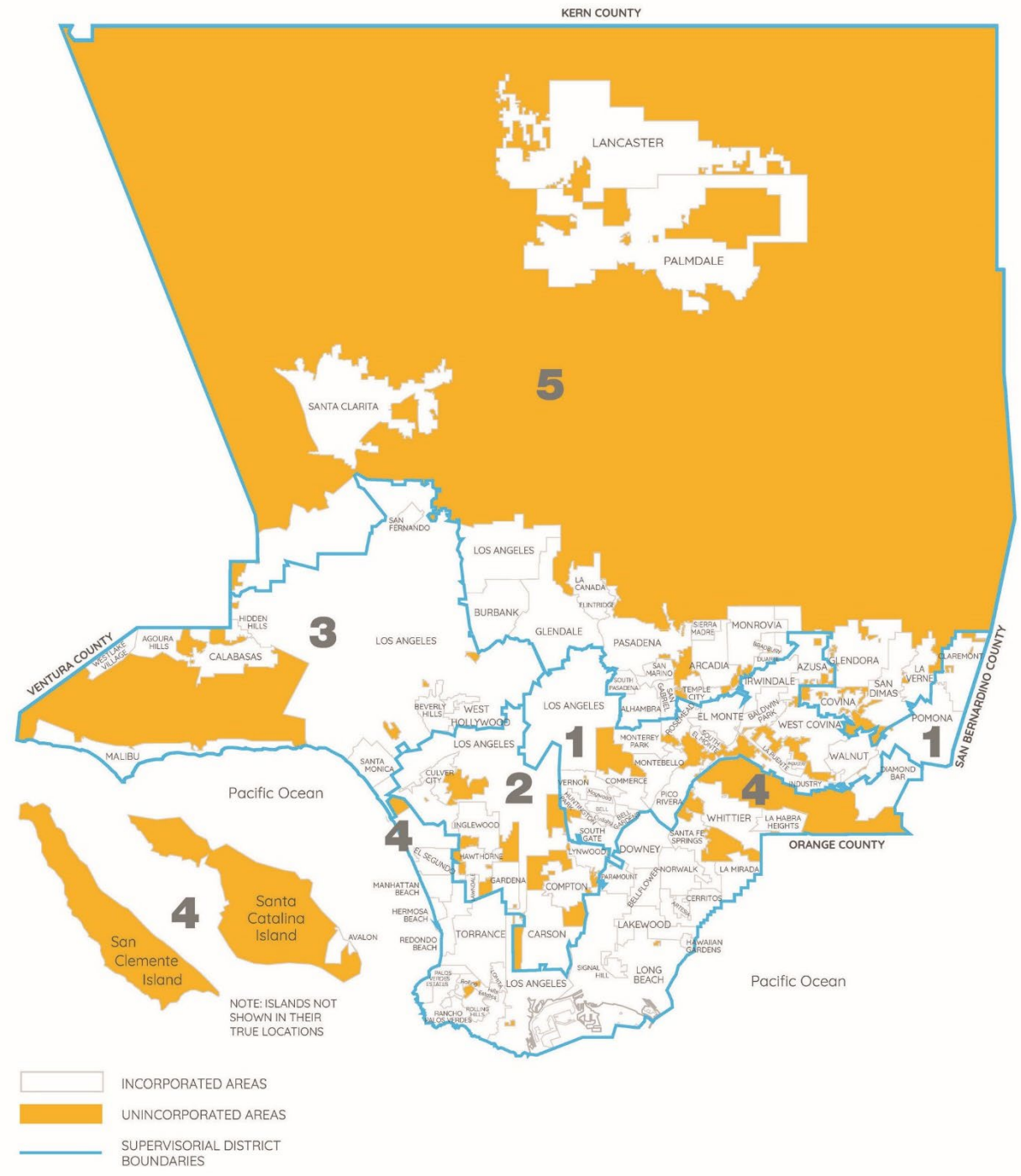


Figure 1-1: Map of Unincorporated Los Angeles County

Using the 2045 Climate Action Plan for CEQA Streamlining

This 2045 CAP can be used to comply with project-level review requirements pursuant to the California Environmental Quality Act (CEQA). The CEQA Guidelines specify that the CEQA evaluation of a project's GHG emissions can be streamlined if the CAP does the following (CEQA Guidelines Section 15183.5(b)):

- Quantifies GHG emissions, both existing and projected, from activities within a defined geographic area over a specified time period.
- Establishes a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable.
- Identifies and analyzes the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specifies measures or a group of measures, including performance standards, that would collectively achieve the specified emissions level if implemented on a project-by-project basis, as demonstrated by substantial evidence.
- Establishes a mechanism for monitoring the plan's progress toward achieving the target, and requires an amendment if the plan is not achieving specified levels.
- Is adopted in a public process following environmental review.

The 2045 CAP meets the requirements of CEQA Guidelines Section 15183.5(b) by:

(1) Quantifying all primary sectors of GHG emissions associated with all activities occurring within unincorporated Los Angeles County over which the County has some level of jurisdictional control or influence[1] for 2015 through 2045;

(2) Establishing GHG emissions reduction targets for 2030, 2035, and 2045, below which GHG emissions would not be cumulatively considerable based on the substantial evidence that the 2045 CAP is consistent with the 2022 Scoping Plan, Senate Bill (SB) 32, and AB 1279,[2] as well as an aspirational goal for 2045;

(3) Analyzing community emissions for unincorporated Los Angeles County as a whole and including predicted growth expected by 2045;

(4) Including specific mandatory and voluntary measures that quantitatively achieve the overall reduction targets for 2030, 2035, and 2045, and make progress toward the aspirational goal for 2045;

[1] The inventories and forecasts include sources over which the County has some level of jurisdictional control or influence (such as building energy use) and exclude those sources over which the County has no jurisdictional control or influence (such as military vehicles and power plants). This is consistent with standard CAP practice and guidance from CARB and California air districts.

[2] Consistency with the 2022 Scoping Plan, SB 32, and AB 1279 is an appropriate metric by which to determine the significance of the 2045 CAP's GHG emissions through 2045. As stipulated by CEQA Guidelines Section 15064.4(b)(3), a lead agency "may consider a project's consistency with the state's long-term climate goals or strategies" when determining the significance of a project's cumulative GHG emissions impacts. Because the 2045 CAP's 2030 and 2045 targets meet or exceed statewide targets, the 2045 CAP's targets represent the level below which GHG emissions would not be cumulatively considerable.

(5) Including an implementation and monitoring program that contains performance indicators and targets, details regarding funding and financing strategies, a list of available and expected funding sources, and a table for monitoring and reporting progress on the measures and their implementing actions; and

(6) Being adopted through a public process in compliance with CEQA.

Projects that incorporate applicable CEQA streamlining requirements, as identified in the 2045 CAP CEQA Streamlining Consistency Review Checklist (Checklist), and are consistent with the General Plan can streamline their CEQA analysis of GHG impacts without needing a separate quantitative analysis. However, a qualitative checklist-based analysis is encourage to demonstrate consistency with the 2045 CAP. The Checklist is only required if a project applicant wants to use CEQA streamlining for GHG impacts; it is not required if a project-level environmental analysis of GHG impacts is conducted. As such, the Checklist is voluntary. To demonstrate compliance with the 2045 CAP CEQA Streamlining Requirements, all projects that do not screen out of the 2045 CAP consistency review process must implement either (1) all feasible applicable checklist measures or (2) for infeasible checklist measures, alternative project emissions reduction measures. The project review checklist will be used for projects consistent with the 2045 CAP, to demonstrate CAP consistency that allows for a streamlined project-specific CEQA GHG analysis.

1.2 Climate Change Impacts

This 2045 CAP focuses on reducing GHG emissions. The region, however, is already experiencing the impacts of a changing climate. Furthermore, mitigation and adaptation efforts are interrelated. Taking action to prevent climate change can help reduce the speed and magnitude of climate change impacts on a community. While climate change adaptation is not the primary focus of the 2045 CAP, many GHG emissions reduction strategies in the 2045 CAP also will increase climate resilience. Many climate strategies achieve both mitigation and adaptation benefits. GHG emissions reduction strategies and measures that help increase community resilience to climate change are identified in Chapter 3. Concurrent efforts seek to minimize the impacts of climate change through actions that adapt and prepare communities for climate change.

California's Climate Change Assessment

California's Fourth Climate Change Assessment, released in 2018, highlighted key projected climate impacts on the Los Angeles region, taking into account both low-emissions and high-emissions future scenarios, with the latter containing more extreme impacts that are projected to occur if emissions are not cut substantially.[3] These climate impacts include the following:

- **Warming and Extreme Heat.** Extreme temperatures in the Los Angeles region are expected to increase in both intensity and frequency. Under a higher emissions scenario, the hottest day of the year may be up to 10 degrees Fahrenheit warmer by late in the century. Average maximum daily temperatures are projected to increase around 4–5 degrees Fahrenheit by mid-century and 5–8 degrees Fahrenheit by late in the century.

[3] Governor's Office of Planning and Research, California Energy Commission, and California Natural Resources Agency. n.d. *California's Fourth Climate Assessment: Los Angeles Region Report*. Available: https://www.energy.ca.gov/sites/default/files/2019-11/Reg%20Report-%20SUM-CCCA4-2018-007%20LosAngeles_ADA.pdf. Accessed in April 2022.

- **Drought and Precipitation.** While average precipitation is projected to change only slightly overall, the dry and wet extremes are projected to increase. This "precipitation whiplash" means that the region is likely to experience drier periods than what the region has historically experienced, followed by much wetter periods with more extreme rain events, potentially leading to increased water scarcity, mudslides, and flooding.
- **Wildfire.** Wildfires are projected to continue to increase in size, frequency, and intensity. Thirteen of the 20 most destructive wildfires in California have occurred in the past five years.[4]
- **Sea Level Rise.** Sea levels are projected to rise roughly 1–2 feet by mid-century and as much as 8–10 feet by the end of the century based on the most extreme projections. Sea level rise can exacerbate the impacts of high tides, storm surges, and heavy precipitation, and can lead to increased coastal flooding.
- **Ocean Acidification.** As levels of atmospheric carbon dioxide (CO_2) increase as a result of human activity such as burning fossil fuels, the amount of CO_2 absorbed by the ocean also increases. When CO_2 is absorbed by seawater, a series of chemical reactions occur, resulting in increased acidity. Ocean acidification can impair the ability of calcifying organisms like corals to build and maintain their shells, skeletons, and other calcium carbonate structures. Since the Industrial Revolution, the acidity of surface ocean waters has increased by 30 percent.[5]

LA County Climate Vulnerability Assessment

The *LA County Climate Vulnerability Assessment* (Climate Vulnerability Assessment) assesses risks and challenges to Los Angeles County from climate change.[6] The assessment builds on the findings of *California's Fourth Climate Change Assessment*, with an emphasis on social vulnerabilities and the dangers of cascading impacts, where harms to one type of infrastructure can affect other facilities or systems, related services, and the people who rely on them. The social vulnerability assessment overlays climate hazard exposure with social sensitivities, such as preexisting health conditions, age, and income, to determine where higher social vulnerability is present, and highlights the inequities in access to resources that help communities adapt to climate change. The physical vulnerability assessment evaluates the climate vulnerability of different physical infrastructure and facilities Countywide, including level of sensitivity to climate hazards and adaptive capacity to respond to hazards. The Climate Vulnerability Assessment highlights key findings related to infrastructure, such as the role of parks in mitigating extreme heat hazards. Energy infrastructure is recognized as one of the physical assets at highest risk from various hazards that include extreme heat, stormwater flooding, and coastal flooding.

In outlining the region's vulnerabilities to climate hazards, the assessment identifies the following high-level measures and actions that the County and community stakeholders can take to increase resiliency and response to climate change.

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[4] California Department of Forestry and Fire Protection. 2022. Top 20 Most Destructive California Wildfires. Available: https://www.fire.ca.gov/stats-events/. Last updated January 13, 2022. Accessed in January 2022.

[5] National Oceanic and Atmospheric Administration. 2020. Ocean Acidification. Available: https://www.noaa.gov/education/resource-collections/ocean-coasts/ocean-acidification. Last updated April 1, 2020. Accessed in February 2023.

[6] Los Angeles County Chief Sustainability Office. 2021. *LA County Climate Vulnerability Assessment*. October 2021. Available: https://ceo.lacounty.gov/cso-actions/. Accessed in February 2022.

County

- Implement multi-beneficial climate adaptation and mitigation measures that address multiple hazards and prioritize historically disadvantaged communities.
- Collaborate with local and regional jurisdictions to implement a comprehensive climate resilience strategy that addresses area-specific and regional climate vulnerabilities.
- Advocate for equitable legislation and funding to support vulnerable people and places, and climate projects for these communities.
- Inform communities about climate hazards and preparation and mitigation measures.
- Continue research on climate change hazards and risks to eliminate gaps and inform adaptive capacity.

Community Stakeholders

- Support communities' climate planning and adaptation efforts by illuminating needs and gaps.
- Build on information-sharing and awareness of climate issues in communities and for local residents.
- Enhance social connections to build community resilience and adaptive capacity.

1.3 Existing Laws, Regulations, and Policies

Federal and state laws can enable and inform local actions. As such, the 2045 CAP considers applicable federal and state laws (**Table 1-1**) and recognizes that future amendments to measures may be needed to address future federal and state regulations.

Table 1-1: Relevant Federal Laws and Regulations

LEGISLATION / REGULATION	YEAR	DESCRIPTION
Clean Air Act	1970	Established a comprehensive framework for reducing harmful air pollution.
Corporate Average Fuel Economy Standards	1975	Established fuel efficiency standards for passenger cars and light trucks.
Code of Federal Regulations, Title 40, Part 89	1994	Established emissions standards for off-road compression-ignition engines.
Massachusetts v. Environmental Protection Agency	2007	The U.S. Supreme Court ruled that carbon dioxide is an air pollutant under the Clean Air Act and authorized the U.S. Environmental Protection Agency to regulate greenhouse gas emissions.
Phase 2 Heavy-Duty National Program*	2016	Established emissions standards for heavy-duty trucks through model year 2027.

NOTE:

** Portions of Phase 2 were rolled back in July 2018.*

According to the U.S. Environmental Protection Agency, transportation emissions have accounted for the largest portion of U.S. GHG emissions in recent years.[7] Federal climate change legislation has therefore focused on curbing emissions from the transportation sector by regulating fuel consumption standards for light-duty vehicles, and for medium- and heavy-duty trucks and engines. These fuel efficiency standards are defined for new vehicle model years and are regulated under the Clean Air Act and the Corporate Average Fuel Economy program.

Over the past 30 years, the State of California has enacted legislation to address climate change (**Table 1-2**). In 2006, the Global Warming Solutions Act (AB 32) was enacted to address emissions from all sources throughout the state. AB 32 authorized CARB to implement a comprehensive program to achieve the state's targets of reducing GHG emissions to 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050. By 2016, California met the AB 32 target set for 2020. In the same year, then-Governor Jerry Brown signed SB 32, which established a new 2030 target to reduce GHG emissions by 40 percent below 1990 levels, as established by his EO B-30-15 (2015). In 2018, Governor Brown issued EO B-55-18, establishing a statewide goal to reach carbon neutrality by 2045, and maintain net negative emissions thereafter. In September 2022, Governor Newsom signed AB 1279, which codified EO B-55-18 by requiring that the state achieve net zero GHG emissions no later than 2045 and reduce direct anthropogenic GHG emissions 85 percent below 1990 levels by 2045. In December 2022, CARB adopted the 2022 Scoping Plan, which lays out a path to achieve the statewide goals codified in AB 1279.

Table 1-2: Relevant State Laws, Regulations, and Policies

LEGISLATION / REGULATION	YEAR	DESCRIPTION
Transportation		
AB 1493 Clean Car Standards	2002	Established emissions reduction requirements for new passenger vehicles from 2009 to 2016.
EO S-01-07 Low Carbon Fuel Standard	2007	Established the State of California's Low Carbon Fuel Standard and an emissions reduction target of at least 10 percent of the carbon intensity of the state's transportation fuels by 2020. With the adoption of the 2022 Scoping Plan, the standard has been revised to a reduction of at least 20 percent.
SB 375	2008	Directed the California Air Resources Board to set regional targets for GHG emissions reductions from passenger vehicles.
AB 1493 Amendments	2009	Cemented the state's enforcement of the legislation starting in 2009, while providing vehicle manufacturers with new compliance flexibility.
Advanced Clean Cars Program	2012	Combined the control of smog-causing pollutants and GHG emissions into a single coordinated package of regulations to guide the development of environmentally advanced cars.
Mobile Source Strategy	2016	Described the strategy for transitioning to zero-emission vehicles, or ZEVs, with a goal of 1.5 million ZEVs by 2025 and 4.2 million ZEVs by 2030. The Mobile Source Strategy includes more stringent GHG emissions requirements for light-duty vehicles beyond 2025, and calls for increased deployment of ZEV trucks.
Advanced Clean Cars Update	2017	Affirmed that adopted GHG emissions reduction standards remain appropriate for 2022 through 2025 model years.

[7] U.S. Environmental Protection Agency. 2022. Inventory of U.S. Greenhouse Gas Emissions and Sinks. Available: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks. Accessed in February 2022.

Table 1-2: Relevant State Laws, Regulations, and Policies (cont.)

LEGISLATION / REGULATION	YEAR	DESCRIPTION
AB 2127	2018	Requires the CEC, working with CARB and the CPUC, to prepare and biennially update a statewide assessment of the EV charging infrastructure needed to support the levels of EV adoption required for the state to meet its goals of putting at least 5 million ZEVs on California roads by 2030 and reducing emissions of GHGs to 40% below 1990 levels by 2030.
EO B-48-15	2018	Established a statewide goal of at least 5 million ZEVs on state roads by 2030, and installation of 200 hydrogen fueling stations and 250,000 ZEV chargers.
EO N-79-20	2020	Established a target that 100 percent of in-state sales of new passenger cars and trucks be zero-emission by 2035 and that 100 percent of medium- and heavy-duty vehicles in the state be zero-emission by 2045 and by 2035 for drayage trucks.
Advanced Clean Cars II Program	2022	Requires that by 2035 all new passenger cars, trucks, and SUVs sold in California will be zero emissions. It amends the Zero-Emission Vehicle Regulation to require an increasing number of ZEVs, and relies on advanced vehicle technologies, including battery-electric, hydrogen fuel cell electric, and plug-in hybrid EVs, to meet air quality and climate change emissions standards. It also amends the Low-Emission Vehicle Regulations to include increasingly stringent standards for gasoline cars and heavier passenger trucks to continue to reduce smog-forming emissions while the sector transitions toward 100% electrification by 2035.
Energy		
SB 1078	2002	Required that 20% of electricity retail sales be served by renewable resources by 2017.
CALGreen Code (Title 24, Part 11)	2011	Established the first mandatory green building standards code in the country.
SB 350	2015	Accelerated implementation of SB 1078 and mandated a 50% Renewables Portfolio Standard, or RPS, by 2030. SB 350 includes interim annual RPS targets with three-year compliance periods and requires that 65% of RPS procurement be derived from long-term contracts of 10 or more years.
CALGreen Code Update	2016	Affirmed energy standards for newly constructed buildings, and additions and alterations to existing buildings. Added requirements for demand reductions during critical peak periods and future solar electric and thermal system installations.
SB 100 California Renewables Portfolio Standard Program	2018	Established a goal of supplying 100% of the state's electricity from clean sources by 2045.
SB 596	2021	Requires CARB, by July 1, 2023, to develop a comprehensive strategy for the state's cement sector to achieve net zero emissions of GHGs associated with cement used in California as soon as possible, but no later than December 31, 2045. The law establishes an interim target of 40% below the 2019 average GHG intensity of cement by December 31, 2035.
SB 1020	2022	Adds interim renewable energy and zero-carbon energy retail sales of electricity targets to California end-use customers set at 90% in 2035 and 95% in 2040. It accelerates the timeline required to have 100% renewable energy and zero-carbon energy procured to serve state agencies from the original target year of 2045 to 2035. This law requires each state agency to individually achieve the 100% goal by 2035, with specified requirements.
SB 905	2022	Requires CARB to create the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate carbon capture, utilization, or storage and CO_2 removal projects and technology.

Table 1-2: Relevant State Laws, Regulations, and Policies (cont.)

LEGISLATION / REGULATION	YEAR	DESCRIPTION
SB 1137	2022	Prohibits the development of new oil and gas wells or infrastructure in health protection zones, as defined, except for purposes of public health and safety or other limited exceptions. This law requires operators of existing oil and gas wells or infrastructure within health protection zones to undertake specified monitoring, public notice, and nuisance requirements.
SB 1075	2022	Requires CARB, by June 1, 2024, to prepare an evaluation that includes policy recommendations regarding the use of hydrogen, and specifically the use of green hydrogen, in California; a description of strategies supporting hydrogen infrastructure, including identifying policies that promote the reduction of GHGs and short-lived climate pollutants; a description of other forms of hydrogen to achieve emission reductions; and other required elements.
SB 1206	2022	Mandates a stepped sales prohibition on newly produced high-GWP HFCs to transition California's economy toward recycled and reclaimed HFCs for servicing existing HFC-based equipment. This law also requires CARB to develop regulations to increase the adoption of very low-, i.e., GWP <10, and no-GWP technologies in sectors that currently rely on higher-GWP HFCs.
Waste and Water		
AB 341	2011	Required each city, county, and regional agency to develop a source reduction and recycling element of an integrated waste management plan containing specified components, including a source reduction component, a recycling component, and a composting component. With certain exceptions, the source reduction and recycling element of that plan was required to divert 75% of all solid waste from landfill disposal or transformation by 2020, through source reduction, recycling, and composting activities.
AB 1826	2014	Required any business, defined as a commercial or public entity that generates more than 4 cubic yards of commercial solid waste per week or is a multifamily residential dwelling of 5 units or more, to arrange for recycling services.
SB 1383	2016	Established emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants, including methane by 40%, HFC gases by 40%, and anthropogenic black carbon by 50% below 2013 levels by 2030.
SB 606 and AB 1668	2018	Required urban and agricultural water suppliers to enact new urban efficiency standards for indoor use, outdoor use, and water lost to leaks.
Agriculture, Forestry, and Other Land Use		
EO N-82-20	2020	Sets a statewide goal to conserve at least 30% of California's land and coastal waters by 2030. This order instructed the CNRA, in consultation with other state agencies, to develop a Natural and Working Lands Climate Smart Strategy that serves as a framework to advance the state's carbon neutrality goal and build climate resilience.
SB 27	2021	Requires the CNRA, in coordination with other state agencies, to establish the Natural and Working Lands Climate Smart Strategy by July 1, 2023. This law also requires CARB to establish specified CO_2 removal targets for 2030 and beyond as part of its 2022 Scoping Plan.
AB 1757	2022	Requires the CNRA, in collaboration with CARB, other state agencies, and an expert advisory committee, to determine by January 1, 2024, a range of targets for natural carbon sequestration, and for nature-based climate solutions, that reduce GHG emissions in 2030, 2038, and 2045. These targets must support state goals to achieve carbon neutrality and foster climate adaptation and resilience.

Table 1-2: Relevant State Laws, Regulations, and Policies (cont.)

LEGISLATION / REGULATION	YEAR	DESCRIPTION
Statewide Emissions Reduction Targets		
EO S-3-05	2005	Established the state's first GHG emissions reductions targets: reduction to 2000 levels by 2010, 1990 levels by 2020, and 80% below 1990 levels by 2050.
AB 32, Global Warming Solutions Act	2006	Codified EO S-3-05's 2020 goal and authorized CARB to implement a comprehensive, multiyear program to reduce GHG emissions from all sources throughout the state.
AB 32 Scoping Plan	2008	Described the long-term road map for achieving the AB 32 target of reducing emissions to 1990 levels by 2020.
SB 535, Greenhouse Gas Reduction Fund and Disadvantaged Communities	2012	Required that 25% of all funds allocated pursuant to an investment plan for the use of state monies collected through a Cap-and-Trade program be allocated to projects that benefit disadvantaged communities, and that at least 10% of these be spent on projects located in disadvantaged communities.
EO B-30-15	2015	Established a GHG emissions reduction target of 40% below 1990 levels by 2030.
SB 32, California Global Warming Solutions Act of 2006: Emissions limit	2016	Codified EO B-30-15's 2030 goal.
2017 Scoping Plan Update	2017	Described the long-term road map for achieving the SB 32 target of reducing emissions by 40% below 1990 levels by 2030.
AB 398, California's Cap-and-Trade Program	2017	Extended the state's Cap-and-Trade Program through 2030, a key strategy for reducing GHGs in the state. The Cap-and-Trade Program sets total allowable emissions for facilities and creates carbon offset credits through carbon sequestration projects.
EO B-55-18	2018	Established a target to achieve carbon neutrality (net zero GHG emissions) by 2045.
AB 1279	2022	Established the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045; to maintain net negative GHG emissions thereafter; and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced at least 85% below 1990 levels.

Abbreviations: 2022 Scoping Plan = 2022 Scoping Plan for Achieving Carbon Neutrality; *AB = Assembly Bill; CALGreen Code = California Green Building Standards Code; CARB = California Air Resources Board; CEC = California Energy Commission; CNRA = California Natural Resources Agency;* CO_2 *= carbon dioxide; CPUC = California Public Utilities Commission; EO = Executive Order; EV = electric vehicle; GHG = greenhouse gas; GWP = global warming potential; HFC = hydrofluorocarbon; RPS = Renewable Portfolio Standard; SB = Senate Bill; ZEV = zero-emission vehicle*

1.4 County Climate Action Framework

General Plan and 2020 CCAP

The General Plan provides the policy framework and long-range vision for growth in unincorporated Los Angeles County through the year 2035. It establishes goals, policies, and programs to foster healthy, livable, and sustainable communities, and provides a guide for future land use, housing, and economic development. The General Plan includes the Planning Areas Framework, which serves as a mechanism for local communities to develop plans that respond to their unique and diverse characteristics.

In 2015, the 2020 CCAP was adopted as a component of the Air Quality Element of the General Plan. It identified emissions related to community activities, established a 2020 GHG emissions reduction target consistent with AB 32, and established 26 local actions for reductions of GHG emissions. The 2020 CCAP was the first plan to set GHG emissions reduction goals in unincorporated Los Angeles County, providing a road map for implementing measures to reduce unincorporated Los Angeles County's GHG emissions. The 2020 CCAP addressed emissions from land use, transportation, building energy, water consumption, and waste generation.

This 2045 CAP builds upon the 2020 CCAP by including new emissions reduction targets that address both GHG emissions from General Plan buildout and the projected reductions needed to reach carbon neutrality by 2045, in accordance with the State of California's most recent efforts. The 2045 CAP also integrates the guiding principles from the General Plan to identify tailored climate action opportunities within unincorporated Los Angeles County and to examine potential co-benefits (see Appendix D). These guiding principles include the following objectives:

- Employ smart growth.
- Ensure that community services and infrastructure are sufficient to accommodate growth.
- Provide the foundation for a strong and diverse economy.
- Promote excellence in environmental resource management.
- Provide healthy, livable, and equitable communities.

The 2045 CAP is a policy document intended to reduce communitywide GHG emissions and supports development already allowed under the General Plan's land use assumptions as identified in the Land Use Element and 2021–2029 Housing Element. No changes to General Plan land use designations, zoning, or land use, or specific projects, are proposed as part of the 2045 CAP.

OurCounty Sustainability Plan

In August 2019, the County Board of Supervisors adopted *OurCounty: Los Angeles Countywide Sustainability Plan* (OurCounty Sustainability Plan). The plan includes a bold and cross-cutting set of goals, strategies, actions, and targets for creating a resilient, inclusive, and sustainable Los Angeles County.

The OurCounty Sustainability Plan does not supersede the General Plan. It is a forward-looking strategic framework for creating a more equitable and resilient Los Angeles County in the face of climate change. This 2045 CAP is consistent with the OurCounty Sustainability Plan's visions and goals for the region, but differs in that it is part of the General Plan and focuses on reducing GHG emissions from community activities projected for unincorporated Los Angeles County. Further, the measures identified in the 2045 CAP underwent environmental review pursuant to CEQA.

The 2045 CAP details the GHG emissions reduction vision and goals of the OurCounty Sustainability Plan for unincorporated Los Angeles County and implements the GHG emissions reduction policies of the Air Quality Element of the General Plan. Specifically, the 2045 CAP replaces the existing implementation strategy of the Air Quality Element, known as the 2020 CCAP. As discussed above, the 2045 CAP is a policy document that supports development already allowed under the General Plan's land use assumptions as identified in the Land Use Element and 2021–2029 Housing Element. No changes to General Plan land use designations, zoning, or land use specific projects are proposed as part of the 2045 CAP.

Appendix C provides a summary of the strategies and actions in the OurCounty Sustainability Plan that align most closely with the 2045 CAP.

1.5 County Leadership on Climate Action

Achieving carbon neutrality requires large-scale transformations extending well beyond the borders of unincorporated Los Angeles County. While the 2045 CAP is focused on reducing community emissions, the County must take a strong leadership role and build partnerships that will be necessary to realize deep carbon reductions across sectors and geographies.

Appendix C, *Prior and Current County Actions on Climate Change*, summarizes past and current actions by the County on climate change, focusing on key achievements over the past 10–15 years. Section 3.3, *Strategies, Measures, and Actions*, summarizes within each sector recent climate actions initiated by the County to reduce emissions from municipal operations or catalyze community change to facilitate emissions reductions.

1.6 Climate Equity

The 2045 CAP is intended to be inclusive, accessible, and meaningful and prioritizes frontline communities, which are Black, Indigenous, and People of Color (BIPOC) and low-income households that have historically experienced a disproportionately high share of environmental impacts.

The County is committed to actively promoting equity throughout its policies and practices. The County's Racial Equity Strategic Plan provides a multi-dimensional definition of equity that includes:[8]

Procedural equity refers to fair, transparent, and inclusive processes that lead to more just outcomes and opportunities for individuals impacted by inequity. Procedural equity can be achieved through processes that acknowledge power imbalances across stakeholders and aim to rectify them by recognizing diverse forms of power and expertise, namely expertise from lived experiences—integral to informing more equitable and effective public decision-making.

Distributional equity is the most understood form of equity, achieved through fair allocation of resources such as goods and services, as well as societal benefits and burdens.

Structural equity addresses the root causes of inequities including underlying systemic structures, policies, societal norms, and practices that contribute towards disparate population-level outcomes.

[8] For more information, see https://ceo.lacounty.gov/racial-equity-strategic-plan/

Climate equity overlays these definitions of equity with social vulnerabilities specific to climate change. This includes the communities that are most likely to be harmed by climate impacts, as well as those most likely to be left out of the benefits of a transition to a carbon-free economy. This 2045 CAP refers to these as "frontline communities."

The definition of "frontline community" can change based on the specific public policy, plan, or action being considered. In unincorporated Los Angeles County, frontline communities are in areas with the worst air and soil pollution and traffic congestion, with the least open space and smallest number of trees, and they are exposed to particulate matter from living near major freeways, ports, and industry. These communities also have the least access to nature, healthy food, and health care and suffer elevated rates of heart disease, asthma, and premature death, as well as reduced access to economic opportunities. Frontline communities could also include tribal communities, as well as other low-income households in rural and remote areas with limited access to resources and high exposure to fire and other hazards. Frontline communities are inequitably bearing the greatest burden of the climate crisis.

Because frontline communities also have fewer resources to prevent, adapt, or recover from climate disasters, the County prioritizes strategies that both invest in and support these communities. These strategies include providing specific incentives and subsidies for affordable housing developments, implementing building decarbonization measures in multifamily buildings and low-income housing, and implementing other initiatives as discussed below.

Climate Equity Guiding Principles

The level of planning, policy change, and investment needed to implement climate action strategies creates an opportunity for the County to integrate equity in ways that help reverse the trends of discrimination and disinvestment. Doing that will require deliberate effort to build procedural, distributional, and structural equity. These climate equity guiding principles, summarized in **Figure 1-2**, ensure that frontline communities are prioritized and engaged with for resource and funding allocation.

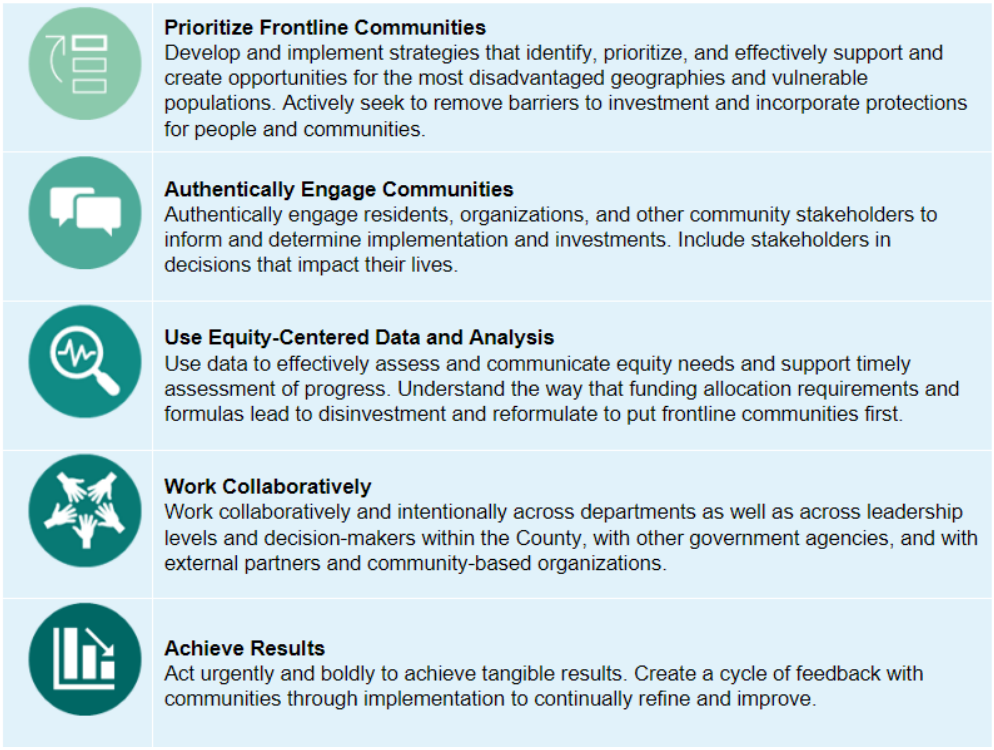

Figure 1-2: Climate Equity Guiding Principles

Equity Approach

An approach was developed to promote and prioritize equity based on the climate equity guiding principles to provide a pathway to successful implementation of the 2045 CAP. Transparency, engagement, and early action are the primary themes.

The equity approach illustrated below will help the County to communicate the climate threats that frontline communities face, confront the barriers that frontline communities encounter in terms of traditional public investment, and support pathways toward equitable and transformative implementation of climate strategies. Collaboration with frontline communities will follow the process depicted in **Figure 1-3**.

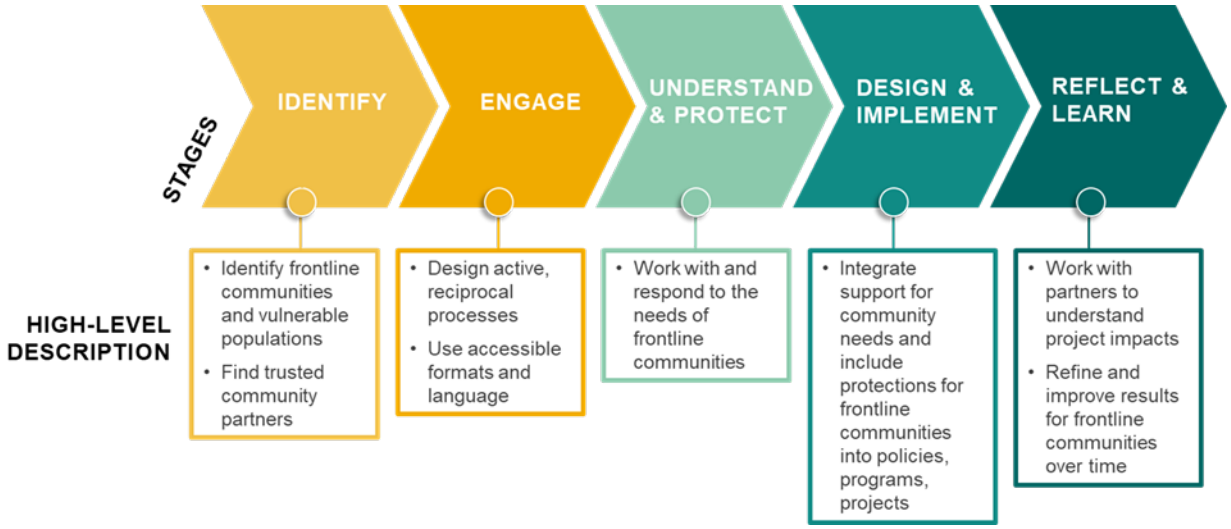

Figure 1-3: Integrating Equity into 2045 CAP Implementation

Engagement is an ongoing conversation that must happen to align 2045 CAP programs with community needs throughout the stages of planning, design, implementation, monitoring, and performance. Engagement includes time for post-project reflection and learning so that all parties can collectively and continually improve in meeting community needs.

Identify Frontline Communities

The County will identify frontline communities to prioritize additional resources to support the implementation of 2045 CAP actions. Available data sets, such as the SB 535 Disadvantaged Communities map, the federal government's Climate and Economic Justice Screening Tool, the County's Climate Vulnerability Assessment, CalEnviroScreen, and the County's Equity Indicators Tool will be used to identify frontline communities.

Using multiple data sets will allow for increased eligibility of grant funding when made available. The State of California designated "Disadvantaged Communities" to invest proceeds from the Cap-and-Trade Program in these communities that will help improve public health and quality of life by reducing GHG emissions. Having the frontline communities in unincorporated Los Angeles County align with the SB 535 Disadvantaged Communities designation will ensure that funding from the state's Cap-and-Trade Program can be used to implement the County's 2045 CAP actions. More information on SB 535 Disadvantaged Communities can be found here: https://oehha.ca.gov/calenviroscreen/sb535.

The Climate and Economic Justice Screening Tool was developed by the federal government in response to EO 14008. The purpose of the tool is to help identify both urban and rural disadvantaged communities and provide information for the Justice40 Initiative. The Justice40 Initiative will deliver at least 40 percent of the overall benefits from federal investments in climate change, clean energy and energy efficiency, clean transit, affordable and sustainable housing, training and workforce development, pollution remediation, and clean water infrastructure to disadvantaged communities. More information on the Justice40 Initiative can be found here: https://www.whitehouse.gov/environmentaljustice/justice40/.

Engage Communities and Build Capacity

The County is committed to building a meaningful and reciprocal relationship with partners in frontline communities, and to implementing community engagement processes for all climate projects. This requires meeting people where they are, in formats that enable active dialogue and participation. Community engagement will be facilitated with inclusive language access strategies.

Community engagement can help create a feedback loop with frontline communities that provides qualitative data for monitoring and implementation purposes and for informing the next CAP update. Engaging with community-based organizations (CBOs) will be a vital part of the community engagement process because CBOs are well-rooted in the communities they serve and provide a channel of communication between the communities and the County.

In addition, conversations with local tribes will be held to start a dialogue on how climate change is affecting native and indigenous communities and what the County can do to support equitable implementation of CAP actions. Early consultations beyond what is minimally required by AB 52 and SB 18 will allow tribes to provide input during the planning phase of an implementation action.

Provide a Just Transition

A just transition to clean energy is imperative to minimize impacts on the economy while maximizing opportunities for the workforce to transition to clean energy jobs. The vision for a just transition for unincorporated Los Angeles County must be defined in partnership with the people whose lives and livelihoods are most affected. Although the net result of a transition away from fossil fuels will likely be a net gain in total jobs given the level of capital investment, the types of jobs will shift. That can have real consequences on people in many different fields, from electrical workers working in power plants to plumbers installing heating, ventilation, and air conditioning systems in homes; the challenges will vary. This may be particularly challenging for older workers compared to those just entering the workforce. The County cannot address all of these challenges on its own, but it can commit to becoming an active partner in supporting workers during this transition.

The Los Angeles Just Transition Strategy report was developed with a task force that included frontline and tribal communities, industry representatives, labor organizations, and workforce development partners.[9] The report includes goals, strategies, and actions to ensure a just transition for workers and communities affected by the phase-out of oil drilling and extraction activities.

Incorporate Anti-Displacement

The climate crisis is urgent and requires immediate action; however, the County is also facing a housing crisis, with too many people unhoused, and too many people overburdened by high housing costs. Although it may be tempting to try to solve these issues separately, they are in fact deeply intertwined. Frontline communities are likely to be affected by extreme-weather events and have fewer resources to recover and adapt. Leaving them out of policies and programs to decarbonize will perpetuate the cycles of disinvestment that underlie and exacerbate existing disparities.[10]

Affordable housing is the most complicated and vulnerable building sector. Providers often compile funding sources from multiple lenders, each with their own financial requirements and expectations. Cash flows are limited and providers may have limited access to additional capital to make improvements. As a result, many buildings have significant backlogs of deferred maintenance. At the same time, residents of these buildings often have limited housing options that they can afford. The concerns range from landowners possibly passing the cost of improvements to tenants to increased property assessments that result from improvements. Displacement of residents is a concern as improvements and retrofits are made to the building stock.

Decarbonizing buildings through efficiency, switching from fossil fuels to other sources of energy, and electrification will take up-front investment. As part of a larger effort to stem displacement of vulnerable populations, the Housing Element includes Program 43, which will assess displacement and gentrification risk through a displacement risk study. The data will be presented through an anti-displacement mapping tool to ensure that the most current information is available as anti-displacement efforts are implemented. The anti-displacement mapping tool will help to inform the implementation of CAP actions in communities that are already vulnerable to displacement or gentrification. Equity strategies may include the use of grant programs to prevent passing the costs on to tenants, protection of tenants from harassment or from displacement due to construction and other illegal eviction processes, and additional public engagement to clarify any misconception of property assessments.

The anti-displacement solution will require more than leaving affordable housing and frontline communities out through exemptions. Leaving some communities out perpetuates cycles of disinvestment. As other buildings are transitioned, frontline communities and affordable housing would be left behind and not enjoy the benefits of decarbonization, such as lower energy costs and healthier indoor air, and eventually could lead to stranded assets as buildings would remain

[9] Los Angeles County. 2022. *Los Angeles Just Transition Strategy*. December 2022. Available: https://assets-us-01.kc-usercontent.com/0234f496-d2b7-00b6-17a4-b43e949b70a2/d2ade00b-66cc-4da1-8a01-7f9d72ee7b5d/LA%20County-City%20Just%20Transition%20Strategy_FINAL%2012.5.22.pdf. Accessed February 2023.

[10] City of Los Angeles. 2023. LACityClerk Connect: Council File 21-1463, "Community Assemblies/Climate Emergency Mobilization Office/Building Decarbonization/L.A.s Green New Deal." Available: https://cityclerk.lacity.org/lacityclerkconnect/index.cfm?fa=ccfi.viewrecord&cfnumber=21-1463. Last changed January 13, 2023.

reliant on a diminishing natural gas infrastructure. The County will look beyond exemptions and work with partners to design policies and programs that support frontline communities, protect tenants, and prioritize public subsidies to maintain housing affordability.

Include Rural and Remote Communities

Rural and remote communities often face different issues than their more urban counterparts related to infrastructure and buildings. Communities along the wildland/urban interface and those surrounded by natural areas have higher fire exposure and may experience more outages as a result of Public Safety Power Shutdowns. These issues are of particular concern for vulnerable populations, such as people who rely on electricity for medical issues, elderly people who may have a hard time evacuating, or low-income communities that may not be able to afford housing elsewhere. Rural populations will be included in stakeholder engagement processes for the CAP to enable potential issues and strategies to surface.

Deliver Support to Frontline Communities

The County will conduct studies for many 2045 CAP measures and actions to identify priority areas for implementation, physical infrastructure needs, regulatory and legal requirements, up-front and ongoing costs, barriers and obstacles, and needed partnerships.

Historically, frontline communities have had challenges accessing incentives for energy retrofit initiatives. A key challenge is the use of rebates, which reimburse energy customers after retrofits have been completed. Rebates and other program delivery mechanisms that require complex applications and out-of-pocket investment make it difficult for energy customers who are already financially burdened. It will be a priority of the County to provide a grant program in place of the traditional rebate programs for frontline communities. A grant program to fund energy retrofits will allow frontline communities to take advantage of the benefits from the beginning of the process. The grant program can also include services, labor, and supplies provided by the County. The goal is to support bringing the benefits of decarbonization to frontline communities without burdening vulnerable people with upfront costs.

Develop a Monitoring and Reporting Mechanism

A monitoring and reporting mechanism will be developed to track the overall implementation of the 2045 CAP and monitor the rate of implementation in frontline communities. A robust data collection system involving all lead and partner departments will be developed to provide the information necessary for monitoring. The monitoring program will inform which actions to prioritize and allocate additional funding to, especially for frontline communities. The data collected will be used to analyze factors such as areas of implementation, progress of CAP actions, funding availability and allocation, and comparative rate of implementation. See Appendix E for the performance objectives, tracking metrics, and potential funding sources included in the monitoring program.

This information will be reported on the County's website and released annually as part of the General Plan Progress Report. The County's Climate Action website (https://planning.lacounty.gov/climate) will include a dashboard displaying the most current updates on the implementation of the 2045 CAP actions in frontline communities. The dashboard will contain information that members of the public can use to track progress and provide feedback on adjustments needed to meet the 2045 CAP Equity Guiding Principles.

1.7 Energy Resilience

Although the 2045 CAP is focused on reducing GHG emissions, action must be taken in the context of climate adaptation and resilience. Safe and thriving communities require a reliable, affordable source of clean energy. The shift toward electrifying buildings and vehicles, and the increase in temperatures caused by climate change, will mean increased demand on the electricity grid. At the same time, energy infrastructure is vulnerable to increased climate-driven extreme events including fires, heat, and floods. Providing reliable energy while moving away from fossil fuels in buildings and transportation will take planning, investment, and collaboration. Efforts are needed across California to increase renewable energy supply and prepare the grid. The County will work in collaboration with multiple partners on implementation.

It is important to note that climate impacts on the grid will happen whether decarbonization takes place or not. Southern California Edison (SCE) has released a Climate Adaptation and Vulnerability Assessment to evaluate grid vulnerability.[11] Climate change is not a far-off possibility—it is happening now, with devastating consequences.[12] Frontline communities again are bearing the greatest burden. Adaptation is needed to prepare the grid at the same time and with the same urgency as reducing emissions to limit the impacts of climate change. The potential cost of doing nothing on either front far exceeds the cost of action.[13] These issues must be addressed in tandem to have the greatest value.

The energy transition includes not only a shift in energy sources, but also a shift in where and when energy is generated and how it is used and managed. This requires rethinking the energy grid to move away from a centralized system dominated by large-scale fossil fuel-based power plants with a one-way flow of energy from source to customers. Instead, the grid is becoming increasingly decentralized, distributed, localized, and network-based. Over time, this will enable greater energy resilience because the system will be able to respond and adapt to local conditions in a more precise way, limiting large-scale disruptions.

[11] Southern California Edison. 2023. Climate Adaptation. Available: https://www.sce.com/about-us/environment/climate-adaptation. Accessed February 2023.

[12] Intergovernmental Panel on Climate Change. 2022. *Summary for Policy Makers*. Section B: Observed and Projected Impacts and Risks. Available: https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf. Accessed February 2023.

[13] Deloitte. 2023. Carbon-Proofing the Grid: Increasing Renewables and Resilience. February 24, 2023. Available: https://www2.deloitte.com/us/en/insights/industry/power-and-utilities/carbon-proofing-strategies.html. Accessed February 2023.

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CHAPTER 2

GHG Emissions Inventory, Forecasts, and Reduction Targets

2.1 Community GHG Emissions Inventory

The 2015 GHG emissions inventory for unincorporated Los Angeles County forms the baseline inventory for the 2045 CAP. The year 2015 was selected as the emissions baseline for the 2045 CAP because of the availability in that year of the most recent, reliable, accurate, and complete emissions activity data that were available when the OurCounty Sustainability Plan was prepared. The 2015 GHG emissions inventory is compliant with the *Global Protocol for Community-Scale Greenhouse Gas Inventories*, which accounts for communitywide GHG emissions in line with 2006 Intergovernmental Panel on Climate Change guidelines for national GHG inventories. The inventory accounts for the CO_2 equivalence of seven gases: CO_2, methane, nitrous oxide, hydrofluorocarbons (HFCs), perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride. These emissions are organized into five sectors, based on the activity type or source:

- **Transportation:** The transportation sector accounts for emissions from fuel combustion and electricity consumption from passenger vehicles, goods movement, public transit systems (including bus and rail), and off-road vehicles.
- **Stationary Energy:** The stationary energy sector includes emissions from energy use in buildings, facilities, and stationary (off-road) equipment. Emissions from fossil fuel combustion at on-site and off-site energy generation facilities, fossil fuel extraction, and fugitive emissions released from oil and natural gas systems are reported for this sector.
- **Waste:** The waste sector accounts for emissions generated at landfills, biological treatment (composting and anaerobic digestion), and wastewater treatment plants.

- **Industrial Processes and Product Use (IPPU):** Emissions from non-energy industrial activities and use of products like refrigerants, foams, aerosols, and alternatives to ozone-depleting substances, among other fossil fuel-based solvents, are reported under IPPU.
- **Agriculture, Forestry, and Other Land Use (AFOLU):** The AFOLU sector accounts for land-related emissions (and removals). Land-use changes, agriculture, forestry, and aggregate sources (including wildfires, biomass burning, and fertilizer use) are reported for this sector.

The community-scale GHG emissions inventories for unincorporated Los Angeles County were developed using the *Global Protocol for Community-Scale Greenhouse Gas Inventories*.[14] This protocol is used for calculating and reporting emissions from community activities and sources from seven gases: CO_2, methane, nitrous oxide, HFCs, perfluorocarbons, hexafluoride, and nitrogen trifluoride. The inventories include the following emissions:

- Emissions produced from activities and sources within the boundaries of unincorporated Los Angeles County (Scope 1).
- Emissions generated from the use of grid-supplied electricity, heat, steam, and/or cooling within the boundaries of unincorporated Los Angeles County (Scope 2).
- Emissions occurring outside the boundaries of unincorporated Los Angeles County as a result of activities taking place within the boundaries of unincorporated Los Angeles County (Scope 3).

The GHG inventories comprise emissions from activities occurring within unincorporated Los Angeles County areas, including emissions that occur elsewhere because of those activities. A good example is solid waste, which is generated locally but disposed of at a landfill outside the jurisdiction, where it decomposes and generates GHGs. Solid waste is a Scope 3 emissions source.

It should also be noted that the Los Angeles County Sanitation Districts has prepared a separate GHG inventory using site-specific data rather than population-based estimates, which were used for certain sources in the 2045 CAP's 2015 and 2018 inventories.[15,16] The County and the Los Angeles County Sanitation Districts will work cooperatively to achieve carbon neutrality.

In 2015, emissions generated by community activities occurring in unincorporated Los Angeles County amounted to 5.5 million metric tons CO_2 equivalent ($MTCO_2e$).[17] The transportation and stationary energy sectors were the largest contributors to the inventory. The transportation sector accounts for approximately 2.8 million $MTCO_2e$ (51 percent) of total GHG emissions, while the

[14] World Resources Institute, C40 Cities Climate Leadership Group, and ICLEI – Local Governments for Sustainability. 2014. *Global Protocol for Community-Scale Greenhouse Gas Inventories*, Version 1.1. December 2014. Available: https://ghgprotocol.org/greenhouse-gas-protocol-accounting-reporting-standard-cities. Accessed in January 2021.

[15] Los Angeles County Sanitation Districts. 2022. *2021 Greenhouse Gas Inventory Report*.

[16] Environmental Science Associates. 2022. P*ositive Verification Opinion for Greenhouse Gas Emissions and Reductions for Emissions Year 2021*.

[17] The 2015 GHG emissions inventory for the unincorporated Los Angeles County is adapted from the Countywide 2015 Community GHG Inventory prepared for the OurCounty Sustainability Plan. Per the OurCounty Sustainability Plan, 2015 emissions from unincorporated Los Angeles County amounted to 9.5 million $MTCO_2e$. The CAP accounts for emissions from all the sectors and subsectors reported in the OurCounty Sustainability Plan and includes additional community activities for unincorporated Los Angeles County (including off-road equipment, buses, and product use emissions, as detailed in Appendix A.1). However, due to updated activity data, emission factors, and modeling protocols, the 2045 CAP reports significantly lower emissions for 2015 (5.5 million $MTCO_2e$).

stationary energy sector accounts for approximately 1.9 million $MTCO_2e$ (35 percent) of total GHG emissions. The transportation sector includes emissions from on-road passenger vehicles, trucks, and railways. The stationary energy sector includes emissions from residential, commercial, and institutional uses; industrial buildings; and stationary equipment. The remaining emissions sources include waste and wastewater (8 percent), refrigerants and other industrial products (5 percent), and other land-related activities including forestry and agriculture (1 percent).

To capture the latest emissions profile and emissions trends in Los Angeles County since 2015, the County prepared an updated inventory for the year 2018, given the availability in that year of the most recent complete data set of emissions-generating activity. The 2018 inventory relies on the same protocol and data sources that were used in the 2015 GHG emissions inventory. In 2018, communitywide emissions totaled nearly 5.2 million $MTCO_2e$. The transportation sector was the greatest contributor, accounting for 52 percent of emissions and 2.7 million $MTCO_2e$. The stationary energy sector was the second greatest contributor at 33 percent and 1.7 million $MTCO_2e$. The remaining emissions were generated by the waste (9 percent), IPPU (5 percent), and AFOLU (1 percent) sectors.

Total GHG emissions decreased approximately 7 percent between 2015 and 2018. The stationary energy sector saw the greatest decrease (11 percent), followed by the IPPU sector (6 percent) and the transportation sector (5 percent).[18] Emissions from stationary energy decreased primarily because of the increasing level of renewable energy supplied by SCE into the electricity grid, and because certain power-generating facilities reduced their fossil fuel combustion in the intervening years. Emissions from transportation decreased primarily because of vehicle turnover to more fuel-efficient vehicles. **Table 2-1** and **Figure 2-1** show the 2015 and 2018 emissions breakdowns by sector and sub-sector. (See Appendix A for more detail on the inventories.)

[18] This decrease is attributable to declining emissions factors from the CARB EMissions FACtors 2021 (EMFAC2021) model, which outpace the increase in total vehicle miles traveled (VMT) as modeled with the Southern California Association of Governments' (SCAG's) 2016 Regional Travel Demand Model. According to the California Department of Tax and Fee Administration, statewide taxable sales of gasoline and diesel fuel increased by 2 percent from 2015 to 2018. Statewide gasoline and diesel fuel sales may not trend precisely with unincorporated Los Angeles County gasoline and diesel fuel sales, and VMT apportioned to areas in unincorporated Los Angeles County may not correlate perfectly with gasoline sales, which could explain this difference. For additional discussion, see Appendix A.

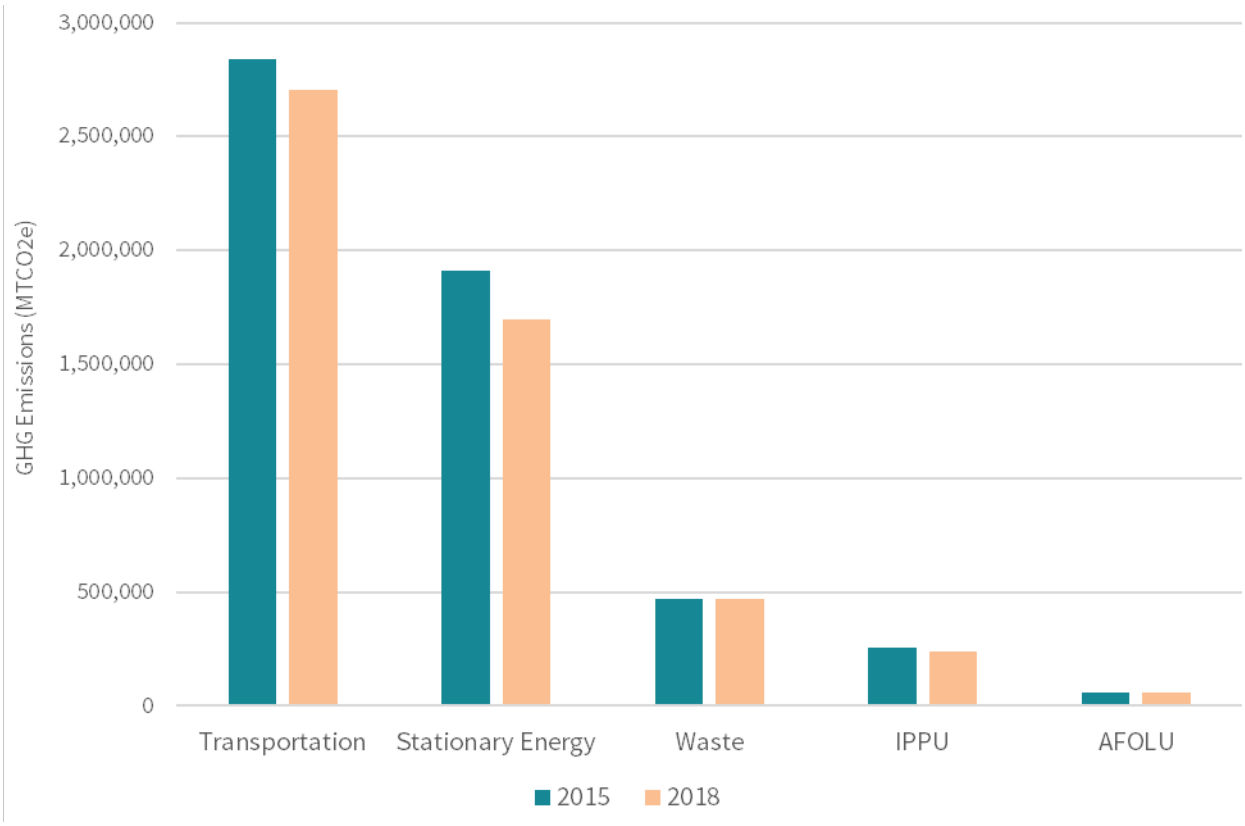

Figure 2-1: 2015 and 2018 Greenhouse Gas Emissions by Sector

Source: Appendix A: Greenhouse Gas Accounting, Business-as-Usual Forecast, and Emission Reduction Targets.

Table 2-1: 2015 and 2018 Greenhouse Gas Emissions by Sector and Sub-sector

SECTOR / SUB-SECTOR	ANNUAL GHG EMISSIONS ($MTCO_2e$) 2015	2018
Transportation	**2,838,133**	**2,704,685**
On-Road Transportation	2,828,720	2,695,195
Railways	9,413	9,490
Stationary Energy	**1,908,637**	**1,698,809**
Residential Buildings	1,030,285	962,743
Commercial and Institutional Buildings	386,753	349,373
Manufacturing and Construction	309,449	244,417
Energy Industries	121,252	98,554
Fugitive Emissions from Oil and Natural Gas Systems	58,222	41,066
Agricultural Off-Road Equipment	2,675	2,658
Waste	**469,997**	**469,382**
Solid Waste Disposal	404,604	407,578
Biological Treatment of Solid Waste	10,214	5,309
Wastewater Treatment	55,179	56,495
IPPU	**253,529**	**239,505**
Product Use	253,529	239,505
AFOLU	**60,860**	**60,860**
Aggregate Sources and Non-CO_2 Emissions Sources	25,048	25,048
Land-use Change	35,811	35,811
TOTAL	**5,531,155**	**5,173,240**

Abbreviations: AFOLU = Agriculture, Forestry, and Other Land Use; CO_2 = carbon dioxide; GHG = greenhouse gas; IPPU = Industrial Processes and Product Use; $MTCO_2e$ = metric tons of carbon dioxide equivalent
Note: Totals may not add precisely due to rounding.
Source: Appendix A: Greenhouse Gas Accounting, Business-as-Usual Forecast, and Emission Reduction Targets.

2.2 Emissions Forecasts

The emissions forecasts used in the 2045 CAP account for socioeconomic trends, population growth, historic emissions patterns, and existing policies and legislation that affect GHG emissions. **Figure 2-2** shows population and employment growth projections from 2015 to 2045 for unincorporated Los Angeles County. The 2018 GHG emissions inventory serves as the year from which future emissions are forecasted. Note that the 2045 CAP's baseline year for target setting is 2015; 2018 is just the most recent GHG emissions inventory conducted by the County and was therefore used to forecast emissions.

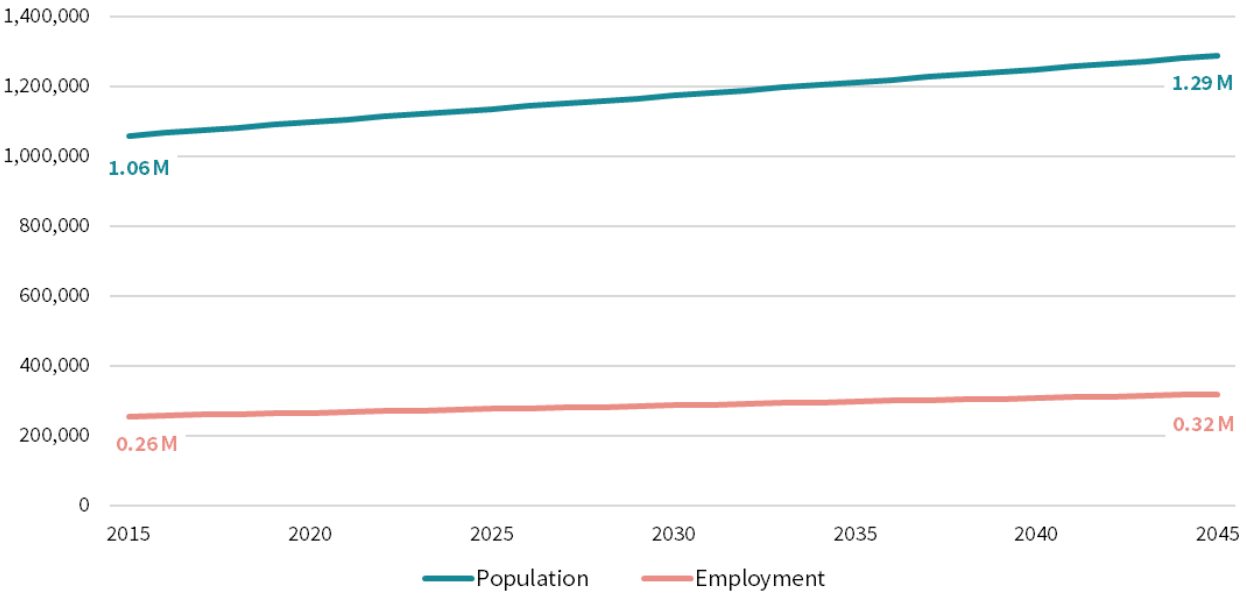

Figure 2-2: Population and Employment Growth in Unincorporated Los Angeles County[19]

Business-as-Usual Forecast

Forecasts were developed by sector under a business-as-usual (BAU) scenario for the years 2019 through 2045 (**Figure 2-3**). The BAU forecast assumes that no further government action is taken to reduce GHG emissions and is consistent with the following:

- Population projections by the Southern California Association of Governments (SCAG) to 2040, used in SCAG's 2016 Regional Transportation Model.[20]
- Building demolition and construction rates from building area data obtained from the County's Office of the Assessor.
- Passenger vehicle and truck vehicle miles traveled (VMT) and emissions estimated using the SCAG's 2016 Regional Travel Demand Model and CARB's EMissions FACtors 2021 (EMFAC2021) model.

[19] Southern California Association of Governments. 2016. *The 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy*. April 2016 model. Accessed by Fehr and Peers in July 2019.
[20] The General Plan uses the 2008 Regional Transportation Model.

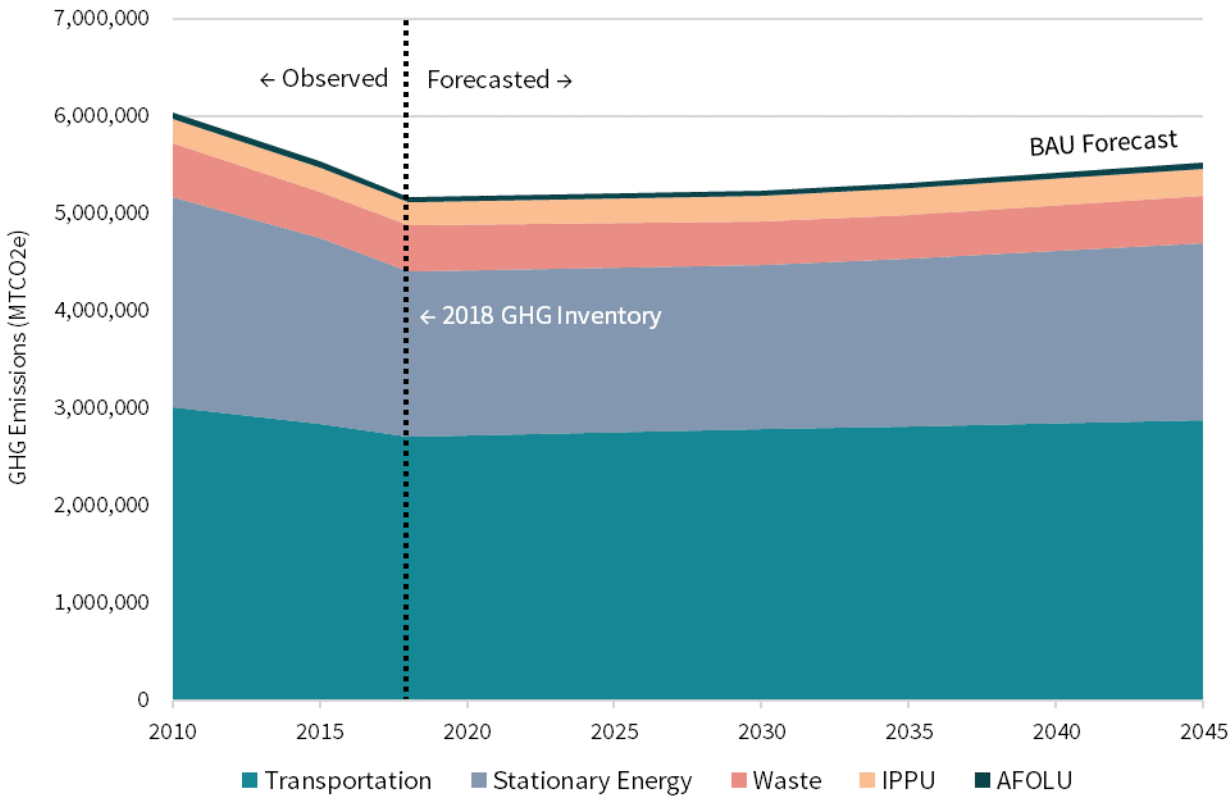

Figure 2-3: Forecast of 2045 Business-as-Usual Greenhouse Gas Emissions
Source: Appendix A: Greenhouse Gas Accounting, Business-as-Usual Forecast, and Emission Reduction Targets.

Adjusted Business-as-Usual Forecast

The Adjusted BAU forecast accounts for future growth under BAU conditions but makes adjustments for federal, state, and County regulations that were implemented before development of the 2045 CAP. The Adjusted BAU forecast assumes that population, housing, employment, and transportation activities would continue to grow over time, consistent with the projections shown in Figure 2-2.

The Adjusted BAU forecast also accounts for existing standards and regulations, such as the California Energy Commission (CEC) 2019 and 2022 Title 24 building energy efficiency requirements, Renewables Portfolio Standards (SB 100), the California Department of Resources Recycling and Recovery (CalRecycle) 75 percent waste diversion initiative (AB 341), Pavley and Advanced Clean Car Standards (AB 1493), and Low Carbon Fuel Standards (EO S-01-07). Furthermore, some existing GHG emissions reduction commitments by County agencies and select strategies from the 2020 CCAP and OurCounty Sustainability Plan are also incorporated into the Adjusted BAU forecast, such as decommissioning of the Pitchess Cogeneration facility and the County's fleet purchases of zero-emission vehicles (ZEVs).

Table 2-2 shows the projected total emissions for each target year under the Adjusted BAU forecast. Total emissions for unincorporated Los Angeles County are forecasted to decline from 5.5 million $MTCO_2e$ in 2015 to 3.8 million $MTCO_2e$ by 2045, a 31 percent reduction. The table

also shows the forecasts by each major sector. **Figure 2-4** compares the Adjusted BAU forecast to the BAU forecast.

Table 2-2: Forecasts of Adjusted Business-as-Usual Greenhouse Gas Emissions

	ANNUAL GHG EMISSIONS ($MTCO_2e$)				
SECTOR	**2015**	**2018**	**2030**	**2035**	**2045**
Transportation	2,838,133	2,704,685	2,205,885	2,080,234	1,993,281
Stationary Energy	1,908,637	1,698,809	1,502,306	1,341,401	1,018,793
Waste	469,997	469,382	451,919	454,097	482,489
IPPU	253,529	239,505	259,605	267,981	284,731
AFOLU	60,860	60,860	60,860	60,860	60,860
TOTAL	**5,531,155**	**5,173,240**	**4,480,574**	**4,204,572**	**3,840,154**

Abbreviations: AFOLU = Agriculture, Forestry, and Other Land Use; GHG = greenhouse gas; IPPU = Industrial Processes and Product Use; $MTCO_2e$ = metric tons of carbon dioxide equivalent
Source: Appendix B: Emissions Forecasting and Reduction Methods.

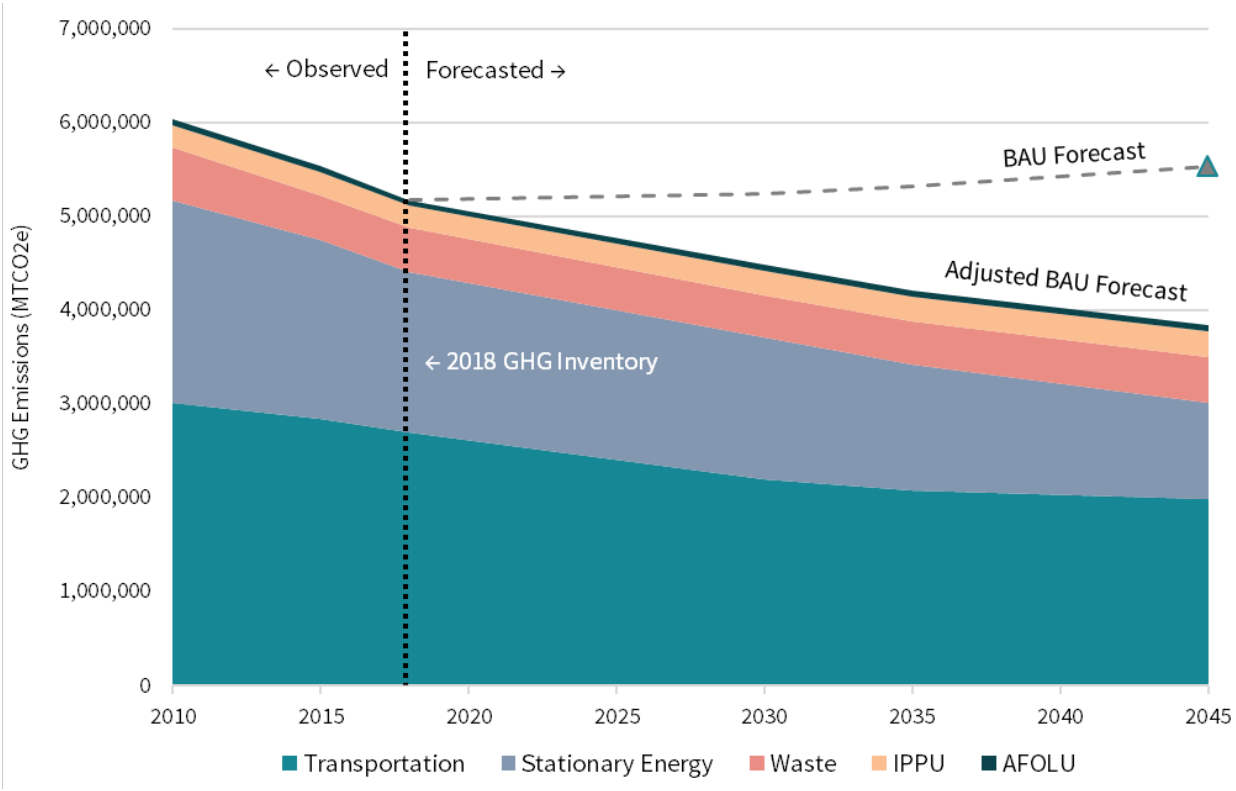

Figure 2-4: Forecast of 2045 Adjusted Business-as-Usual Greenhouse Gas Emissions
Source: Appendix B: Emissions Forecasting and Reduction Methods.

2.3 Emissions Targets

Over the past two decades, the State of California has established multiple GHG emissions reduction targets between 1990 and 2050 to address various aspects of climate change. AB 32 and SB 32 codified the state's GHG emissions reduction targets by requiring that statewide GHG emissions be reduced to 1990 levels by 2020, and to 40 percent below 1990 levels by 2030, respectively. AB 1279 codified EO B-55-18 by requiring that the state achieve net zero GHG emissions no later than 2045; AB 1279 also requires the state to reduce direct anthropogenic GHG emissions 85 percent below 1990 levels by 2045. The 2045 CAP sets a series of GHG emissions reduction targets and goals to align with various state, regional, and County targets. Most notably, this includes the targets established by SB 32 for 2030, SB 100 and SB 1020 for renewable energy and zero-carbon resources, and the statewide goal established by AB 1279 to achieve carbon neutrality by 2045.

State Targets

AB 32 and SB 32:

- By 2020, reduce GHG emissions to 1990 levels.
- By 2030, reduce GHG emissions to 40 percent below 1990 levels.

AB 1279:

- By 2045, reduce statewide anthropogenic GHG emissions to at least 85 percent below 1990 levels.
- By 2045 or sooner, achieve net zero[21] GHG emissions and achieve and maintain net negative GHG emissions thereafter.

SB 100 and SB 1020:

- By 2035, source 90 percent of retail sales of electricity to California end-use customers from eligible renewable energy resources and zero-carbon resources.
- By 2035, source 100 percent of electricity procured to serve all state agencies from eligible renewable energy resources and zero-carbon resources.
- By 2045, source 100 percent of retail sales of electricity to California end-use customers from eligible renewable energy resources and zero-carbon resources.

The 2017 Scoping Plan sets forth a statewide plan to achieve the state's SB 32 2030 GHG emissions reduction target. The 2022 Scoping Plan, adopted by CARB in December 2022, supersedes the 2017 Scoping Plan, and is the state's plan to achieve carbon neutrality by 2045 or earlier and reduce anthropogenic emissions to 85 percent below 1990 levels by 2045 as mandated by AB 1279.

[21] AB 1279 defines *net zero GHG emissions* as "emissions of GHGs, as defined in subdivision (g) of Section 38505, to the atmosphere are balanced by removals of GHG emissions over a period of time, as determined by CARB." California Health and Safety Code Section 38562.2.

Regional Targets

SB 375/SCAG Regional Transportation Plan:

- By 2035, reduce GHG emissions from light-duty vehicles by 19 percent per capita, below a 2005 baseline.
- By 2040, reduce GHG emissions from light-duty vehicles by 21 percent per capita, below a 2005 baseline.

OurCounty Sustainability Plan

- By 2025, reduce GHG emissions Countywide by 25 percent below 2015 levels.
- By 2035, reduce GHG emissions Countywide by 50 percent below 2015 levels.
- By 2045, achieve carbon neutrality for County municipal operations.
- By 2050, achieve carbon neutrality Countywide.

2045 CAP Targets and Carbon Neutrality Goal

The 2045 CAP identifies three targets and one long-term aspirational goal for GHG emissions in unincorporated Los Angeles County. The targets are emissions reductions levels that the 2045 CAP can achieve through the implementation of strategies, measures, and actions, based on quantitative emissions modeling. In other words, the 2045 CAP quantitatively demonstrates how unincorporated Los Angeles County can achieve these three targets. The goal is for carbon neutrality, but implementation of the 2045 CAP is not enough to achieve this emissions level. This is a long-term aspiration of the County to align with the State of California's new statutory target of net zero GHG emissions by 2045.

The targets and carbon neutrality goal in the 2045 CAP align with various state, regional, and County targets for 2030, 2035, and 2045. The 2045 CAP includes a target for the year 2030 to align with SB 32, a target for the year 2045 to align with SB 1279, and an interim target year of 2035 to show substantial progress between the 2030 and 2045 targets and associated state goals. These target years were also selected to support using the 2045 CAP for CEQA streamlining of project-level climate change impacts. (See Chapter 4 for additional discussion of the 2045 CAP's relationship to CEQA.)

2045 CAP Targets

- By 2030, reduce GHG emissions by 40 percent below 2015 levels in unincorporated Los Angeles County.
- By 2035, reduce GHG emissions by 50 percent below 2015 levels in unincorporated Los Angeles County.
- By 2045, reduce GHG emissions by 83 percent below 2015 levels in unincorporated Los Angeles County.

2045 CAP Aspirational Goal

- By 2045, achieve carbon neutrality in unincorporated Los Angeles County.

Figure 2-5 shows unincorporated Los Angeles County's emissions from 2010 through 2018 along with the Adjusted BAU forecast through 2045. It also includes the BAU forecast for reference and shows the 2045 CAP's target and goal trendline from 2018 through 2045. As shown in Figure 2-5, the 2030 target of 40 percent below 2015 levels by 2030 sets unincorporated Los Angeles County on a course that exceeds the 2025 Countywide target from the OurCounty Sustainability Plan, proceeds on a near-linear trajectory toward the 2035 and 2045 targets, and lays the groundwork for achieving the aspirational 2045 carbon neutrality goal.

The 2030 target is consistent with the SB 32 target of a 40 percent reduction below 1990 levels. Total unincorporated Los Angeles County emissions in 1990 are estimated to be 6.4 million $MTCO_2e$. Because the 2015 emissions of 5.5 million $MTCO_2e$ are 15 percent lower than the 1990 emissions, the 2030 target of a 40 percent reduction below 2015 levels is equivalent to a 48 percent reduction below 1990 levels. This exceeds the state target of 40 percent below 1990 levels by 2030. As such, the 2045 CAP's 2030 target is in line with (and actually more stringent than) the SB 32 target for the state. The 2045 target of 83 percent below 2015 levels (equivalent to 85 percent below 1990 levels) aligns with the State of California's 2045 target as codified in AB 1279 and evaluated in the Final 2022 Scoping Plan. In addition, the 2035 target of 50 percent below 2015 levels (equivalent to 57 percent below 1990 levels) puts unincorporated Los Angeles County on the trajectory to achieve 85 percent below 1990 levels by 2045, consistent with state targets. These concepts are illustrated in Figure 2-5 and **Figure 2-6**.

Year	California	2045 CAP
2030	40% below 1990	40% below 2015*
2035	none	50% below 2015
2045	85% below 1990 Carbon Neutrality	83% below 2015& Carbon Neutrality#
2050	80% below 1990	none

GHG

*A reduction of 40% below 2015 levels is equivalent to **48% below 1990 levels***
&A reduction of 83% below 2015 levels is equivalent to **85% below 1990 levels***
#The 2045 CAP has an ***aspirational goal*** of carbon neutrality by 2045*

Figure 2-5: Statewide and 2045 CAP Greenhouse Gas Emissions Targets and Goals

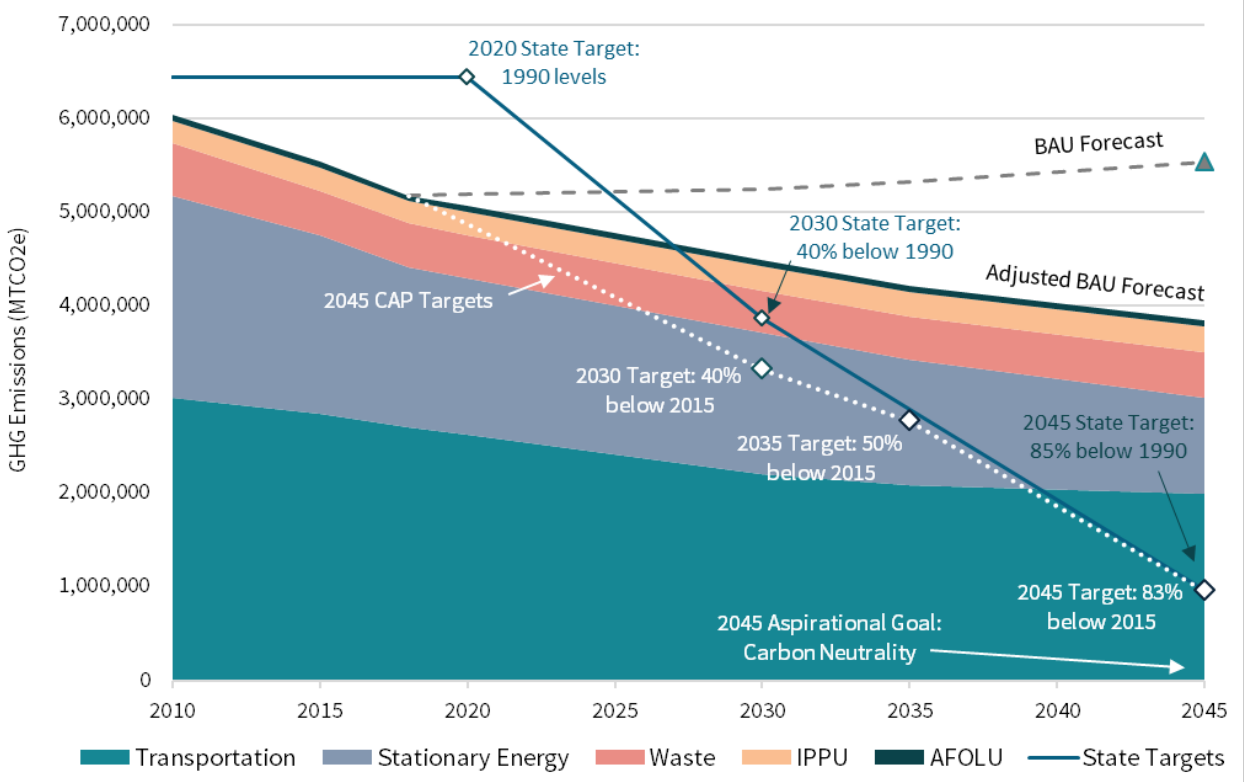

Figure 2-6: 2030, 2035, and 2045 Greenhouse Gas Emissions Targets and 2045 Aspirational Goal

Source: Appendix B: Emissions Forecasting and Reduction Methods.

CHAPTER 3

GHG Emissions Reduction Strategies, Measures, and Actions

3.1 GHG Emissions Reduction Framework

Although state policies and regulations contribute greatly to reducing GHG emissions, local measures are critical to the ability of unincorporated Los Angeles County to meet its emissions reduction targets and its long-term aspirational goal to be carbon neutral. This chapter describes the County's actions to reduce GHG emissions, organized by the following five categories of strategies:

Energy Supply

Transportation

Building Energy and Water

Waste

Agriculture, Forestry, and Other Land Uses

Throughout this chapter, strategies, measures, and actions are defined as follows:

- **Strategies** are the overall, sector-level goals of the 2045 CAP. These are broad strategies that aim for overarching goals within each emissions sector and are based on the Draft CAP strategies. For example, "*Decarbonize the Energy Supply*" is a strategy.
- **Measures** are focused, sub-sector–specific programs and goals that include performance standards that are designed to be quantified for GHG emissions reductions. They support strategies and are achieved through individual implementing actions. For example, "*Procure Zero-Carbon Electricity*" is a measure.
- **Actions** are the specific policies, programs, or tools that will be implemented to support long-range planning. Actions are intended to be implemented in a coordinated manner to make meaningful progress toward the associated measure and strategy. For example, "*Enroll the community in CPA's 100 percent Green Power option*" is an action.

Strategies in the 2045 CAP include at least one defined GHG emissions reduction measure with implementing actions and time-defined targets that state the levels of performance required to reduce emissions.

As discussed in Chapter 1, the 2045 CAP is a policy document that would support development already allowed under the General Plan's land use assumptions in the Land Use Element and 2021–2029 Housing Element. No changes to General Plan land use designations, zoning, or land use–specific projects are proposed as part of the 2045 CAP.

3.2 GHG Emissions Reduction Potential

Quantitative modeling has been used to estimate the GHG emissions reductions associated with the performance objective(s) of 18 separate measures. The modeling incorporates state and County policies, resolutions, programs, and incentives, as well as outreach and education activities (as detailed in Appendix B). This analysis quantifies the annual emissions reductions anticipated from each of the 18 measures in 2030, 2035, and 2045.

Through locally implemented strategies and measures, described in more detail in the following sections, annual emissions reductions for unincorporated Los Angeles County are anticipated to be 1,580,723 $MTCO_2e$ by the year 2030 (**Table 3-1**). Combined with state and regional measures, local measures will enable unincorporated Los Angeles County to reduce total community GHG emissions to approximately 2,899,852 $MTCO_2e$ in the year 2030 (**Table 3-2**). This reduction of approximately 48 percent from 2015 levels would enable unincorporated Los Angeles County to exceed its 2030 target. Also shown in these tables, annual emissions reductions for unincorporated Los Angeles County are anticipated to be 2,033,420 $MTCO_2e$ in the year 2035 and 2,988,956 $MTCO_2e$ in the year 2045—61 percent below 2015 levels in 2035 and 85 percent below 2015 levels in 2045—exceeding the targets for both years. These measures would also put unincorporated Los Angeles County on a path toward attaining carbon neutrality by 2045.

Table 3-1: Annual Greenhouse Gas Emissions Reductions by Strategy

STRATEGY	ANNUAL GHG EMISSIONS REDUCTIONS ($MTCO_2e$/YEAR) 2030	2035	2045
Energy Supply			
Strategy 1: Decarbonize the Energy Supply	511,476	363,311	52,148
Transportation			
Strategy 2: Increase Densities and Diversity of Land Uses Near Transit	66,542	63,286	61,480
Strategy 3: Reduce Single-Occupancy Vehicle Trips	11,465	13,715	13,324
Strategy 4: Institutionalize Low-Carbon Transportation	606,799	969,808	1,766,822
Building Energy and Water			
Strategy 5: Decarbonize Buildings	183,524	293,575	499,860
Strategy 6: Improve Efficiency of Existing Building Energy Use	22,274	41,255	203,455
Strategy 7: Conserve Water	10,575	15,122	11,764
Waste			
Strategy 8: Minimize Waste and Recover Energy and Materials from the Waste Stream	154,514	248,362	342,934
Agriculture, Forestry, and Other Land Use			
Strategy 9: Conserve and Connect Wildlands and Working Lands	8,953	17,906	26,858
Strategy 10: Sequester Carbon and Implement Sustainable Agriculture	4,602	7,080	10,310
TOTAL REDUCTIONS	**1,580,723**	**2,033,420**	**2,988,956**

Abbreviation: $MTCO_2e$/year = metric tons of carbon dioxide equivalent per year
Note: Totals may not add precisely due to rounding.
Source: Appendix B: Emissions Forecasting and Reduction Methods.

Table 3-2: Summary of Unincorporated Los Angeles County Greenhouse Gas Emissions Reductions by Year

DATA / METRIC	ANNUAL GHG EMISSIONS ($MTCO_2e$/YEAR) 2030	2035	2045
Business-as-Usual Forecast	5,238,062	5,319,243	5,524,939
Adjusted Business-as-Usual Forecast	4,480,574	4,204,572	3,840,154
Total Reductions from 2045 CAP Measures	-1,580,723	-2,033,420	-2,988,956
Resulting Community Emissions with 2045 CAP Implementation	2,899,852	2,171,152	851,199
Emissions Targets (2030, 2035, and 2045)	**3,318,693**	**2,765,578**	**958,088**
Target/Goal Met?	**Yes**	**Yes**	**Yes**

Abbreviations: 2045 CAP = 2045 Los Angeles County Climate Action Plan; *$MTCO_2e$/year = metric tons of carbon dioxide equivalent per year*
Note: Totals may not add precisely due to rounding.
Source: Appendix B: Emissions Forecasting and Reduction Methods.

Figure 3-1 depicts unincorporated Los Angeles County's GHG emissions reduction pathway for meeting its targets through 2045 and making substantial progress toward the long-term aspirational goal of carbon neutrality by 2045. To achieve that long-term aspirational goal, additional state and local measures will be needed, potentially including carbon offsets. The figure illustrates that approximately 850,000 $MTCO_2e$ in residual emissions will need to be eliminated or offset to meet the 2045 carbon-neutral aspirational goal.

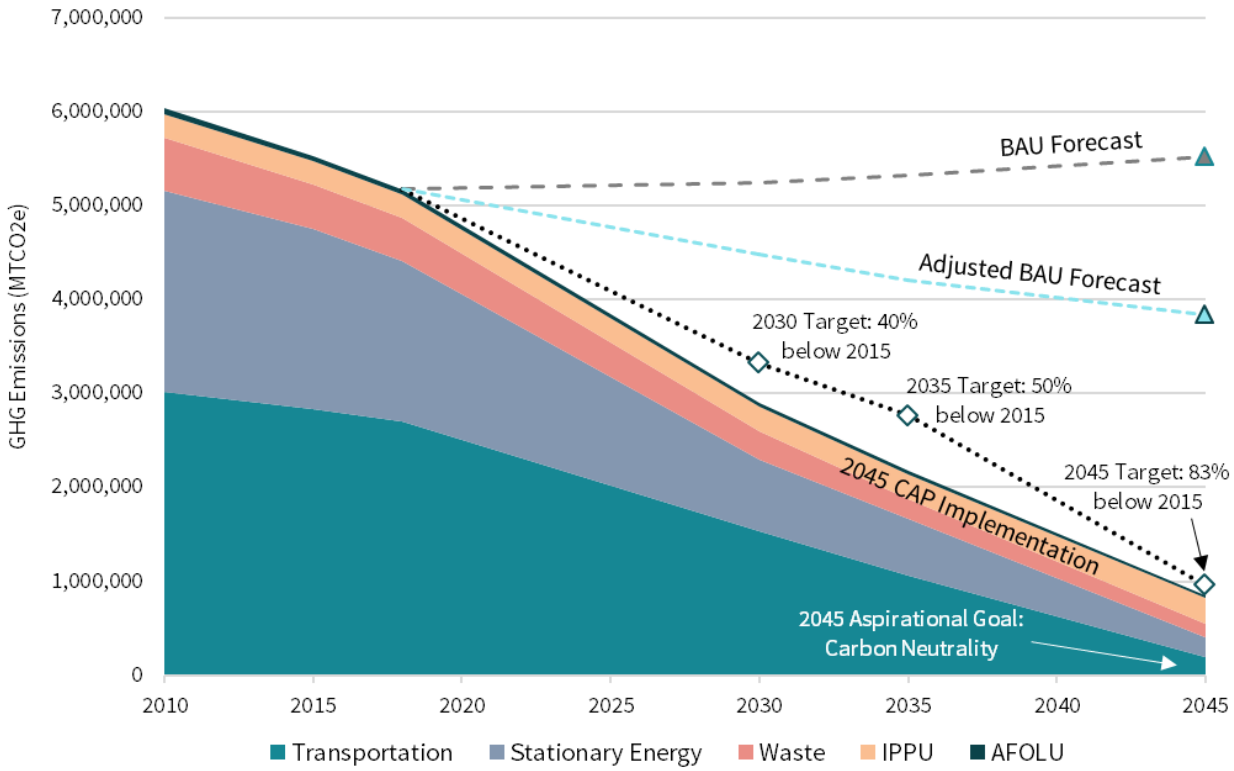

Figure 3-1: Communitywide Greenhouse Gas Emissions Forecasts with 2045 Climate Action Plan Implementation

Source: Appendix B: Emissions Forecasting and Reduction Methods.

Core Measures

The 2045 CAP includes 25 measures and more than 90 implementing actions, and achieving the GHG emissions targets for 2030, 2035, and 2045 described in Chapter 2 can be accomplished by successfully reaching the performance objectives of the core measures and other quantified and supporting measures. While the core measures provide the highest GHG emissions reduction potential, the implementation of other non-core measures provides the County a more comprehensive approach to emissions reductions.

Based on the GHG emissions reduction estimates provided in Chapter 3, **Figure 3-2** shows how five core measures out of the 18 quantified measures contribute almost 90 percent of the total reductions expected by 2030. Unincorporated Los Angeles County can meet its targets for 2030 and 2035 solely through implementation of these five core measures[22]:

- T6: Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales
- ES2: Procure Zero-Carbon Electricity
- E1: Decarbonize Existing Buildings
- T8: Accelerate Freight Decarbonization
- W1: Institutionalize Sustainable Waste Systems and Practices

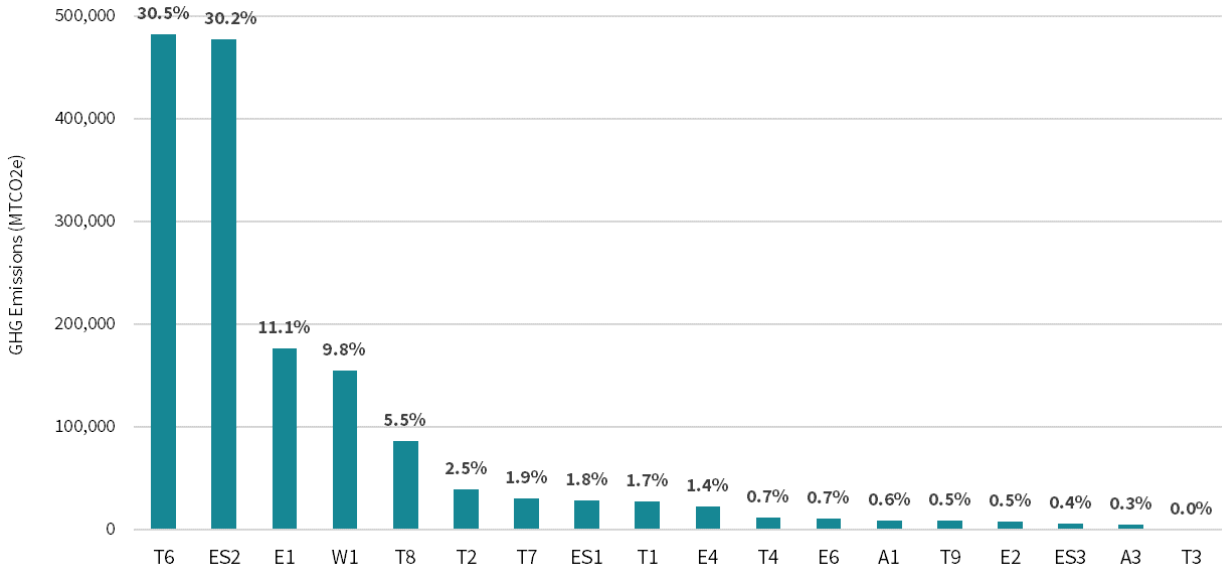

Figure 3-2: Greenhouse Gas Emissions Reduction Measures, Ranked by 2030 Reduction Potential

Source: Appendix B: Emissions Forecasting and Reduction Methods.

Table 3-3 summarizes these five core measures including their performance objectives, implementing agencies, and potential funding sources. Additional detail is provided in Appendix E, including each measure's implementing actions and associated metrics.

[22] Achieving the performance objectives for these five measures should cause unincorporated Los Angeles County to exceed the 2030 target by more than 160,000 $MTCO_2e$ and the 2035 target by more than 230,000 $MTCO_2e$.

Table 3-3: Core Measures for Meeting Unincorporated Los Angeles County's 2030, 2035, and 2045 Greenhouse Gas Emissions Targets

MEASURE	PERFORMANCE GOALS	LEAD	PARTNERS	POTENTIAL FUNDING SOURCES
T6: Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales	Increase the fleetwide percentage of light-duty vehicles in unincorporated Los Angeles County that are ZEVs to 30% by 2030; 50% by 2035; and 90% by 2045. Increase the sales of new light-duty vehicles in unincorporated Los Angeles County that are ZEVs to 68% by 2030 and 100% by 2035. Install new public and private shared electric vehicle charging stations (EVCS): 37,000 by 2030; 74,000 by 2035; and 140,000 by 2045. Install new EVCSs at County facilities and properties: 5,000 by 2030; 10,000 by 2035; and 25,000 by 2045.	CSO ISD DRP PW	Fire LASD Parks Beaches and Harbors SCE	• SCE Charge Ready Program • SCAQMD and MSRC Residential EV Charging Incentive Pilot Program • SCAQMD Alternative Fuel Vehicle and Fueling Infrastructure Grants • SCAQMD Heavy-Duty Zero Emission Vehicle Replacement Grant • SCAQMD Goods Movement Emission Reduction Program CARB Clean Fuel Reward and CALeVIP • CARB Clean Mobility Options Voucher Pilot Program • CARB Low Carbon Transportation Investments and Air Quality Improvement Program • CARB Bus Replacement Grant • CARB Hybrid and Zero Emission Truck and Bus Voucher Incentive Project • CARB Greenhouse Gas Reduction Fund • CPUC Transportation Electrification Program • CEC CALeVIP and EVSE Rebates • CEC Clean Transportation Program • CalCAP EV Charging Station Financing Program for small businesses • Federal Inflation Reduction Act EV tax credits and other financial incentives • Federal EV Charging Tax Credit • Federal Zero-Emission Transit Bus Tax Exemption

Table 3-3: Core Measures for Meeting Unincorporated Los Angeles County's 2030, 2035, and 2045 Greenhouse Gas Emissions Targets (cont.)

MEASURE	PERFORMANCE GOALS	LEAD	PARTNERS	POTENTIAL FUNDING SOURCES
ES2: Procure Zero-Carbon Electricity	Participate in CPA's Green Power option, SCE's Green Rate option, or other available 100% zero-carbon electricity service: 100% municipal participation by 2025 and 96% community participation by 2030.	ISD CSO	CPA SCE LA100	• CPA Powershare program • Federal Inflation Reduction Act • CARB Greenhouse Gas Reduction Fund • CARB California Climate Investments program • CPUC California Solar Initiative • CPUC Self-Generation Incentive Program • Low-Income Solar and Wind Investment Tax Credit • U.S. DOE Renewable Energy and Efficiency Energy grants
E1: Decarbonize Existing Buildings	Decarbonize the existing residential building stock: 25% by 2030; 40% by 2035; and 80% by 2045. Decarbonize the existing nonresidential building stock: 15% by 2030; 25% by 2035; and 60% by 2045. Require major renovations to be electric-ready. Require ZNE for all major renovations: 50% by 2030; 75% by 2035; and 100% by 2045. Adopt building performance standards and reach code(s). Adopt ZNE ordinance.	DRP PW ISD CSO	SCE SoCalGas CPA RePowerLA Coalition NRDC	• CPUC Technology and Equipment for Clean Heating and Building Initiative for Low Emissions Development programs • CARB Greenhouse Gas Reduction Fund • CARB California Climate Investments program • California Alternative Energy and Advanced Transportation Financing Authority • California Lending for Energy and Environmental Needs Center • Affordable Housing and Sustainable Communities Program • CPUC Energy Saving Assistance Program • CPA and CALeVIP rebates • Federal Inflation Reduction Act • Home Electrification and Energy Efficiency Rebates • Efficient Building Code Adoption Grants • County General Fund

Table 3-3: Core Measures for Meeting Unincorporated Los Angeles County's 2030, 2035, and 2045 Greenhouse Gas Emissions Targets (cont.)

MEASURE	PERFORMANCE GOALS	LEAD	PARTNERS	POTENTIAL FUNDING SOURCES
W1: Institutionalize Sustainable Waste Systems and Practices	Increase the total unincorporated Los Angeles County waste diversion rate to 85% by 2030; 90% by 2035; and 95% by 2045. Reduce the disposal of single-use plastics in landfills. Increase Construction and Demolition Ordinance to 70% diversion. Increase percentage of construction and demolition debris reused in new projects (private, public).	PW CSO	DRP DPH LACSD CalRecycle	• CalRecycle grants • CEC grants • USDA Water & Waste Disposal Loan & Grant Program
T8: Accelerate Freight Decarbonization	Increase the fleetwide percentage of medium- and heavy-duty vehicles in unincorporated Los Angeles County that are ZEVs to 40% by 2030; 60% by 2035; and 90% by 2045. Increase the fleetwide percentage of medium- and heavy-duty vehicles in the County-owned fleet that are ZEVs to 50% by 2030; 70% by 2035; and 95% by 2045. Ensure that 100 percent of the drayage truck fleet is ZEV by 2035. Ensure that 100 percent of sales of medium- and heavy-duty trucks are ZEV by 2045. All new warehouse loading docks must have EVCSs by 2030. All existing warehouse loading docks must have EVCSs by 2030.	PW DRP CSO ISD LASD Fire Parks	SCAQMD CARB SCAG Metro Councils of governments Cities	• SCAQMD Heavy-Duty Zero Emission Vehicle Replacement Grant • SCAQMD Goods Movement Emission Reduction Program • CEC CALeVIP EVSE Rebates • SCE Charge Ready Program EVSE rebates • CARB Advanced Technology Freight Demonstration Projects • CARB Low Carbon Transportation Investments and Air Quality Improvement Program • CARB Clean Vehicle Rebate Project (CVRP) public fleet vehicle rebates • CEC Clean Transportation Program • CPUC statewide transportation electrification infrastructure rebate program • County General Fund Federal Inflation Reduction Act EV tax credits and other financial incentives • Federal New EV Tax Credit • Federal EV Charging Tax Credit • Federal Commercial EV Tax Credit

Table 3-3: Core Measures for Meeting Unincorporated Los Angeles County's 2030, 2035, and 2045 Greenhouse Gas Emissions Targets (cont.)

MEASURE	PERFORMANCE GOALS	LEAD	PARTNERS	POTENTIAL FUNDING SOURCES

Abbreviations: AHSC = Center, Affordable Housing and Sustainable Communities; Beaches and Harbors = Los Angeles County Department of Beaches & Harbors; C&D = construction and demolition; CAEATFA = California Alternative Energy and Advanced Transportation Financing Authority; CalCAP = California Capital Access Program; CALeVIP = California Electric Vehicle Infrastructure Project; CalRecycle = California Department of Resources Recycling and Recovery; Caltrans = California Department of Transportation; CARB = California Air Resources Board; CDFA = California Department of Food and Agriculture; CEC = California Energy Commission; CPA = Clean Power Alliance; CPUC = California Public Utilities Commission; CSO = Chief Sustainability Office; CVRP = Clean Vehicle Rebate Project; DPH = Department of Public Health; DRP = Department of Regional Planning; ESAP = Energy Saving Assistance Program; EV = electric vehicle; EVCS = electric vehicle charging station(s); EVSE = electric vehicle supply equipment; GGRF = Greenhouse Gas Reduction Fund; ISD = Internal Services Department; LA100 = The Los Angeles 100% Renewable Energy Study; LACSD = Los Angeles County Sanitation Districts; LASD = Los Angeles County Sheriff's Department; Metro = Los Angeles County Metropolitan Transportation Authority; MSRC = Mobile Source Air Pollution Reduction Review Committee; NRDC = National Resources Defense Council; Parks = Los Angeles County Department of Parks and Recreation; PW = Public Works; SCAG = Southern California Association of Governments; SCAQMD = South Coast Air Quality Management District; SCE = Southern California Edison; SoCalGas = Southern California Gas Company; USDA = U.S. Department of Agriculture; U.S. DOE = U.S. Department of Energy; U.S. EPA = U.S. Environmental Protection Agency; ZEV = zero emission vehicle; ZNE = zero net energy.
Source: Appendix B: Emissions Forecasting and Reduction Methods.

Costs and Savings

Many GHG emissions reduction actions result in cost savings to residents, businesses, and the County. These savings are achieved through participation in programs aimed at increasing energy efficiency, water efficiency, use of public transportation, and utilization of renewable energy sources. Increased energy and water efficiency provides cost savings in the form of lower utility bills, while the use of public transportation can reduce costs associated with gasoline use and vehicle maintenance costs. Renewable on-site energy generation also provides cost savings to residents and business owners, as these buildings would not need to purchase as much electricity from utility providers. State and federal measures are critical to meeting the County's emissions reduction goals; however, local programs and policies, as well as choices made by unincorporated Los Angeles County's residents and businesses, will determine the ability of unincorporated Los Angeles County to achieve its emissions reduction targets.

Many GHG emissions reduction actions will result in cost savings for residents and businesses. There is often a misperception that climate action costs more than inaction. When full-cost accounting is conducted and understood, in many cases costs are lower for emissions-reducing activities (like energy conservation and local rooftop solar electricity generation) and much higher for emissions-producing activities (on average, charging an electric car costs *half* of what it costs to refuel a comparable gas-powered car).[23,24] In addition, there will be broader regional indirect cost savings from implementing the 2045 CAP's measures and actions such as potentially reduced climate-induced disasters (like heat waves, wildfires, and sea level rise) and associated cost recovery.

[23] California Air Resources Board. 2023. Cars and Light-Trucks are Going Zero—Frequently Asked Questions. Available: https://ww2.arb.ca.gov/resources/documents/cars-and-light-trucks-are-going-zero-frequently-asked-questions. Accessed in February 2023.

[24] While electricity costs vary, the average price in California is about 18 cents per kilowatt-hour (kWh). At this price, charging an electric car such as the Nissan LEAF with a 40-kWh battery with a 150-mile range would cost about $7 to fully charge. Meanwhile, fueling a 25-miles-per-gallon gas vehicle at a gas price of $3.70 per gallon would cost about $22 for enough gas to drive approximately 150 miles. (Drive Clean. 2021. Electric Car Charging Overview. Available: https://driveclean.ca.gov/electric-car-charging. Accessed February 2023.)

The Path to Carbon Neutrality

AB 1279 mandates that by 2045, the State of California must achieve net zero GHG emissions and reduce anthropogenic GHG emissions to 85 percent below 1990 levels. In December 2022, CARB adopted the 2022 Scoping Plan, which lays out the sector-by-sector road map for California to achieve carbon neutrality by 2045 or earlier. The 2045 CAP aligns with AB 1279 and the 2022 Scoping Plan through its 2045 **target** of reducing unincorporated Los Angeles County's emissions to 85 percent below 1990 levels and its **aspirational goal** of carbon neutrality by 2045. As defined by AB 1279, CARB, and the 2045 CAP, carbon neutrality and net zero GHG emissions are equivalent, and mean that GHG emissions generated by sources such as transportation, power plants, and industrial processes must be less than or equal to the amount of CO_2 that is stored, both in natural sinks and through mechanical sequestration.[25] To achieve carbon neutrality, the County must leverage its influence as a climate leader, collaborating with other local jurisdictions as well as the private, institutional, and nonprofit sectors. Recognizing that no single entity has direct control over communitywide GHG emissions, a collaborative approach is essential to realize equitable and sustainable climate actions for a carbon neutral Los Angeles County.

The 2045 CAP provides a road map for successfully achieving both the 2030 and 2035 targets by a substantial margin along with the 2045 target. The 2045 CAP places unincorporated Los Angeles County on a trend that aims for carbon neutrality by 2045. However, as illustrated in Figure 3-1, successful implementation of the 2045 CAP alone will not be enough for unincorporated Los Angeles County to achieve this aspirational goal of carbon neutrality. As indicated in Table 3-2, even with CAP implementation, there will still be approximately 850,000 $MTCO_2e$ of residual emissions in 2045. These emissions will originate from buildings and energy industries that can reduce but cannot eliminate emissions from natural gas use (approximately 170,000 $MTCO_2e$), use of light-duty vehicles and heavy-duty trucks (approximately 190,000 $MTCO_2e$), fluorinated products/product use (approximately 285,000 $MTCO_2e$), solid waste disposal (approximately 86,000 $MTCO_2e$), wastewater treatment (approximately 73,000 $MTCO_2e$), miscellaneous other sources (approximately 32,000 $MTCO_2e$), off-road equipment use (approximately 27,000 $MTCO_2e$), and fertilizer use (approximately 24,000 $MTCO_2e$).

Figure 3-3 depicts unincorporated Los Angeles County's residual GHG emissions in 2045 with implementation of the 2045 CAP for each major sector. Total residual emissions are approximately 850,000 $MTCO_2e$.

[25] California Health and Safety Code Section 38562.2.

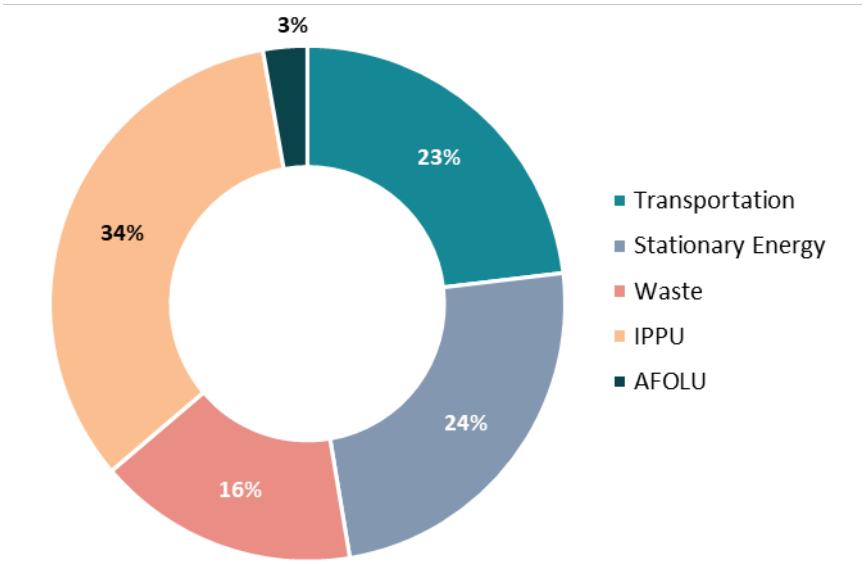

Figure 3-3: Residual 2045 Communitywide Greenhouse Gas Emissions with 2045 Climate Action Plan Implementation
Source: Appendix B: Emissions Forecasting and Reduction Methods.

The County expects that new state regulations to be adopted in the next 20–25 years will further reduce GHG emissions and that technologies will be established and more commercially available over the next 20–25 years that would further reduce these residual emissions. To obtain carbon neutrality by 2045, it is highly likely that the following actions will need to occur in unincorporated Los Angeles County:

- Electrify 90–100 percent of buildings and facilities, including residential, commercial, industrial, and energy industries.
- Achieve zero (or near-zero) waste going to landfills.
- Use ZEVs for more than 90 percent of the Countywide vehicle fleet, including light-duty passenger vehicles and heavy-duty trucks.
- Eliminate all oil and natural gas operations.
- Transition all refrigerants, fire suppressants, and consumer products used within unincorporated Los Angeles County to extremely low (or zero) global warming potential (GWP) substitutes.
- Replace nearly all off-road equipment and off-road vehicles (including locomotives) with electric, green hydrogen,[26] or other zero-emission engine technologies.
- Capture all fugitive wastewater treatment process emissions and convert to fuel.
- Eliminate nitrous oxide emissions from fertilizer application.
- Implement statewide, regional, and local carbon removal and carbon capture and sequestration strategies to offset all remaining residual emissions.

[26] *Green hydrogen* is hydrogen generated by renewable energy or from low-carbon power, and has significantly lower carbon emissions than traditional hydrogen, which is produced by steam reforming of natural gas.

If the residual emissions, shown in Figure 3-1, cannot be eliminated through new regulations or technologies, the County will consider future implementation of carbon removal strategies (such as carbon capture and sequestration and direct air capture), along with future implementation of a carbon offsets/credits program, following completion of a feasibility study, to achieve carbon neutrality by 2045. Evolving state regulations, programs, and financial incentives will provide new opportunities for unincorporated Los Angeles County to counteract any residual emissions. For example, almost $9 billion in in carbon capture and sequestration support was included in the $1 trillion Infrastructure Investment and Jobs Act of 2021, which includes funding to establish four direct air capture hubs. As another example, SB 27 of 2021 will provide carbon removal projects via an in-state project registry, which will serve as a database of projects in the state that drive climate action on natural and working lands. Further, SB 905 of 2022 requires CARB to create the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate carbon capture, utilization, or storage (CCUS) and CO_2 removal projects and technology; these projects could also support unincorporated Los Angeles County's aspirations to achieve carbon neutrality.

Alignment with the 2022 Scoping Plan

The 2022 Scoping Plan, adopted by CARB in December 2022, expands on prior scoping plans. This plan responds to more recent legislation, outlining a technologically feasible, cost-effective, and equity-focused path to achieve the state's climate target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045 and achieving carbon neutrality[27] by 2045 or earlier.[28] The 2022 Scoping Plan outlines the strategies the state will implement to achieve carbon neutrality by reducing GHG emissions to meet the anthropogenic target, and by expanding actions to capture and store carbon through the state's natural and working lands and using a variety of mechanical approaches.

The 2022 Scoping Plan also discusses the role of local governments in meeting the state's GHG emissions reduction goals, because local governments have jurisdiction and land use authority related to community-scale planning and permitting processes, local codes and actions, outreach and education programs, and municipal operations. The efforts of local governments to reduce GHG emissions within their jurisdictions are critical to achieving the state's long-term climate goals. Furthermore, local governments make critical decisions on how and when to deploy transportation infrastructure and can choose to support transit, walking, bicycling, and neighborhoods that allow people to transition away from cars; they can adopt building ordinances that exceed statewide building code requirements; and they play a critical role in facilitating the rollout of ZEV infrastructure.[29] The 2022 Scoping Plan encourages local governments to take

[27] *Carbon neutrality* means "net zero" emissions of GHGs. In other words, it means that GHG emissions generated by sources such as transportation, power plants, and industrial processes must be less than or equal to the amount of CO_2 that is stored, both in natural sinks and through mechanical sequestration. AB 1279 uses the terminology "net zero" and the 2022 Scoping Plan uses the terminology "carbon neutrality" or "carbon neutral." For purposes of this 2045 CAP, these terms mean the same thing and are used interchangeably.

[28] California Air Resources Board. 2022. *2022 Scoping Plan For Achieving Carbon Neutrality.* November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp_1.pdf. Accessed in January 2023.

[29] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in January 2023.

ambitious, coordinated climate actions at the community scale—actions that are consistent with and supportive of the state's climate goals. These actions could include:

- Develop local CAPs and strategies consistent with the state's GHG emissions reduction goals.
- Incorporate state-level GHG emissions priorities into local governments' processes for approving land use and individual plans and individual projects.
- Implement CEQA mitigation, as needed, to reduce GHG emissions associated with new land use development projects.
- Leverage opportunities for regional collaboration.

The 2045 CAP is consistent with CARB's recommendation for local governments contained in the 2022 Scoping Plan, as demonstrated in Table H-1 of Appendix H.

3.3 Strategies, Measures, and Actions

This section provides an in-depth discussion of the strategies and GHG emissions reduction measures in the 2045 CAP, describing specific implementing actions, performance objectives, anticipated GHG emissions reductions, estimated cost impacts, and implementation responsibilities. **Measures and actions that have been quantified are identified with a ^{Q} superscript.**

Although the 2045 CAP focuses on reducing unincorporated Los Angeles County emissions, six actions in the energy sector, seven actions in the transportation sector, and three actions in the waste sector specifically aim to reduce GHG emissions associated with the County's municipal operations. **Actions specifically designed to reduce emissions for County municipal operations are identified with an ^{M} superscript.**

For estimated up-front capital costs, the following key is used:

- $: Less than 500,000 U.S. dollars (USD)
- $$: 500,000 to 2 million USD
- $$$: 2 million to 15 million USD
- $$$$: 15 million to 150 million USD
- $$$$$: More than 150 million USD

As noted in Chapter 1, in this document, the term "unincorporated Los Angeles County" means the unincorporated areas of Los Angeles County; "Countywide" refers to Los Angeles County in its entirety, inclusive of both unincorporated areas and all 88 incorporated cities; and "County" refers to County of Los Angeles government.

Energy Supply (ES)

The source of energy used is essential to achieving the County's goal to reduce GHG emissions associated with energy supply and consumption. This category includes a range of strategies aimed at decarbonizing the energy used throughout unincorporated Los Angeles County. The approach combines eliminating all oil and gas extraction operations in unincorporated Los Angeles County, decarbonizing the energy supply, generating energy on-site through renewables, and load management and peak reductions.

Decarbonizing the energy supply provides multiple co-benefits for residents, employees, and employers. These benefits have not always reached frontline, BIPOC, and disadvantaged communities. For example, residents of affordable housing and multifamily housing have not been well served by local renewable energy programs, such as rooftop solar, leading to cycles of disinvestment and potentially higher energy bills. Concurrently, many of these same residents are already extremely rent and utility burdened, and COVID-19 has exacerbated these problems. The lack of housing and high cost of living in the region mean that increased costs in household expenses could trigger displacement. New and innovative approaches are needed to bring the benefits of renewable energy to all residents while protecting and increasing affordable housing.

Energy Supply (ES) comprises the following strategy and measures:

Strategy 1: Decarbonize the Energy Supply

- Measure ES1: Develop a Sunset Strategy for All Oil and Gas Operations Q
- Measure ES2: Procure Zero-Carbon Electricity Q
- Measure ES3: Increase Renewable Energy Production Q
- Measure ES4: Increase Energy Resilience
- Measure ES5: Establish GHG Requirements for New Development

Energy Supply
Strategy 1: Decarbonize the Energy Supply

2045 VISION

Phase out oil and gas extraction and provide building energy needs without using fossil fuels

Strategy Description

Oil and gas extraction is widespread and contributes significant GHG emissions into the atmosphere. These emissions are difficult to monitor and control, so this strategy aims to phase out all oil and gas extraction operations in unincorporated Los Angeles County by 2045. In January 2023, the County Board of Supervisors adopted the Oil Well Ordinance, which prohibits all new oil and gas extraction wells and production facilities in all zones and designates all existing oil and gas extraction activities as nonconforming uses in all zones. An amortization study is currently underway to determine the fastest possible phase-out timeline for all existing oil wells and production facilities. The County currently also requires that within 90 days after the abandonment of any well, the well site shall be restored as nearly as practicable to its original condition.[30]

Decarbonizing the energy supply requires three complementary components: procuring clean renewable sources of energy, shifting building energy loads for heating and cooking to electricity or renewable fuels rather than fossil fuels, and reducing energy use through energy efficiency actions. The Clean Power Alliance (CPA) enabled the County to transition to a low-carbon energy future at an accelerated pace. The CPA is a community choice aggregation program that offers participants the option to increase the amount of their electricity coming from renewable sources. The County will procure electricity that is generated by 100 percent renewable sources from CPA or other available 100 percent zero-carbon electricity service options (such as SCE's Green Rate program).

This strategy would incentivize new or upgraded energy generation and related infrastructure. Examples of such projects could include distributed generation via solar roofs, community solar, or microgrids (known as "distributed energy resources" [DER]); battery storage and EV charging stations (EVCSs); utility-scale solar photovoltaic (PV) development; and/or energy transmission and subtransmission facilities.

It is not currently possible to quantify the renewable energy potentially facilitated by the 2045 CAP that would be provided by new utility-scale solar projects, or to identify where that demand would be met. The increased demand for renewable energy could be met in a variety of additional ways, other than through new utility-scale solar projects. In particular, the importation of renewable energy into the unincorporated areas by providers such as CPA and the further development of

[30] There is a minimum bond amount of $152,000 per well; the bond must be executed in favor of the County to cover the costs of plugging if the operator fails to do so. All equipment and pipelines not necessary for operation and maintenance of other wells on-site must be removed.

rooftop solar are reasonable, feasible steps on the County's path to meeting its targets and advancing toward its goal of carbon neutrality.

According to CPA's 2022 Integrated Resource Plan (a CPUC proceeding to evaluate long-term grid resource needs), the projected 2030 renewable electricity mix is approximately 23 percent utility-scale solar, 53 percent battery storage, 21 percent onshore wind, and 2 percent hydro; the projected 2035 renewable electricity mix is 30 percent utility-scale solar, 45 percent battery storage, 24 percent onshore wind, and 1 percent hydro.[31] This demonstrates that utility-scale solar is a relatively small portion of CPA's renewable energy supply mix through 2035. In addition, because of the large number of 100 percent Green Power customers, CPA expects to meet and exceed the State of California's 30 million $MTCO_2e$ GHG targets, even in its lowest renewables case. Note that these projections do not include behind-the-meter distributed energy generation like rooftop solar because DER electricity generation is not supplied by CPA.

The County's strategy to shift to a renewables-based electricity supply must ensure equitable access to affordable, local, and reliable energy sources. An effort to develop a comprehensive community energy map will identify the geographic opportunities to deploy these distributed energy resources in an equitable manner to help address energy insecurity. Prioritizing distributed energy resources in wildfire-prone communities will provide an alternative to the costly infrastructure upgrades that would be required to maintain uninterrupted power service. Enabling community-shared solar will expand access to local renewable energy for renters and other potential customers.

Where appropriate, microgrids and smart thermostats and controls can be used to manage energy demand, including lowering peak energy demand and dynamically responding to grid conditions. Reducing peak energy demand limits the use of the dirtiest "peaker" plants, limits the need to construct new generation facilities, and reduces the likelihood of power outages due to excessive demand. Installing microgrids combined with solar generation and batteries is a key strategy to support both grid and building resilience. These strategies can help offset the additional demand on electricity supply associated with electrification and can protect buildings from power outages associated with fire and extreme weather events. These strategies can also enable buildings to act as grid assets to support energy resilience, by dynamically optimizing use of renewable resources when they are most abundant.[32]

Past and Current County Actions

- In March 2016, the County Board of Supervisors instructed the Department of Regional Planning (DRP) to amend Title 22, the Planning and Zoning Code for unincorporated Los Angeles County, to ensure that oil and gas facilities may no longer operate by right in unincorporated Los Angeles County, and ensure that the regulations reflect best practices and current mitigation methods and technologies, minimize environmental impacts, and protect sensitive uses and populations. In 2020 DRP updated the Oil Well Ordinance.

[31] Clean Power Alliance. 2022. 2022 Integrated Resource Plan (IRP) Introduction. September 22, 2022. Available: https://cleanpoweralliance.org/wp-content/uploads/2022/09/Item-6-2022-IRP-Introduction.pptx. Accessed in February 2023.

[32] As responsive assets, buildings can ramp energy use up or down, depending on the cost or carbon intensity of the utility generation source. This helps utilities ensure the balanced, flexible supply and demand of high levels of renewables needed to decarbonize the electricity system, resulting in resilient cities, communities, and regions. For more, see https://rmi.org/our-work/buildings/pathways-to-zero/grid-interactive-energy-efficient-buildings/.

- In 2017, DRP amended the zoning code to support and facilitate responsible development of small-scale renewable energy systems and utility-scale renewable energy facilities.
- In 2017, the Board of Supervisors approved the creation of a community choice energy program for Los Angeles County known as the Clean Power Alliance. CPA began operating in 2018 and now serves 32 jurisdictions across Los Angeles and Ventura counties, representing 3 million residents. In 2019, all customers in unincorporated Los Angeles County were automatically enrolled in CPA's Clean Energy (50 percent renewable) tier. Since October 2022, all customers in unincorporated Los Angeles County are automatically enrolled in CPA's 100 percent renewable energy option.
- Since October 2022, all residents and businesses in unincorporated Los Angeles County have been receiving 100 percent renewable energy—wind, solar, geothermal—from CPA.
- In September 2020, the Board of Supervisors passed a motion to prepare a comprehensive review of existing County policies, practices, and operations to ensure that there are appropriate backup systems to support unincorporated Los Angeles County residents in times of emergencies including, at a minimum, a specific focus on equity. The report was published in February 2021.
- In February 2022, the Board of Supervisors passed a motion to study the feasibility of establishing Zero Net Energy (ZNE) standards for major development projects and other large-scale development.
- In March 2022, the Board of Supervisors passed a motion to ensure the equitable decarbonization of buildings by conducting a stakeholder engagement process, studying energy resource and infrastructure needs, and seeking funding.
- In April 2022, the Internal Services Department completed a feasibility study for energy resilience and microgrids at the East L.A. Civic Center.
- In September 2022, the Board of Supervisors voted to phase out oil and gas drilling and ban all new drill sites in unincorporated Los Angeles County areas. The ordinance prohibits new oil wells and production facilities in all zones, designates existing oil wells and production facilities as nonconforming uses in all zones, and establishes regulations for existing oil wells and production facilities. The phase-out will close more than 1,600 active and idle oil and gas wells in unincorporated Los Angeles County. A timetable for the phase-out will be decided after the County determines the fastest way to legally shut down the wells.
- On January 24, 2023, the Board of Supervisors adopted the Oil Well Ordinance, which becomes effective after 30 days.
- As of February 2023, the County is conducting an amortization study to determine the fastest possible phase-out timeline for all existing oil wells and production facilities. This study will consider the legal, environmental, political, and cost considerations of the phase-out. The amortization study will guide the strategy to phase out oil and gas extractions and facilities.

Alignment with State Initiatives

- SB 1137: Prohibits the development of new oil and gas wells or infrastructure in health protection zones, as defined, except for purposes of public health and safety or other limited exceptions.
- SB 100: By 2045, 100 percent of electricity is sourced from zero-carbon resources.
- SB 1020: Adds interim renewable energy and zero-carbon energy retail sales of electricity targets to California end-use customers set at 90 percent in 2035 and 95 percent in 2040; accelerates the timeline required to have 100 percent renewable energy and zero-carbon energy procured to serve state agencies from the original target year of 2045 to 2035.
- SB 1075: Requires CARB, by June 1, 2024, to prepare an evaluation that includes policy recommendations regarding the deployment, development, and use of hydrogen, and specifically the use of green hydrogen, in California.
- California Energy Efficiency Strategic Plan: A roadmap to achieve maximum energy savings across all major groups and sectors in California. This comprehensive Plan is the state's first integrated framework of goals and strategies for saving energy, covering government, utility, and private sector actions, and holds energy efficiency to its role as the highest priority resource in meeting California's energy needs.
- California Green Building Standards Code (CALGreen Code) (Title 24 Building Code): The CALGreen Code establishes mandatory measures for new residential and nonresidential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality.
- Renewables Portfolio Standard: A statewide mandate to increase the proportion of electricity from renewable sources. The program sets continuously escalating renewable energy procurement requirements for the state's load-serving entities. Generation must be procured from RPS-certified facilities (see SB 100 and SB 1020 above).
- SB 905 of 2002: Requires CARB to create the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate CCUS and CO_2 removal projects and technology.

Energy Supply
Strategy 1: Decarbonize the Energy Supply

MEASURE ES1: Develop a Sunset Strategy for All Oil and Gas Operations

Annual GHG Emissions REDUCTIONS

By 2030: 28,368

By 2035: 40,178

By 2045: 52,148

(units = $MTCO_2e$)

Estimated COST

$–$$$$

PERFORMANCE OBJECTIVES*

Reduce oil and gas operations compared to 2015 levels by:

- 40 percent by 2030
- 60 percent by 2035
- 80 percent by 2045

Examine all active, idle, and abandoned oil wells for fugitive emissions of GHGs.

Conduct carbon removal feasibility study.

** The performance objectives provided here serve as a general metric and may be refined upon completion of the Oil Well Amortization Study.*

DESCRIPTION

Develop a sunset strategy for all oil and gas operations that prioritizes disproportionately affected communities and develop a strategy for carbon removal.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

ES1.1—Collaborate with other local jurisdictions and utilities to develop a sunset strategy for all oil and gas operations that prioritizes disproportionately affected communities.

ES1.2—Develop a policy that requires the examination of idle and abandoned oil wells for fugitive emissions of GHGs to develop and implement a closure plan. Coordinate with federal and state agencies collecting fugitive emissions data.

ES1.3—Develop a carbon removal strategy, including direct air capture and carbon capture and sequestration (CCS).

Energy Supply
Strategy 1: Decarbonize the Energy Supply

MEASURE ES2: Procure Zero-Carbon Electricity (Core) Q

Annual GHG Emissions REDUCTIONS

By 2030: 477,188

By 2035: 317,915

By 2045: 0*

(units = $MTCO_2e$)

Estimated COST

$–$$

PERFORMANCE OBJECTIVES

Participate in CPA's Green Power option, SCE's Green Rate option, or other available 100 percent zero-carbon electricity service:

- 100 percent municipal participation by 2025
- 96 percent community participation by 2030 (approximately 4 percent opt-out rate)

** There are zero GHG emissions reductions in 2045 because the State of California's Renewables Portfolio Standard requires 100 percent carbon-free electricity sources by 2045, and the implementation of the Renewables Portfolio Standard is accounted for in the Adjusted BAU scenario.*

DESCRIPTION

Supplying unincorporated Los Angeles County's power demand with zero-carbon electricity[33] is critical to achieving significant GHG emissions reductions. The Clean Power Alliance (CPA) is a nonprofit and community choice energy provider that currently serves 32 communities across Southern California.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

ES2.1—Transition all County facilities within unincorporated areas to CPA's 100% Green Power option, SCE's 100% Green Rate option, or other available 100% renewable electricity service.M

ES2.2—Complete enrollment of the community in CPA's 100% Green Power option or SCE's Green Rate option.

[33] *Zero-carbon electricity* means energy resources that either qualify as "renewable" in the most recent Renewables Portfolio Standard Eligibility Guidebook or generate zero GHG emissions on-site.

Energy Supply
Strategy 1: Decarbonize the Energy Supply

MEASURE ES3: Increase Renewable Energy Production Q

Annual GHG Emissions REDUCTIONS*

By 2030: 5,919

By 2035: 5,219

By 2045: 0#

(units = $MTCO_2e$)

Estimated COST

$–$$$

PERFORMANCE OBJECTIVES

Install rooftop solar PV on all existing single-family residential homes and multifamily residential buildings:

- 20 percent by 2030
- 25 percent by 2035
- 35 percent by 2045

Install rooftop solar PV on all existing commercial buildings:

- 15 percent by 2030
- 22 percent by 2035
- 32 percent by 2045

Install rooftop solar PV on all new multifamily residential buildings:

- 80 percent by 2030
- 85 percent by 2035
- 95 percent by 2045

Install rooftop solar PV on all new commercial buildings:

- 40 percent by 2030
- 50 percent by 2035
- 70 percent by 2045

DESCRIPTION

Expand local solar power generation on existing and new development and for County projects.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

ES3.1—Require rooftop solar PV for all new development.

ES3.2—Install rooftop solar PV at existing buildings.

ES3.3—Identify and install solar PV systems at existing viable County facilities and properties. M

ES3.4—Explore the feasibility to install community-shared solar facilities on County properties where opportunities exist. M

ES3.5—Require and incentivize renewable energy for affordable housing developments for both new development and existing buildings.

ES3.6—Streamline and prioritize permitting for solar and battery storage projects.

Energy Supply
Strategy 1: Decarbonize the Energy Supply

MEASURE ES3: Increase Renewable Energy Production Q

Install 20,000 kW of solar PV at LA County facilities by 2030.

Install rooftop solar PV at all affordable housing developments.

* *These GHG emissions reductions assume implementation of Measure ES2 occurs first; the vast majority of emission reductions from carbon-free electricity sources are accounted for in Measure ES2. In reality, emission reductions for these two measures will be more evenly shared.*

There are zero GHG emissions reductions in 2045 because the State of California's Renewables Portfolio Standard requires 100 percent carbon-free electricity sources by 2045, and the implementation of the Renewables Portfolio Standard is accounted for in the Adjusted BAU scenario.

Energy Supply
Strategy 1: Decarbonize the Energy Supply

MEASURE ES4: Increase Energy Resilience

Annual GHG Emissions REDUCTIONS

Not quantified (supporting measure)

Estimated COST

$–$$$

PERFORMANCE OBJECTIVES

- Achieve community electricity storage capacity equal to the communitywide 24-hour average usage by 2035/2045.
- Achieve community electricity generation capacity equal to the communitywide 24-hour average usage by 2035/2045.
- Establish a community resilience hub program to equip community-serving County facilities (e.g., libraries, rec centers, senior centers).
- Provide solar and battery systems sufficient to support emergency cooling and other emergency functions. Partner with the local community for implementation.
- Locate at least one hub in each County district, with a focus on vulnerable populations.
- Install microgrids based on a feasibility study.
- Obtain a grant and establish a program to support an energy efficiency and assurance program for facilities that are large energy users and support critical community functions.

DESCRIPTION

Expand energy storage and microgrids throughout the community and for County operations.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

ES4.1—Develop a program to deploy community resilience hubs[34] at scale.

ES4.2—Invest in energy storage and microgrids at critical County facilities through CPA's Power Ready Program. **M**

ES4.3—Develop a publicly accessible community energy map that identifies opportunities for deploying distributed energy resources and microgrids to improve energy resiliency.

ES4.4—Conduct feasibility studies to identify priority areas for solar and storage, combined with building- and community-scale microgrids and alternative technologies such as fuel cells and grid paralleling, to support demand management, peak shaving, and load shifting to increase grid resilience. Study implementation, costs, barriers, and obstacles and identify partnerships. Adopt regulations that establish this use and standards for its development. Limiting peak energy demand can eliminate or reduce the use of high-carbon peaker plants.

ES4.5—Develop a Countywide program to promote energy efficiency and resilience measures in facilities providing critical community services.

[34] According to the Urban Sustainability Directors Network, resilience hubs are "are community-serving facilities augmented to support residents, coordinate communication, distribute resources, and reduce carbon pollution while enhancing quality of life. Hubs provide an opportunity to effectively work at the nexus of community resilience, emergency management, climate change mitigation, and social equity while providing opportunities for communities to become more self-determining, socially connected, and successful before, during, and after disruptions."

Energy Supply
Strategy 1: Decarbonize the Energy Supply

MEASURE ES5: Establish GHG Requirements for New Development

Annual GHG Emissions REDUCTIONS

Not quantified (supporting measure)

Estimated COST

$–$$

PERFORMANCE OBJECTIVES

- All new development that does not require a General Plan amendment and opts to use CEQA streamlining for GHG impacts shall be consistent with the 2045 CAP.
- Develop reach codes, ordinances, and conditions of approval as needed.

DESCRIPTION

Develop and implement requirements for new projects choosing to streamline their GHG impacts analysis under CEQA to ensure that such new development is consistent with the 2045 CAP milestone targets for 2030, 2035, and 2045. These requirements include applicant completion of a 2045 CAP CEQA streamlining checklist for non-CEQA-exempt new development requiring discretionary approvals to demonstrate consistency with the 2045 CAP and thereby streamline environmental review of their GHG impacts using the 2045 CAP's PEIR pursuant to CEQA Guidelines Section 15183.5(b).

To demonstrate compliance with the 2045 CAP CEQA streamlining requirements, all projects that do not screen out of the 2045 CAP consistency review process must implement either (1) all feasible applicable checklist measures or (2) for infeasible checklist measures, alternative project emission reduction measures. The project review checklist will be used for projects consistent with the 2045 CAP, to demonstrate CAP consistency that allows for streamlined project-specific CEQA GHG analysis.

In addition, the County will assess the feasibility of developing a GHG offsets/credit program to create a pathway toward achieving the aspirational 2045 goal of carbon neutrality. For more information, see Chapter 4, *Implementation and Monitoring*.

Energy Supply
Strategy 1: Decarbonize the Energy Supply

MEASURE ES5: Establish GHG Requirements for New Development

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

ES5.1—Identify new requirements for new development, including reach codes,[35] ordinances, and conditions of approval to reduce GHG emissions from energy use, transportation, waste, water, and other sources. Include affordable housing considerations in these requirements, and develop supporting measures (financial support, technical assistance, or other incentives) to defray potential additional first costs in order to maintain housing affordability.

ES5.2—Implement the 2045 CAP CEQA streamlining checklist for new development to demonstrate consistency with the 2045 CAP's strategies, measures, and actions for purposes of streamlining environmental review of GHG impacts using the 2045 CAP's PEIR pursuant to CEQA Guidelines Section 15183.5(b).

ES5.3—Establish an Offsite GHG Reduction Program for new development to use as a GHG reduction or mitigation pathway for 2045 CAP compliance and to fund programs for reducing GHG emissions in the built environment.

[35] A *reach code* is a local building energy code that "reaches" beyond the state's minimum requirements for energy use in building design and construction.

Transportation (T)

Activities within the transportation sector are responsible for the majority of GHG emissions in unincorporated Los Angeles County, as the dominant mode of transportation is vehicles that run on fossil fuels. Land use patterns developed over time—including unincorporated Los Angeles County's road and highway networks, streetscapes, and parking infrastructure—have been designed to prioritize and promote the usage of cars and trucks. The County will address transportation emissions by prioritizing public transportation, walking, biking, and active transit options, and other alternatives to single-occupancy trips. For trips requiring vehicles, the County will focus on advancing zero-emission and near-zero-emission technologies.

Decarbonizing transportation provides many co-benefits for unincorporated Los Angeles County residents, employees, and employers. Many of these benefits have not always reached BIPOC and disadvantaged communities. For example, residents of affordable housing and multifamily housing have not been well served by EV charging infrastructure and low-cost charging opportunities. This can lead to cycles of disinvestment and more expensive gas and electricity bills. The lack of housing and high cost of living in unincorporated Los Angeles County mean that increased costs in transportation expenses could lead to displacement. New and innovative approaches are needed to bring the benefits of EV charging infrastructure and ZEVs to all residents while protecting and increasing affordable housing.

Transportation (T) comprises the following strategies and measures:

Strategy 2: Increase Densities and Diversity of Land Uses Near Transit

- Measure T1: Increase Density Near High-Quality Transit Areas [Q]
- Measure T2: Develop Land Use Plans Addressing Jobs/Housing Balance and Increase Mixed Use [Q]

Strategy 3: Reduce Single-Occupancy Vehicle Trips

- Measure T3: Expand Bicycle and Pedestrian Network to Serve Residential, Employment, and Recreational Trips [Q]
- Measure T4: Broaden Options for Transit, Active Transportation, and Alternative Modes of Transportation [Q]
- Measure T5: Limit and Remove Parking Minimums

Strategy 4: Institutionalize Low-Carbon Transportation

- Measure T6: Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales [Q]
- Measure T7: Electrify County Fleet Vehicles [Q]
- Measure T8: Accelerate Freight Decarbonization [Q]
- Measure T9: Expand Use of Zero-Emission Technologies for Off-Road Vehicles and Equipment [Q]

Transportation

Strategy 2: Increase Densities and Diversity of Land Uses Near Transit

2045 VISION

Increased housing opportunities with close and convenient access to destinations such as shopping and employment centers

Strategy Description

This strategy focuses on coordinating land use development that leads to outcomes associated with reduced VMT, such as increased densities near transit, jobs-housing balance, and strategically located land uses that can reduce travel distances for many trip purposes.

Past and Current County Actions

- As of 2021, the County has adopted Transit Oriented District plans for three unincorporated Los Angeles County communities: Willowbrook, West Carson, and West Athens–Westmont.
- In 2022, the County updated its Housing Element to reduce regulatory barriers and provide incentives to promote the equitable distribution of sustainable housing development through programs that include but are not limited to the Rezoning Program, Residential Parking Program, Rent Stabilization Ordinance, and Affordable Housing and Sustainable Communities Program.

Alignment with State and Regional Initiatives

- Connect SoCal, SCAG's Regional Transportation Plan/Sustainable Communities Strategy for achieving a 13 percent reduction in per capita passenger vehicle GHG emissions relative to 2005, as required by SB 375.
- The Advanced Clean Cars II Program requires that 100 percent of in-state sales of new passenger cars and trucks be zero-emission by 2035 and that 100 percent of medium- and heavy-duty vehicles in the state be zero-emission by 2045 and by 2035 for drayage trucks.

Transportation
Strategy 2: Increase Densities and Diversity of Land Uses Near Transit

MEASURE T1: Increase Density Near High-Quality Transit Areas Q

Annual GHG Emissions REDUCTIONS

By 2030: 27,357

By 2035: 26,019

By 2045: 25,276

(units = $MTCO_2e$)

Estimated COST

$–$$

PERFORMANCE OBJECTIVES

Increase in residential density:

- Implement and complete Housing Element Update rezoning programs to achieve the minimum densities.
- Achieve a minimum of 20 dwelling units (DU) per acre (maximum of 30–150 DU per acre) for HQTAs.
- Locate a majority of residential and employment centers in unincorporated Los Angeles County within 1 mile of an HQTA.
- Achieve a 27 percent increase in DUs within HQTAs.

DESCRIPTION

Increase housing opportunities that are affordable and near transit, to reduce VMT.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

T1.1—Incentivize residential and community-serving uses to be developed in high quality transit areas (HQTAs), while ensuring inclusion of vital public amenities, such as parks and active transportation infrastructure.

T1.2—Develop land use tools that will increase the production of a diversity of housing types, such as missing middle housing.

Transportation

Strategy 2: Increase Densities and Diversity of Land Uses Near Transit

MEASURE T2: Develop Land Use Plans Addressing Jobs-Housing Balance and Increase Mixed Use Q

Annual GHG Emissions REDUCTIONS

By 2030: 39,184

By 2035: 37,267

By 2045: 36,204

(units = $MTCO_2e$)

Estimated COST

$$

PERFORMANCE OBJECTIVES

- By 2030, achieve a job density of 300 jobs per acre.
- For communities with an imbalance of jobs/housing (±20 percent), develop community plans to identify and quantify strategies for bringing that imbalance below 20 percent.

DESCRIPTION

Increasing density and the mix of land uses can help reduce single-occupancy trips, the number of trips, and trip lengths.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

T2.1—Develop community plans that will increase the percentage of residents who could live and work within the same community, and that could decrease VMT.

Transportation

Strategy 3: Reduce Single-Occupancy Vehicle Trips

2045 VISION

A proliferation of travel options that do not require personal vehicle ownership

Strategy Description

This strategy focuses on development of transportation networks that increase the accessibility, comfort, and convenience of active travel modes to help reduce trips made in single-occupancy vehicles.

Past and Current County Actions

- Throughout unincorporated Los Angeles County, 64 miles of bikeways were created between 2012 and 2021, with 3.65 miles in progress. An additional 36 miles of bikeway are planned to be completed by 2025, with 18 miles scheduled to be completed thereafter.
- The County is working with the Los Angeles County Metropolitan Transportation Authority (Metro) on a transit program that prioritizes public transit by creating bus priority lanes, improving transit facilities, reducing transit-passenger time, and providing bicycle parking near transit stations.
- The Countywide Traffic Signal Synchronization Program, instituted in 1988, includes upgrading traffic signal infrastructure and timing to allow for signal synchronization, implementation of pedestrian and bicycle improvements, and improvement of transit operations through more consistent travel times.
- The Department of Regional Planning is currently working on a study to inform the update to parking standards for multifamily residential development with the goal of reducing barriers to investments in multifamily housing production, reducing the overall cost of housing, and helping to lower VMT. After the conclusion of the study, recommendations will be finalized and an ordinance will be prepared to amend the zoning code. Public hearings on the ordinance are anticipated in 2023.

Alignment with State and Regional Initiatives

- Connect SoCal, SCAG's Regional Transportation Plan/Sustainable Communities Strategy for achieving a 13 percent reduction in per capita passenger vehicle GHG emissions relative to 2005, as required by SB 375.

Transportation

Strategy 3: Reduce Single-Occupancy Vehicle Trips

MEASURE T3: Expand Bicycle and Pedestrian Network to Serve Residential, Employment, and Recreational Trips Q

Annual GHG Emissions REDUCTIONS

By 2030: 0

By 2035: 2,811

By 2045: 2,730

(units = $MTCO_2e$)

Estimated COST

$$$–$$$$$

PERFORMANCE OBJECTIVES

- Increase bikeway miles 300 percent by 2035.
- Implement the County's Bicycle Master Plan.
- Complete updates to the County's Pedestrian Action Plan, Bicycle Master Plan, and Active Transportation Plans every five years.

DESCRIPTION

Travel options that serve a variety of land uses and trip purposes can help shift some trips away from single-occupancy vehicles.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

T3.1—Create a more connected and safer bikeway network by expanding bikeway facilities and implementing protected and separated lanes.

T3.2—Implement and regularly update the County's Pedestrian Action Plan, Bicycle Master Plan, and Active Transportation Plans.

T3.3—Collaborate with Metro and other transit providers to enhance pedestrian and bicycle environments through energy efficient lighting and shading to promote active transportation. Build shade structures at major transit stops, such as those identified in Metro's Active Transportation Strategic Plan, prioritizing communities with high heat vulnerability. Develop and implement a Shaded Corridors Program.

Transportation

Strategy 3: Reduce Single-Occupancy Vehicle Trips

MEASURE T4: Broaden Options for Transit, Active Transportation, and Alternative Modes of Transportation Q

Annual GHG Emissions REDUCTIONS

By 2030: 11,465

By 2035: 10,904

By 2045: 10,593

(units = $MTCO_2e$)

Estimated COST

$–$$$$$

PERFORMANCE OBJECTIVES

- By 2030, double transit service hours from 560,000 to 1.12 million.
- By 2030, install bus-only lanes and signal prioritization on all major transit thoroughfares.
- By 2030, ensure that 75 percent of unincorporated Los Angeles County residents live within one-half mile of shuttle or mobility service.

DESCRIPTION

Transit service, micro mobility services (such as bike-share, scooter-share, and drone deliveries), and access to these transportation options can help reduce VMT.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

T4.1—Expand and improve the frequency of service of unincorporated Los Angeles County shuttles and explore new mobility services, such as micro transit,[36] autonomous delivery vehicles, micro mobility, and on-demand autonomous shuttles.

T4.2—Collaborate with Metro and other transit providers to install bus-only lanes and/or signal prioritization along major thoroughfares, and work with transit agencies and neighboring jurisdictions to plan and install full bus rapid transit infrastructure along priority corridors, as appropriate.

T4.3—Collaborate with Metro and other transit providers to develop a transportation technology strategy to proactively address how evolving tech-enabled mobility options can support public transit.

T4.4—Collaborate with Metro and other transit providers to set aside maintenance funds to ensure that public transit facilities, including stations and stops, are safe and clean to enhance the transit experience and increase ridership.

T4.5—Collaborate with Metro and other transit providers to develop and implement a transportation demand management (TDM) ordinance that requires future development projects to incorporate measures such as subsidized transit passes and car share.

T4.6—Offer free and/or discounted transit passes for students, youth, seniors, people with disabilities, and low-income populations.

[36] *Micro transit* is public or private multi-passenger transportation services that serve passengers using dynamically generated routes; they provide transit-like service on a smaller, more flexible scale.

Transportation

Strategy 3: Reduce Single-Occupancy Vehicle Trips

MEASURE T4: Broaden Options for Transit, Active Transportation, and Alternative Modes of Transportation Q

T4.7—Expand and improve the County's Telecommuting Policy, using data gathered through the alternative work program.

T4.8—Establish temporary and permanent car-free areas.

T4.9—Develop a VMT bank or exchange program.

T4.10—Collaborate with Metro and other transit providers to ensure that all new forms of public transportation (e.g., new bus lines, new light rail service) are low- or zero-emission.

Transportation

Strategy 3: Reduce Single-Occupancy Vehicle Trips

MEASURE T5: Limit and Remove Parking Minimums

Annual GHG Emissions REDUCTIONS

Not quantified (supporting measure)

Estimated COST

$$–$$$

PERFORMANCE OBJECTIVES

- Reduce parking stipulations to reduce parking supply and encourage transit use.
- Unbundle parking costs to reflect cost of parking.
- Implement parking pricing to encourage “park-once” behavior.

DESCRIPTION

Parking strategies such as parking maximums, unbundling parking, or market-price parking can help reduce VMT.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

T5.1—Implement a comprehensive parking reform strategy, which should include, but not be limited to: elimination of minimum parking requirements for all new residential units, establishment of parking maximums within one-half mile of high-quality transit stops, creation and expansion of parking benefit districts, development of planning strategies for transitioning land dedicated to parking to alternative transit and public uses, and incentives for developers to provide less than maximum allowable parking.

Transportation
Strategy 4: Institutionalize Low-Carbon Transportation

2045 VISION

100 percent of all vehicles in unincorporated Los Angeles County have zero carbon emissions

Strategy Description

Motorized vehicles that are needed for travel must transition from internal combustion engines to zero-carbon and near-zero-carbon technologies, such as electric vehicles (EVs) and ZEVs. Expanding access to charging infrastructure will address a key barrier to the adoption of EVs. The County will work to provide access to clean transportation by developing programs that include e-bikes, zero-emission buses and shuttles, and electrified trains. The County will also endeavor to install EVCSs at County properties and in the public right-of-way, require new development to install EVCSs, and develop incentives and requirements for existing buildings to install EVCSs.

This strategy also aims to reduce emissions from diesel- and gasoline- powered off-road equipment, including construction, landscaping, recreational, and commercial and industrial equipment. This strategy increases the use of electric-powered equipment by establishing a goal such that a portion of all equipment is electric-powered. Other technologies include green hydrogen fuel cell and natural gas.

Past and Current County Actions

- In 2008, the Department of Public Works (PW) began the implementation of a three-pronged sustainable pavement treatment approach.
- As of April 2022, the County has deployed approximately 750 EV charging ports across County facilities to support the electrification of its fleet and to increase electric vehicle supply equipment (EVSE) access to employees and the public.
- In 2016, the EV Infrastructure Ordinance was adopted; this ordinance provides an expedited and streamlined permitting process for EV charging infrastructure.
- The Idling Reduction Ordinance, adopted in 2018, amended the zoning code to require signs in on-site loading areas to encourage the reduction of vehicle idling.
- In 2021, the County installed 315 new PowerFlex-networked charging stations with advanced managed charging capability.
- In April 2021, the Board of Supervisors adopted a revised fleet policy that requires the purchase of ZEVs for the County when replacing all County vehicles, to the extent that they are available and meet operational needs.

Alignment with State Initiatives

- Governor's EO B-48-15 (5 million ZEVs on California roads by 2030) and EO N-79-20 (100 percent of in-state sales of new passenger cars and trucks be zero-emission by 2035).

Transportation
Strategy 4: Institutionalize Low-Carbon Transportation

MEASURE T6: Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales (Core)

Annual GHG Emissions REDUCTIONS

By 2030: 482,515
By 2035: 820,125
By 2045: 1,535,101
(units = $MTCO_2e$)

Estimated COST

$–$$$

PERFORMANCE OBJECTIVES

Increase the fleetwide percentage of light-duty vehicles in unincorporated Los Angeles County that are ZEVs to:

- 30 percent by 2030
- 50 percent by 2035
- 90 percent by 2045

Increase the sales of new light-duty vehicles in unincorporated Los Angeles County that are ZEVs to:

- 68 percent by 2030
- 100 percent by 2035

Install the following total number of new public and private shared EVCSs:

- 37,000 by 2030
- 74,000 by 2035
- 140,000 by 2045

DESCRIPTION

Increase unincorporated Los Angeles County's ZEV market share and vehicle penetration to the maximum extent feasible to replace internal combustion engine vehicles. Set targets for reducing total gasoline and diesel vehicle fuel sales.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

T6.1—Develop a Zero Emission Vehicle Master Plan. Collaborate with other regional agencies and jurisdictions to share infrastructure.

T6.2—Install EVCSs at existing buildings and right-of-way infrastructure throughout unincorporated Los Angeles County.

T6.3—Require all new development to install EVCSs through a condition of approval/ordinance. Residential development must install EVCSs; nonresidential development must install EVCSs at a percentage of total parking spaces.

T6.4—Install EVCSs at County facilities and properties for public, employee, and fleet use, prioritizing locations in frontline, BIPOC, and disadvantaged communities. Complete an assessment of EV charging locations, identifying gaps in publicly accessible stations for frontline, BIPOC, and disadvantaged communities. Provide EV purchase incentive information in multiple languages to frontline communities.

T6.5—Continue to pilot vehicle-grid integration applications at workplaces to maximize the benefits that daytime charging for plug-in electric vehicles (PEVs) can have on the grid, including demand response to reduce peak loads and energy storage during periods of renewable overproduction.

Transportation

Strategy 4: Institutionalize Low-Carbon Transportation

MEASURE T6: Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales (Core) Q

Install the following total number of new EVCSs at County facilities and properties:

- 5,000 by 2030
- 10,000 by 2035
- 25,000 by 2045

T6.6—Expand electric options for active transportation, such as electric scooters and e-bikes. Provide access to neighborhood electric vehicles, such as golf carts, shared EVs, and others. Develop policies and/or ordinances to expand these options.

T6.7—Increase the use of green hydrogen vehicles. Use biomethane and biogas created from organic waste as a "bridge fuel" to achieve 100 percent green hydrogen and electric vehicles. Consider the use of other zero-emission fuel sources.

Transportation

Strategy 4: Institutionalize Low-Carbon Transportation

MEASURE T7: Electrify County Fleet Vehicles Q M

Annual GHG Emissions REDUCTIONS

By 2030: 29,743

By 2035: 24,335

By 2045: 10,119

(units = $MTCO_2e$)

Estimated COST

$$$–$$$$

PERFORMANCE OBJECTIVES

Electrify the County bus and shuttle vehicle fleets by 2035.

Increase the fleetwide percentage of light-duty vehicles in the County–owned fleet that are ZEVs to:

- 35 percent by 2030
- 60 percent by 2035
- 100 percent by 2045

Support the state's goal that all new light-duty vehicle fleet purchases, with certain exceptions, will be ZEVs.

DESCRIPTION

Electrify the County bus, shuttle, and light-duty vehicle fleets.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

T7.1—Electrify the County bus and shuttle vehicle fleets and partner with transit agencies for group purchasing and siting of shared charging and/or fueling infrastructure. M

T7.2—Electrify light-duty County fleet vehicles. M

Transportation
Strategy 4: Institutionalize Low-Carbon Transportation

MEASURE T8: Accelerate Freight Decarbonization (Core) Q

Annual GHG Emissions REDUCTIONS

By 2030: 86,168

By 2035: 103,528

By 2045: 176,638

(units = $MTCO_2e$)

Estimated COST

$–$$$$

PERFORMANCE OBJECTIVES

Increase the fleetwide percentage of medium- and heavy-duty vehicles in unincorporated Los Angeles County that are ZEVs to:

- 40 percent by 2030
- 60 percent by 2035
- 90 percent by 2045

Increase the fleetwide percentage of medium- and heavy-duty vehicles in the County-owned fleet that are ZEVs to:

- 50 percent by 2030
- 70 percent by 2035
- 95 percent by 2045

Ensure that 100 percent of the drayage truck fleet is ZEV by 2035.

Ensure that 100 percent of sales of medium- and heavy-duty trucks are ZEV by 2045.

Require that all new warehouse loading docks have EVCSs by 2030.

Require that all existing warehouse loading docks have EVCSs by 2030.

DESCRIPTION

Incentivize and implement freight decarbonization technologies, specifically focusing on charging infrastructure.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

T8.1—Implement freight decarbonization technologies along highway corridors passing through unincorporated Los Angeles County communities through programs such as zero-emission delivery zones.

T8.2—Create an ordinance requiring new goods movement facilities to install alternative fueling infrastructure.

T8.3—Adopt Building Performance Standards for existing goods movement facilities and reach code requirements for major retrofits and renovations that require alternative fueling infrastructure for medium- and heavy-duty vehicles. Require goods movement facilities to install alternative fueling infrastructure for medium- and heavy-duty vehicles at the point of sale.

T8.4—Streamline permitting of ZEV charging and fueling infrastructure for medium- and heavy-duty vehicles.

T8.5—Electrify the County medium- and heavy-duty vehicle fleet.

Transportation
Strategy 4: Institutionalize Low-Carbon Transportation

MEASURE T9: Expand Use of Zero-Emission Technologies for Off-Road Vehicles and Equipment Q

Annual GHG Emissions REDUCTIONS

By 2030: 8,373

By 2035: 21,819

By 2045: 44,964

(units = $MTCO_2e$)

GHG BENEFIT-COST RATIO

$–$$

PERFORMANCE OBJECTIVES

Increase the fleetwide percentage of off-road fleet and equipment in unincorporated Los Angeles County that are ZEVs to:

- 20 percent by 2030
- 50 percent by 2035
- 95 percent by 2045

Increase the fleetwide percentage of construction, agriculture, and manufacturing equipment in the unincorporated Los Angeles County that are ZEVs to:

- 50 percent by 2030
- 75 percent by 2035
- 100 percent by 2045

DESCRIPTION

Phase out the use of gas- and diesel-powered small (≤25 horsepower) off-road equipment and increase the use of zero-emission and near-zero-emission construction, agriculture, and manufacturing equipment.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

T9.1—Partner with the South Coast Air Quality Management District and Antelope Valley Air Quality Management District to increase the use of zero-emission and near-zero-emission construction, agriculture, and manufacturing equipment.

T9.2—Identify types of ZEV and green hydrogen equipment that are commercially available (e.g., forklifts, loaders, welders, saws, pumps, fixed cranes, air compressors, sweepers, aerial lifts, pressure washers) and require the use of these types of equipment on all new projects through an ordinance or conditions of approval.

T9.3—Require, to the maximum extent feasible, the use of zero-emission and near-zero-emission construction, agriculture, and manufacturing equipment for County projects. M

Building Energy and Water (E)

Buildings are central in the County's approach to reducing GHG emissions associated with energy supply and consumption. This category includes a range of strategies aimed at reducing energy use in buildings, decarbonizing the energy and materials used in buildings, and reducing water consumption. The approach combines increasing energy efficiency, electrifying buildings, replacing fossil fuels with carbon-free and renewable fuel sources, and decarbonizing building materials.[37]

These actions must apply to both new and existing buildings. A foundational first step for existing buildings is to track and report building energy and water use to raise awareness and highlight opportunities for savings, followed by retrofit programs for efficiency and decarbonization. Green building standards and net zero energy incentives for new developments will significantly reduce GHG emissions. Scaling up energy efficiency programs and developing energy and emissions performance standards for existing and new buildings will reduce overall energy demand and associated GHG emissions, avoiding costly new infrastructure and enabling an easier transition to renewable energy sources and low-/zero-GHG buildings.

Water consumption in unincorporated Los Angeles County has a significant carbon footprint because energy is required to collect, treat, store, and convey water to homes and businesses from distant sources. By prioritizing water conservation programs, expanding the County's efforts toward water recycling and reuse, and promoting net zero water developments, the County will simultaneously reduce GHG emissions and lessen communitywide dependency on imported water sources.

The Los Angeles County Sanitation Districts (LACSD) provides affordable, high-quality recycled water to public and private water suppliers to help meet the water supply needs for more than five

[37] In *California Restaurant Association v. City of Berkeley*, No. 21-16278, the Ninth Circuit Court of Appeals found Berkeley's natural gas ban preempted by the federal Energy Policy and Conservation Act (EPCA). Despite the court's broad statements, the CRA decision only addressed a single type of approach to building electrification: a non-building code prohibition on gas infrastructure in new construction (Berkeley's ordinance leveraged "police powers" to amend the City's Health and Safety Code). The CRA decision did not address other approaches used by local governments in the Ninth Circuit such as air quality standards that regulate air pollutant emissions from appliances, reach codes that encourage all-electric construction (for example, the California Green Building Standards Code—Part 11, Title 24, California Code of Regulations), and policies that require reductions in GHG emissions or air pollution from new construction that provide for flexibility for achieving such requirements. On May 31, 2023, Berkeley's City Attorney filed a petition for an "en banc" rehearing with the full 11-judge panel on the U.S. Court of Appeals for the Ninth Circuit. The Biden Administration filed an Amicus Brief in support of the City of Berkeley's ordinance, stating that the panel's opinion is flawed by wrongly interpreted the preemption provision of EPCA. It is not known how the final ruling will impact various local government approaches to electrification, including all-electric building code amendments and air emissions standards. Building performance standards (BPS) are being developed in response to the ruling, such as air emission standards for buildings similar to the state of New York's Local Law 97. Performance standards such as this are anticipated to achieve similar GHG reduction results as building electrification without restricting fuel type.

million people within the Sanitation Districts' service area. The recycled water is beneficially reused for industrial, commercial, and recreational applications; groundwater replenishment; agriculture; and the irrigation of parks, schools, golf courses, roadways, and nurseries.

Improving the environmental performance of buildings provides multiple co-benefits for occupants. These benefits have not always reached frontline communities. Residents of affordable housing and multifamily housing, in particular, have not been well served by traditional energy retrofit programs, leading to ongoing cycles of disinvestment, higher energy bills, and less healthy indoor air quality. At the same time, many of these same residents are already extremely rent and utility burdened, and COVID-19 has exacerbated these problems. The lack of housing and high cost of living in the region mean that increased costs in household expenses could trigger displacement. New and innovative approaches are needed to bring the benefits of healthy, decarbonized, and resilient buildings to all residents while protecting and increasing affordable housing.

Building Energy and Water (E) comprises the following strategies and measures:

Strategy 5: Decarbonize Buildings

- Measure E1: Decarbonize Existing Buildings Q
- Measure E2: Decarbonize New Development Q
- Measure E3: Other Decarbonization Actions

Strategy 6: Improve Efficiency of Existing Building Energy Use

- Measure E4: Improve Energy Efficiency of Existing Buildings Q

Strategy 7: Conserve Water

- Measure E5: Increase Use of Recycled Water and Graywater Systems
- Measure E6: Reduce Indoor and Outdoor Water Consumption Q

What is Building Decarbonization?

Building decarbonization is a framework for reducing GHG emissions associated with buildings.

Building emissions come from:

DIRECT SOURCES:

- Combustion of fuels for heating and cooking (gas stoves, gas heaters).
- Gas leaks (gas lines in buildings, unlit pilot lights).
- Hydrofluorocarbon leaks (from refrigerators and other compressor-based systems for space conditioning and water heating, during use and disposal).

INDIRECT SOURCES:

- Generation of the electricity used in buildings.

Ways to decarbonize buildings:

1. Replace gas-fueled appliances with efficient electric alternatives.
2. Continue decarbonizing electricity by growing the low-carbon share of the generation portfolio.
3. Foster energy efficiency through incentive programs, appliance standards, building standards, research, and financing.
4. Transition to using better refrigerants and reduce associated leakage.
5. Grow distributed energy resources such as rooftop solar PV and on-site battery storage.
6. Decarbonize the gas system by displacing natural gas with renewable gas produced from carbon-free electricity or existing waste streams.
7. Give building owners and occupants incentives to shift their electricity use in response to the timing of energy costs, GHG emissions intensity, or electricity grid emergencies.

Building Energy and Water

Strategy 5: Decarbonize Buildings

2045 VISION

Zero use of fossil fuels to provide building energy needs

Strategy Description

As noted in Strategy 1, building decarbonization requires two complementary components: procuring clean, renewable sources of energy and shifting building energy loads for heating and cooking to electricity or renewable fuels rather than fossil fuels. In addition to renewable electricity purchased through the CPA over the grid, distributed, on-site renewable energy can be promoted in a variety of ways. Because grid-supplied energy is now cleaner than on-site natural gas use, building electrification and, to some extent, the use of biomethane and other renewable fuels, are key to decarbonization.

Past and Current County Actions

- In 2017, LACSD partnered with the Metropolitan Water District of Southern California to explore the potential of a water purification project called Pure Water Southern California (formerly known as the Regional Recycled Water Program) at the Joint Water Pollution Control Plant, located in the City of Carson. At project completion, up to 150 million gallons per day (mgd) of water would be produced to recharge various regional groundwater basins and/or supplement regional water supply sources. The NOP for the project was published in September 2022.
- In 2019, the County adopted the 2020 County of Los Angeles Green Building Standards Code.
- In 2022, the County updated its Housing Element to reduce regulatory barriers and provide incentives to promote the equitable distribution of sustainable housing development through programs that facilitate construction and maintenance of quality housing to enhance livability of neighborhoods.
- In February 2022, the County Board of Supervisors passed a motion to study the feasibility of establishing ZNE standards for major development projects and other large-scale development.
- In March 2022, the Board of Supervisors passed a motion to ensure the equitable decarbonization of buildings though a stakeholder engagement process, studying energy resource and infrastructure needs, and by seeking funding. The motion also directs PW, the Chief Sustainability Office, DRP, and other County departments to provide recommendations for an ordinance or building code changes that would phase out the use of natural gas equipment and appliances in all new residential and commercial construction and substantial renovations, where feasible, starting in 2023.

Alignment with State Initiatives

- California Energy Efficiency Strategic Plan: A roadmap to achieve maximum energy savings across all major groups and sectors in California. This comprehensive Plan is the state's first integrated framework of goals and strategies for saving energy, covering government, utility, and private sector actions, and holds energy efficiency to its role as the highest priority resource in meeting California's energy needs.
- CALGreen Code (Title 24 Building Code): The CALGreen Code establishes mandatory measures for new residential and nonresidential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality.
- Renewables Portfolio Standard (SB 100 and SB 1020): A statewide mandate to increase the proportion of electricity from renewable sources. The program sets continuously escalating renewable energy procurement requirements for the state's load-serving entities. Generation must be procured from RPS-certified facilities.
- SB 1206: Mandates a stepped sales prohibition on newly produced high-GWP HFCs to transition California's economy toward recycled and reclaimed HFCs for servicing existing HFC-based equipment.

Building Energy and Water
Strategy 5: Decarbonize Buildings

MEASURE E1: Decarbonize Existing Buildings (Core) Q

Annual GHG Emissions REDUCTIONS

By 2030: 176,072
By 2035: 280,988
By 2045: 477,221
(units = $MTCO_2e$)

Estimated COST

$$$$

PERFORMANCE OBJECTIVES*

Decarbonize the existing residential building stock:

- 25 percent by 2030
- 40 percent by 2035
- 80 percent by 2045

Decarbonize the existing nonresidential building stock:

- 15 percent by 2030
- 25 percent by 2035
- 60 percent by 2045

Require Zero Net Energy (ZNE)[38] for all major renovations:

- 50 percent by 2030
- 75 percent by 2035
- 100 percent by 2045

DESCRIPTION

As the carbon intensity of grid-supplied electricity decreases, decarbonization of the electrical grid must be combined with building decarbonization, shifting the energy load from fossil fuels to carbon-free energy sources while taking into consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face. This measure aims to decarbonize applicable existing buildings. A primary alternative to fossil natural gas is renewable electricity supplied by CPA. Biomethane is another alternative to fossil natural gas; however, existing opportunities for the widespread use of biomethane are currently limited. The use of other zero-GHG-emission fuel sources for buildings will also be considered.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

E1.1—Adopt Building Performance Standards for existing buildings and reach code requirements for major retrofits and renovations that require zero-GHG emission appliances.

E1.2—Increase alternatives to natural gas uses, such as for cooking, in existing buildings. Establish carbon and GHG intensity limits for existing nonresidential and residential buildings over a certain size.

E1.3—Adopt a ZNE ordinance for building renovations, based on certain criteria (such as commercial facilities with 10,000 square feet of additions). Adopt ZNE Building Performance Standards for certain buildings not undergoing major renovations or retrofits.

E1.4—Create a plan for phased electrification of County facilities. Phase out gas-powered infrastructure and appliances as they need replacement. M

[38] *Zero net energy* is defined by the U.S. Department of Energy as follows: "An energy-efficient building where, on a source energy basis, the actual annual delivered energy is less than or equal to the onsite renewable exported energy." U.S. Department of Energy. 2015. *A Common Definition for Zero Energy Buildings*, September 2015. Prepared by the National Institute of Building Sciences. Available: https://www.energy.gov/sites/prod/files/2015/09/f26/bto_common_definition_zero_energy_buildings_093015.pdf. Accessed in January 2021.

Building Energy and Water

Strategy 5: Decarbonize Buildings

MEASURE E1: Decarbonize Existing Buildings (Core) Q

Require major renovations to be electric-ready.

Adopt building performance standards and reach code(s).

Adopt ZNE ordinance.

Conduct buildings portfolio analysis and cost feasibility study.

E1.5—Create a comprehensive fund aggregation program to support energy efficiency, decarbonization, and resilience in new and existing affordable housing.

E1.6—Create and resource an energy retrofit accelerator to provide a one-stop shop for guidance, technical support, training, and access to aggregated funds to support building owners and contractors. Target support to low-income communities and affordable housing.

Building Energy and Water

Strategy 5: Decarbonize Buildings

MEASURE E2: Decarbonize New Development Q

Annual GHG Emissions REDUCTIONS

By 2030: 7,452

By 2035: 12.588

By 2045: 22,639

(units = $MTCO_2e$)

Estimated COST

$

PERFORMANCE OBJECTIVES

Require all applicable new buildings to be zero-GHG emission. Provide affordable housing set-aside to offset first cost.

- Residential: 90 percent zero-GHG emission by 2030, 95 percent by 2035, and 100 percent by 2045
- Nonresidential: 90 percent zero-GHG emission by 2030 (except large industry and possibly food service), 95 percent by 2035, and 100 percent by 2045

Require most new residential and nonresidential buildings to be ZNE beginning in 2030. Include affordable housing set-aside.

- Residential: 90 percent ZNE by 2030
- Nonresidential: 90 percent ZNE by 2030 (except large industry)

Require all new development to be electric-ready.

DESCRIPTION

This measure aims to decarbonize all applicable new buildings, while taking into consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

E2.1—Adopt an ordinance requiring all applicable new buildings to be zero-GHG emission. Include affordable housing considerations in these requirements, and develop supporting measures (financial support, technical assistance, or other incentives) to defray potential additional first costs in order to maintain housing affordability. Require all new development to be electric-ready.

E2.2—Adopt a ZNE ordinance for all new residential buildings built after 2025 and all new nonresidential buildings built after 2030. Include renter protections for affordable housing. Provide affordable housing set-aside to offset first cost.

E2.3—Adopt CALGreen Code Tier 1 green building standards and identify which Tier 2 standards could be adopted as code amendments.

Building Energy and Water
Strategy 5: Decarbonize Buildings

MEASURE E3: Other Decarbonization Actions

Annual GHG Emissions REDUCTIONS

Not quantified (supporting measure)

Estimated COST

$-$$$

PERFORMANCE OBJECTIVES

Increase the proportion of biomethane in the utility natural gas mix to:

- 20 percent by 2030
- 30 percent by 2035
- 80 percent by 2045

Use low-carbon, carbon-neutral, or negative-carbon concrete for all new construction; identify carbon intensity limit of concrete.

Replace high-GWP refrigerants with low-GWP refrigerants:

- 15 percent by 2030
- 25 percent by 2035
- 50 percent by 2045

DESCRIPTION

Reduce the life-cycle carbon intensity of building materials and phase out the use of high-GWP refrigerants.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

E3.1—Work with utilities to incorporate increasing levels of biomethane into the natural gas mix.
E3.2—Adopt a concrete code for new construction that limits embodied carbon emissions; specify code requirements of carbon intensity limit for concrete.
E3.3—Adopt reach code requirements that include performance standards to limit the amount of embodied carbon associated with construction.
E3.4—Develop a refrigerant management program that establishes a phase-out timeline for high-GWP refrigerants in existing buildings, incentivizes industrial equipment replacement, and specifies requirements for new development to use low-GWP refrigerants.

Building Energy and Water

Strategy 6: Improve Efficiency of Existing Building Energy Use

2045 VISION

All buildings will be zero net energy users

Strategy Description

Increasing the energy efficiency of existing buildings reduces GHG emissions by decreasing the consumption of nonrenewable energy sources, including natural gas and electricity that is not 100 percent carbon-free. Energy efficiency improvements can be achieved through a variety of methods, including energy audits, benchmarking, appliance replacements and rebates, building retrofits, and consumer education. In addition to reducing GHG emissions, energy-efficient building improvements can lower energy bills, create local green jobs, and improve the longevity of existing buildings. The County will improve the energy efficiency of existing buildings through coordination with agencies and organizations, as well as public outreach.

Past and Current County Actions

- In 2019, the Department of Public Works (PW) adopted a Cool Roof Ordinance to amend Title 31 mandating the installation of Tier 2 level cool roofing materials for all projects in which it has been proven to be cost effective.
- The Internal Services Department manages a portfolio of energy efficiency programs that support communities, local governments, commercial businesses, and residential and multifamily property owners. The Internal Services Department administers the Southern California Regional Energy Network (SoCalREN), which supports energy efficiency programs and achieved more than 16 million kilowatt-hours in electricity savings and more than 280,000 therms of natural gas savings in 2021.

Alignment with State Initiatives

- California Energy Efficiency Strategic Plan: A roadmap to achieve maximum energy savings across all major groups and sectors in California. This comprehensive Plan is the state's first integrated framework of goals and strategies for saving energy, covering government, utility, and private sector actions, and holds energy efficiency to its role as the highest priority resource in meeting California's energy needs.
- CALGreen Code (Title 24 Building Code): The CALGreen Code establishes mandatory measures for new residential and nonresidential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality.

Building Energy and Water

Strategy 6: Improve Efficiency of Existing Building Energy Use

MEASURE E4: Improve Energy Efficiency of Existing Buildings Q

Annual GHG Emissions REDUCTIONS

By 2030: 22,274

By 2035: 41,255

By 2045: 203,455

(units = $MTCO_2e$)

Estimated COST

$–$$$

PERFORMANCE OBJECTIVES

Reduce building energy use intensity below 2015 levels as follows:

- 20 percent for residential, 15 percent for industrial, and 25 percent for commercial by 2030
- 25 percent for residential and industrial and 35 percent for commercial by 2035
- 50 percent for residential, industrial, and commercial by 2045

Adopt building performance standards and reach code(s).

DESCRIPTION

Retrofit existing building stock to reduce overall unincorporated Los Angeles County energy use.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

E4.1—Adopt Building Performance Standards for energy efficiency in existing buildings. Expand and enhance the energy efficiency programs offered by the Southern California Regional Energy Network (SoCalREN). Include affordable housing considerations in these requirements and develop additional renter protections and supporting measures (financial support, technical assistance, or other incentives) to limit the amount of first costs being passed on to low-income renters. (See Actions E1.5 and E1.6.)

E4.2—Adopt an energy efficiency ordinance for existing buildings, requiring all buildings over 20,000 square feet to benchmark and report their energy use and demonstrate their pathway to efficiency.

E4.3—Convert existing County-owned heat-trapping surfaces to cool or green surfaces. M

Building Energy and Water

Strategy 7: Conserve Water

2045 VISION

Community water consumption that does not exceed unincorporated Los Angeles County's sustainable supply

Strategy Description

The GHG emissions associated with water consumption are the result of the electricity and natural gas used to pump, treat, and convey the water. This strategy aims to reduce GHG emissions by decreasing the total amount of water consumed, as well as the energy intensity of the water consumed.

Past and Current County Actions

- The County continues to hold free Smart Gardening Program public workshops on topics such as composting, water-wise gardening, and organic gardening.
- The County allocated $300,000 for the Waterworks Districts' Water Customer Rebate program in Fiscal Year 2021–2022.
- The passage of Measure W in November 2018 created the County's Safe Clean Water Program.
- In 2022, the County updated its Housing Element to reduce regulatory barriers and provide incentives to promote the equitable distribution of sustainability in housing development through programs that include but are not limited to the Priority of Water and Sewer for Affordable Housing.

Alignment with State Initiatives

- SB 606 and AB 1668, requiring urban efficiency standards for indoor use, outdoor use, and water lost to leaks.

Building Energy and Water
Strategy 7: Conserve Water

MEASURE E5: Increase Use of Recycled Water and Graywater Systems

Annual GHG Emissions REDUCTIONS

Not quantified (supporting measure)

Estimated COST

$–$$$

PERFORMANCE OBJECTIVES

Increase use of alternative water sources from recycled water graywater, or potable reuse:

- 25 percent by 2030
- 50 percent by 2035
- 90 percent by 2045

Increase use of recycled water or graywater for agricultural uses:

- 30 percent by 2030
- 50 percent by 2035
- 80 percent by 2045

Increase use of recycled water or graywater for industrial uses:

- 30 percent by 2030
- 50 percent by 2035
- 80 percent by 2045

Implement a successful direct potable reuse project by 2025.

DESCRIPTION

Increasing the use of alternative water sources (e.g., recycled water, graywater, indirect potable reuse) reduces the demand for water sources with higher energy and carbon intensities (e.g., imported water, groundwater).

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

E5.1—Require dual waste piping to be installed in new residential developments to allow for future graywater irrigation systems.

E5.2—Require the use of recycled water and graywater for agricultural purposes where recycled water is available. Identify soil and water conservation best practices for agricultural uses. Work with Los Angeles County Sanitation Districts (LACSD) and other water suppliers to assess the feasibility of new recycled water facilities for unserved communities.

E5.3—Require the use of recycled water and graywater for industrial purposes where recycled water is available. Identify water conservation best practices for industrial uses. Work with LACSD and other water suppliers to assess the feasibility of new recycled water facilities for unserved communities.

E5.4—Require the use of recycled water and graywater for landscaping irrigation purposes where recycled water is available.

E5.5—Partner with the County water districts and retail suppliers to explore the potential for widespread utilization of direct potable reuse through pilot projects.

Building Energy and Water
Strategy 7: Conserve Water

MEASURE E6: Reduce Indoor and Outdoor Water Consumption Q

Annual GHG Emissions REDUCTIONS

By 2030: 10,575
By 2035: 15,122
By 2045: 11,764
(units = $MTCO_2e$)

Estimated COST

$–$$

PERFORMANCE OBJECTIVES

Reduce total water use to less than:

- 110 gallons per capita per day (GPCD) by 2030
- 100 GPCD by 2035
- 85 GPCD by 2045

Reduce outdoor landscaping water use by 10 percent by 2030, 20 percent by 2035, and 50 percent by 2045.

Reduce municipal water consumption by 10 percent by 2030, 20 percent by 2035, and 50 percent by 2045.

DESCRIPTION

Reducing indoor and outdoor water consumption is essential as the state experiences longer and more severe droughts. Not only will water conservation improve regional resiliency, but it will also reduce GHG emissions through the reduction of energy consumption associated with the processing, treatment, and conveyance of water and wastewater.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

E6.1—Develop a water conservation ordinance for new development (public and private). Utilize Leadership in Energy and Environmental Design (LEED) or Sustainable SITES Initiative (SITES) standards. A future ordinance may include a net zero water requirement for new greenfield development.

E6.2—Adopt a water efficiency ordinance for existing buildings, requiring all buildings over 20,000 square feet to benchmark and report their water use and demonstrate their pathway to efficiency.

E6.3—Incentivize residents to replace water-intensive landscaping, such as decorative turf, with water-conserving landscaping and/or California native plants through a new ordinance along with education and incentive programs.

E6.4—Implement strategies to improve water efficiency and increase water conservation at County facilities. M

E6.5—Integrate water-related programs into the County's affordable housing preservation program to protect the housing affordability of units and to keep the units fit for their purpose in a changing climate.

Waste (W)

The County will reduce GHG emissions from waste in a manner that prioritizes overall environmental benefit. This starts with expanded efforts to reduce and reuse waste at the source. Incentives and educational programs will be used to increase awareness and bolster participation in recycling programs. Organic waste, which is responsible for the vast majority of GHG emissions in the waste sector, will be addressed through source reduction, donation of edible food, and composting. Organic waste will also be addressed through waste conversion technologies such as anaerobic digestion and biomass conversion, which produce biogas that can be used to produce heat and electricity, pipeline gas, and other beneficial products such as compost and fertilizer. At wastewater treatment plants, biogas will be captured and converted into electricity.

Waste (W) comprises the following strategy and measures:

Strategy 8: Minimize Waste and Recover Energy and Materials from the Waste Stream

- Measure W1: Institutionalize Sustainable Waste Systems and Practices [Q]
- Measure W2: Increase Organic Waste Diversion

Waste

Strategy 8: Minimize Waste and Recover Energy and Materials from the Waste Stream

2045 VISION

Zero waste sent to landfill

Strategy Description

The County will reduce GHG emissions from waste in a manner that prioritizes overall environmental benefit. This starts with expanded efforts to reduce and reuse waste at the source. Incentives and educational programs will be used to increase awareness and bolster participation in recycling programs. Organic waste, which is responsible for the vast majority of GHG emissions in the waste sector, will be addressed through source reduction, donation of edible food, and composting, as well as through waste conversion technologies such as anaerobic digestion and biomass conversion, which produce biogas that can be used to produce heat and electricity, pipeline gas, and other beneficial products like compost and fertilizer. At wastewater treatment plants, biogas will be captured and converted into electricity.

Past and Current County Actions

- The Conversion Technology Program aims to increase the current in-County capacity of waste diversion from 600 tons per day (tpd) to 3,000 tpd by 2035.
- In 2010, an ordinance was adopted prohibiting the distribution of single-use plastic carryout bags at certain stores and requiring the stores to charge 10 cents for each paper bag provided to a customer.
- In 2018, the County Department of Public Works (PW) launched the Food Donation Recovery and Outreach Program (Food DROP) to facilitate the recovery of edible food to feed those in need instead of being disposed.
- PW is in the process of updating the Construction and Demolition Debris Recycling and Reuse Ordinance to increase the construction and demolition debris recycling requirement from 50 percent to 70 percent for projects in unincorporated Los Angeles County.
- In 2021, an ordinance was adopted requiring that single-use accessories (straws, utensils, condiment cups) be distributed to customers only upon request. In 2022, the Board of Supervisors passed a follow-up ordinance that limits the use of single-use plastic food service ware in unincorporated Los Angeles County to reusable, recyclable, or compostable options.
- As of 2022, there are four landfill gas-to-energy facilities in unincorporated Los Angeles County, with a total installed (rated) renewable energy generation capacity of 96 megawatts.

Alignment with State Initiatives

- SB 1383: Established emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants, including methane by 40%, HFC gases by 40%, and anthropogenic black carbon by 50% below 2013 levels by 2030.
- AB 341: Requires each city, county, and regional agency to develop a source reduction and recycling element of an integrated waste management plan containing specified components, including a source reduction component, a recycling component, and a composting component.
- AB 1826: Requires any business, defined as a commercial or public entity, that generates more than 4 cubic yards of commercial solid waste per week or is a multifamily residential dwelling of 5 units or more, to arrange for recycling services.

Waste

Strategy 8: Minimize Waste and Recover Energy and Materials from the Waste Stream

MEASURE W1: Institutionalize Sustainable Waste Systems and Practices (Core) Q

Annual GHG Emissions REDUCTIONS

By 2030: 154,514

By 2035: 248,362

By 2045: 342,934

(units = $MTCO_2e$)

Estimated COST

$–$$

PERFORMANCE OBJECTIVES

Increase the total unincorporated Los Angeles County waste diversion rate to:

- 85 percent by 2030
- 90 percent by 2035
- 95 percent by 2045

Reduce the disposal of single-use plastics in landfills.

Increase the Construction and Demolition Debris Ordinance to 70 percent diversion.

Increase percentage of construction and demolition debris reused in new projects (private, public).

DESCRIPTION

Undertake actions that result in sustainable waste systems. Responsible and sustainable waste practices are learned behaviors that the County can facilitate through outreach, education, and mandates. Increase diversion of recyclable materials and organics from landfills through ordinances, service improvements, education and outreach, and promotion of product stewardship and markets for material reuse. An increased diversion rate indirectly reduces the demand for virgin materials, which reduces the life-cycle carbon intensity of any resulting products. Through action taken at the County level, waste-conscious habits and thoughtful consumption can become the default.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

W1.1—Identify best practice waste pricing programs to reduce waste generation to the maximum extent feasible, including but not limited to differential prices for waste based on amount generated in the residential sector and reforms to tipping rate structures.

W1.2—Implement, enforce, and expand to the maximum extent feasible the single-use plastics and expanded polystyrene ordinance.

W1.3—Increase the diversion requirements in the County's Construction and Demolition Debris Ordinance and allow the use of recycled construction materials in new projects.

Waste

Strategy 8: Minimize Waste and Recover Energy and Materials from the Waste Stream

MEASURE W2: Increase Organic Waste Diversion

Annual GHG Emissions REDUCTIONS

Not quantified (supporting measure)

Estimated COST

$–$$$$

PERFORMANCE OBJECTIVES

Maximize organic waste diversion to support unincorporated Los Angeles County's overall waste diversion rate goals identified in Measure W1.*

** As the overall diversion rate increases through implementation of Measure W1, the amount of organic waste disposed in landfills decreases over time.*

DESCRIPTION

Provide services for diverting yard waste, food scraps, and compostable paper from landfills to beneficial uses, including compost, food rescue, and energy production.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

W2.1—Require organic waste generators to properly manage organic waste as per the Organic Waste Disposal Reduction Ordinance. Improve upon and expand existing practices and programs to minimize organic waste disposal in landfills.

W2.2—Develop organic waste collection, management, and diversion programs for constituents in unincorporated communities and all County operations; establish a contamination monitoring plan for organic waste programs.

W2.3—Collaborate with the Los Angeles County Sanitation Districts and other waste and wastewater service providers to utilize unused anaerobic digestion capacity of existing wastewater treatment plants and solid waste facilities to generate vehicle fuel and other beneficial uses (electricity and/or biomethane) from newly diverted organic waste. Develop a strategy for using bioenergy created from recycled organic waste.

W2.4—Provide regional leadership for organic waste processing capacity planning and infrastructure development.

W2.5—Enhance and expand the County's existing Food DROP food donation and redistribution program to divert edible food from landfills and make it available to food insecure communities.

Agriculture, Forestry, and Other Land Use (A)

The Agriculture, Forestry, and Other Land Use sector strategies focus on conservation and restoration of existing forest lands and urban forests to sequester carbon and support local ecosystems. These strategies promote clean water, air, and food, in addition to a reduced urban heat island effect. Preserving and supporting unincorporated Los Angeles County's forests, parks, and working lands is essential to reducing climate change impacts, as well as protecting the communities, economies, and ecosystems that depend on the land.

Agriculture, Forestry, and Other Land Use (A) comprises the following strategies and measures:

Strategy 9: Conserve and Connect Wildlands and Working Lands

- Measure A1: Conserve Forests, Woodlands, Shrublands, Grasslands, Desert, and Other Carbon-Sequestering Wildlands and Working Lands Q

Strategy 10: Sequester Carbon and Implement Sustainable Agriculture

- Measure A2: Support Regenerative Agriculture
- Measure A3: Expand Unincorporated Los Angeles County's Tree Canopy and Green Spaces Q

Agriculture, Forestry, and Other Land Use

Strategy 9: Conserve and Connect Wildlands and Working Lands

2045 VISION

Achieve a net gain in carbon storage in unincorporated Los Angeles County's wildlands and working lands through management and restoration

Strategy Description

Forests, chaparral shrublands, grasslands, deserts, and wetlands serve as carbon sinks that can sequester CO_2 that results from human activity. When these natural and working lands are converted to development and urbanized uses, that stored CO_2 is released into the atmosphere. Conserving and restoring these lands keeps carbon in the ground and provides a multitude of benefits, from maintaining biodiversity in the Significant Ecological Areas to preserving the character of unincorporated Los Angeles County's rural areas. Other important factors that enhance carbon storage and carbon sequestration potential include prioritizing habitat connectivity and strategically restoring degraded habitats and fallowed agriculture lands. This strategy will also consider optimal ecosystem services that are the result of the functional integrity of healthy ecosystems; prioritize the preservation of contiguous heterogeneous habitats to benefit biodiversity and help improve the chances of maintaining ecosystem health and carbon sequestration and storage capacity; and incorporate connectivity to optimize carbon storage sequestration. Further, this strategy will consider the role rural communities play in preserving and enhancing carbon sequestration capacity.

Past and Current County Actions

- In 2018, the Department of Regional Planning (DRP) amended the zoning code to allow selected accessory uses within utility rights-of-way, such as parks, open space, and limited agricultural uses, with development standards and streamlined review procedures.
- In 2019, DRP amended the zoning code to guide development to areas that would create the least impact on environmental resources on private properties.

Alignment with State Initiatives

- California 2030 Natural and Working Lands Climate Change Implementation Plan: a collaborative effort by the California Natural Resources Agency, California Department of Food and Agriculture, California Environmental Protection Agency, CARB, and Strategic Growth Council to coordinate all natural and working lands programs under a united approach to maintain a resilient carbon sink and improve air and water quality, water quantity, wildlife habitat, recreation, and other benefits.

- AB 1757 of 2022: Requires the California Natural Resources Agency (CNRA), in collaboration with CARB, other state agencies, and an expert advisory committee, to determine a range of targets for natural carbon sequestration, and for nature-based climate solutions, that reduce GHG emissions in 2030, 2038, and 2045 by January 1, 2024. These targets must support state goals to achieve carbon neutrality and foster climate adaptation and resilience.
- SB 27 of 2021: Requires CNRA, in coordination with other state agencies, to establish the Natural and Working Lands Climate Smart Strategy by July 1, 2023. This law also requires CARB to establish specified CO_2 removal targets for 2030 and beyond as part of its Scoping Plan.

Agriculture, Forestry, and Other Land Use

Strategy 9: Conserve and Connect Wildlands and Working Lands

MEASURE A1: Conserve Forests, Woodlands, Shrublands, Grasslands, Desert, and Other Carbon-Sequestering Wildlands and Working Lands Q

Annual GHG emissions REDUCTIONS

By 2030: 8,953

By 2035: 17,906

By 2045: 26,858

(units = $MTCO_2e$)

Estimated COST

$$–$$$

PERFORMANCE OBJECTIVES

Reduce the amount of natural land converted for urbanized uses:

- 25 percent by 2030 (53 hectares conserved annually)
- 50 percent by 2035 (106 hectares conserved annually)
- 75 percent by 2045 (159 hectares conserved annually)

Conserve and restore new acres of wildland:

- 2,000 acres by 2030
- 4,000 acres by 2035
- 6,000 acres by 2045

Manage new acres of wildland for wildfire risk reduction and carbon stock savings:

- 10,000 acres by 2030
- 20,000 acres by 2035
- 50,000 acres by 2045

DESCRIPTION

Preserve, conserve, and restore agricultural lands, working lands, rangelands, forest lands, wetlands, and other wildlands in unincorporated Los Angeles County.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

A1.1—Develop an open space conservation and land acquisition strategy that prioritizes wildlife connectivity to conserve native habitats for carbon sequestration.

A1.2—Employ ecosystem-appropriate vegetation management of wildlands based on the best available science to reduce unintended human ignitions and wildfire risk and prevent carbon loss in forest lands. Leverage tools such as the Unified Land Management Plan and the Countywide Community Wildfire Prevention Plan.

Agriculture, Forestry, and Other Land Use

Strategy 10: Sequester Carbon and Implement Sustainable Agriculture

2045 VISION

Farms and urban forests that sequester carbon, conserve water, and enhance biodiversity

Strategy Description

Agricultural practices can either strip the environment of its rich resources or work to maintain and utilize the resources in ways that benefit farms and the environment. Farming practices that increase biodiversity, enrich soils, improve watersheds, and enhance ecosystem services are known as *regenerative agriculture practices*. These practices can have positive impacts for the climate, reducing GHG emissions and supporting practices that are environmentally friendly. Adding tree canopy cover and green spaces back into developed areas can help sequester carbon and reduce the urban heat island effect.

Past and Current County Actions

- The County adopted the Tree Planting Ordinance in 2016 to establish new tree planting requirements for projects to provide environmental benefits.
- The Tree Committee of the County's Healthy Design Workgroup coordinates interdepartmental efforts to preserve, maintain, and expand unincorporated Los Angeles County's urban forest in low-income, tree-poor neighborhoods.
- In 2016, the Department of Regional Planning (DRP) amended the zoning code to incentivize growing local foods on private property.
- In 2021, the County was awarded $1.5 million by the state to develop an Urban Forest Management Plan.

Alignment with State Initiative

- California 2030 Natural and Working Lands Climate Change Implementation Plan.

Agriculture, Forestry, and Other Land Use

Strategy 10: Sequester Carbon and Implement Sustainable Agriculture

MEASURE A2: Support Regenerative Agriculture

Annual GHG Emissions REDUCTIONS

Not quantified (supporting measure)

Estimated COST

$–$$$$

PERFORMANCE OBJECTIVES

- Reduce the quantity of synthetic fertilizers used/applied.
- Increase the number of acres of cover crops using regenerative agricultural techniques.

DESCRIPTION

Promote agricultural practices that sequester carbon and restore soil quality, biodiversity, ecosystems health, and water quality.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

A2.1—Create fallow and field resting incentives to reduce bare-fallow land by adding cover crops and promoting crop rotation for active agricultural sites to improve soil quality and limit risks of nutrient erosion, pollutant runoff, and yield reduction. Create a carbon farming plan with the primary objectives of carbon removal and regenerative agriculture.

A2.2—Provide compost and/or organic or nonsynthetic fertilizer to farmers free of charge or at a discounted rate.

Agriculture, Forestry, and Other Land Use

Strategy 10: Sequester Carbon and Implement Sustainable Agriculture

MEASURE A3: Expand Unincorporated Los Angeles County's Tree Canopy and Green Spaces Q

Annual GHG Emissions REDUCTIONS

By 2030: 4,602

By 2035: 7,080

By 2045: 10,310

(units = $MTCO_2e$)

Estimated COST

$–$$

PERFORMANCE OBJECTIVES*

Plant new trees as follows:

- 130,000 by 2030
- 200,000 by 2035
- 270,000 by 2045

Develop an Urban Forest Management Plan.

** The performance objectives provided here serve as a general metric and may be refined upon completion of the Urban Forest Management Plan.*

DESCRIPTION

Create an Urban Forest Management Plan to plant trees, increase unincorporated Los Angeles County's tree canopy cover, add green space, and convert impervious surfaces. Focus tree planting on frontline communities with insufficient tree cover and green spaces.

IMPLEMENTING ACTIONS

For tracking metrics and implementation details, see Appendix E.

A3.1—Create and implement an equitable Urban Forest Management Plan that prioritizes: (1) tree- and parks-poor communities; (2) climate- and watershed-appropriate and drought/pest-resistant vegetation; (3) appropriate watering, maintenance, and disposal practices; (4) provision of shade; and (5) biodiversity.

A3.2—Expand tree planting on County property and in the public right-of-way within unincorporated Los Angeles County. Encourage tree planting on private property.

A3.3—Develop an ordinance requiring that all removed native trees be replaced by an equal or greater number of new trees.

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CHAPTER 4

Implementation and Monitoring

4.1 Implementation Plan

Reaching and maintaining carbon neutrality will require a strong commitment to implementation. Everyone has a role to play in shaping a healthy, sustainable, and climate-resilient future. Implementing the 2045 CAP will require coordination across County departments; collaboration with community partners, residents, and other stakeholders; identification of funding opportunities; and integration of 2045 CAP implementation with other County planning and administrative processes.

To ensure successful implementation of the 2045 CAP, the County will do the following, as depicted in Figure 4-1.

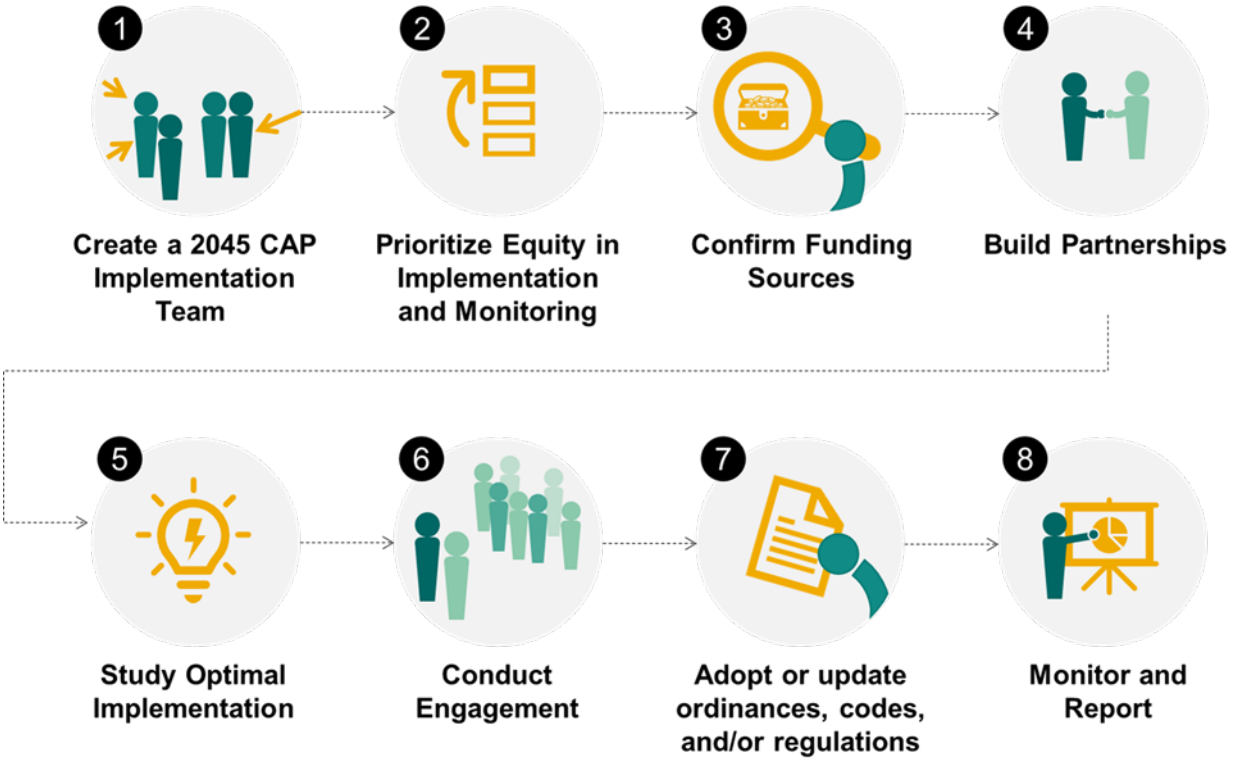

Figure 4-1: CAP Implementation Process

1. Create a 2045 CAP Implementation Team

The Chief Sustainability Office and DRP will develop a cross-departmental 2045 CAP implementation team to include representatives from County departments listed as lead or partner agencies for the 2045 CAP actions. The team will help County departments implement listed actions, identify funding, and monitor annual progress.

2. Prioritize Equity in Implementation and Monitoring

Implementation efforts will continue to prioritize equity.

The following actions will guide implementation of the 2045 CAP:

(1) Engage in meaningful public involvement that is anti-racist and inclusive.

(2) Prioritize funding and action in frontline communities.

(3) Design transportation and land use solutions to eliminate disproportionate burdens on frontline communities.

(4) Partner with local and nonprofit organizations to assist low-income, disadvantaged, and vulnerable communities on information and resource access.

3. Confirm Funding Sources

Successful implementation will require a commitment of resources and confirmation of additional funding sources. Funding efforts will include the following:

- **Grant Opportunities:** Federal, state, and regional agencies and organizations provide grants and loans, as well as planning assistance, for investments in a variety of climate-related projects. Given the State of California's leadership on setting emissions reduction targets and in creating the Cap-and-Trade Program, numerous grant opportunities are offered by different state agencies. Through the Healthy Design Workgroup Grants Committee, the County will continue to review grant opportunities to obtain additional funding that supports climate action implementation.
- **County General Fund:** Annual budgeting allocations fund departmental operations for staff resources to implement programs. Programs that need funding beyond staff resources are assessed through the annual budgeting and prioritization process. Additional funding may be secured through fee programs or discretionary budget allocations.
- **Federal, State, Regional, and Utility Programs and Incentives:** The County will strongly encourage residents and businesses to participate in incentives that promote energy efficiency, water conservation, and the use of EVs.

As discussed in Chapter 3, funding sources for the five core measures have already been identified. These funding sources are presented in Table 3-3.

A list of potential partners, programs, and funding sources that would support 2045 CAP implementation is provided in **Appendix G**. Note that programs and funding sources for implementing GHG emissions reduction programs are developing rapidly and may change substantially from year to year.

4. Build Partnerships

Partnerships are critical to successful implementation of the 2045 CAP. Partners are listed in many of the 2045 CAP actions, and the County will seek to continue to build additional partnerships and engage with stakeholders on an ongoing basis.

5. Study Optimal Implementation

To optimize implementation of the 2045 CAP measures and actions, the County will evaluate and identify priority areas for implementation, GHG emissions reduction potential, physical infrastructure needs, regulatory and legal requirements, up-front and ongoing costs and savings, funding opportunities, barriers and obstacles, impacts on and benefits for frontline communities, and needed partnerships, among other topics. Studies initiated by a CAP action will include additional analysis to identify necessary additional support for frontline communities. Identifying frontline communities' concerns early in the process can help secure funding and shape a project to best fit local needs.

The outcome of the studies may determine the achievable performance goals and actions needed to implement 2045 CAP measures. Performance goals and actions may differ from those identified in the 2045 CAP once the details are analyzed. The 2045 CAP identifies several specific studies needed, including a carbon removal feasibility study (Measure ES1), a solar, battery storage, and microgrid study (Measure ES4), and a buildings portfolio analysis and cost feasibility study (Measure E1). Many more studies would likely be needed.

6. Conduct Engagement

Community engagement and input is a crucial component of successful CAP implementation. The County will conduct community engagement and seek input to ensure that the implementation of CAP measures and actions in the form of programs, policies, ordinances, and projects considers the needs of residents and businesses along with climate objectives. Many of the actions throughout the 2045 CAP, including development of new ordinances, programs, and funding sources, will require targeted community engagement. The County will approach these efforts as opportunities to strengthen relationships and improve the capacity of frontline communities to participate in decisions that affect their lives. The County will work to build partnerships with community-based organizations (CBOs) and other partners in frontline communities that can help build a bridge of two-way communication based on reciprocity and respect. The County will work to help build the capacity of CBOs so that they can better support this effort over time, including by providing grants or other funding to CBOs to support engagement work.

The success of the 2045 CAP's implementation can be furthered by local actions and programs that increase awareness of climate change, promote sustainable actions, and provide a framework for change. The County will develop and strengthen community education and awareness about the 2045 CAP through various promotional efforts to communicate program development and gauge the success of 2045 CAP implementation. The 2045 CAP Implementation Team will guide community engagement that promotes community measures and leads to local contributions for emissions reductions. The community engagement program could incorporate a voluntary local climate challenge that recommends actions for residents, businesses, and other local stakeholders to take, with the goal of creating a more climate-conscious and climate-friendly County and a healthier environment. Recommended actions should prioritize community goals of energy efficiency, waste reduction, water savings, clean transportation, and increasing climate change awareness.

7. Adopt or Update Ordinances, Codes, and/or Regulations

Some actions may represent a continuation of a recently enacted ordinance, while others require a new ordinance. For any new ordinances developed pursuant to a measure or action, there will be a public input and review process and the County will consider many factors: feasibility, cost, exceptions such as weather or climate limitations, and others. The County generally follows these steps when adopting a new ordinance:

(1) Research, evaluate, and/or study.

(2) Engage the public and stakeholders (gather information).

(3) Draft the ordinance, code, or regulation.

(4) Publish the draft ordinance, code, or regulation for public review.

(5) Revise the draft ordinance, code, or regulation in response to public comments.

(6) Conduct formal public hearings (includes a public comment period).

(7) Adopt the ordinance, code, or regulation.

(8) Implement and enforce the ordinance, code, or regulation.

8. Monitor and Report

The 2045 CAP Implementation Team will prepare annual progress reports of the status of the strategies, measures, and actions. This includes community and municipal measures and actions. More information regarding this step is listed in Section 4.2.

4.2 Monitoring and Reporting

GHG Inventory and CAP Updates

The 2045 CAP is a dynamic document that will be monitored and evaluated for its effectiveness on an ongoing basis. Monitoring allows the County to make timely adjustments to implementing actions as technologies, federal and state programs, and circumstances change. Flexibility in implementation is necessary to allow the County to evolve its strategies. The County will update the GHG emissions inventory and the CAP every five years.

Monitoring

The County will monitor each 2045 CAP measure and action using the metrics identified in Appendix E, *Implementation* (see Table E-1), subject to data availability. The County will also track, measure, and improve the performance of measures and actions to reduce emissions from its operations, subject to data availability.

The County will track the status of implementation (e.g., initiated, ongoing, completed), assess the effectiveness of the measures and actions in the 2045 CAP against the performance objectives, and make adjustments to the tracking metrics as needed. Tracking the performance objectives for each quantified GHG reduction measure on a periodic basis will inform the County and community over time as to how the 2045 CAP implementation actions are working toward achieving GHG reduction targets and will help the County re-prioritize actions in future updates to the 2045 CAP.

Tracking the metrics summarized in **Table 4-1** will assist the County in monitoring the progress in meeting climate strategies and goals. Tracking metrics are intended to identify potential data that may be used to analyze GHG emission reductions. See Appendix E for the complete list of tracking metrics that may contribute to progress monitoring. Many of these indicators will be tracked by the Chief Sustainability Office as part of implementation of the OurCounty Sustainability Plan, or are reported by state or County agencies. The list of indicators will be assessed and revised periodically and administratively based on data availability.

Reporting

The County will report on the implementation progress of the 2045 CAP as part of the General Plan Annual Progress Report. In the first two years of implementation, the County will identify where further efforts and additional resources may be needed. In this initial phase, the County will identify the data sources needed to report on the effectiveness of implementation.

The County will also develop a dashboard as part of the reporting on implementation of the 2045 CAP. This dashboard will be updated on an annual basis and will provide information on the ongoing efforts of the CAP actions through data and spatial displays. The dashboard will also track equity-based metrics to measure progress of implementation in frontline communities compared to unincorporated Los Angeles County as a whole.

Table 4-1: Tracking Metrics for Monitoring Progress of 2045 Climate Action Plan Implementation

STRATEGY	TRACKING METRICS
Strategy 1: Decarbonize the Energy Supply	• Number of oil and gas operations/wells decommissioned and remediated • Emissions reductions achieved through oil and gas closures • Decommissioning dates and details (i.e., fuel consumption and GHG emissions) for the Olive View Cogeneration Facility • Number of CCS systems constructed • CARB Pollution Mapping Tool data for natural gas leakage • Participation rates in CPA's Green Power option or SCE's Green Rate option • Renewable energy portfolio (percent share) • Electricity grid emission factor(s) • Rooftop solar PV installations for existing multifamily residential buildings and existing commercial buildings • Rooftop solar PV installations for new multifamily residential buildings • Rooftop solar PV installations for new commercial buildings • Kilowatts of solar capacity installed on County facilities • Total installed distributed energy resource capacity (e.g., kilowatts of solar capacity installed) • Total battery capacity installed • Total community electricity storage capacity • Number and capacity of microgrids established • Number and performance of energy efficiency and resilience projects implemented in facilities providing critical community services • Number and type of projects performing CAP consistency review • Dollars invested into future Offsite GHG Reduction Program, and estimated energy savings and GHG emissions reductions • Energy benefits (all items above) delivered in frontline communities
Strategy 2: Increase Densities and Diversity of Land Uses Near Transit	• Commute mode share • Population residing within HQTAs (and dwelling units within HQTAs) • Jobs located within HQTAs • Total acres of commercial or industrial zones in HQTAs that can support jobs • Residential density (DU/acre) for new development • Daily VMT and vehicle trips • Percent of new units in TODs that provide affordable housing

Table 4-1: Tracking Metrics for Monitoring Progress of 2045 Climate Action Plan Implementation (cont.)

STRATEGY	TRACKING METRICS
Strategy 3: Reduce Single-Occupancy Vehicle Trips	• Commute mode share • Bikeway miles • Pedestrian walkway miles • Total transit service hours • Decrease in transit headways • Miles of bus-only lanes constructed • Number of free and discounted transit passes issued • Number of intersections with signal prioritization • Number and location of shade and lighting projects planned and completed • Parking pricing information, including unbundling • Number and location of car-free areas • Number of ZEV buses and shuttles in operation • Percent change in parking supply; number of new and expanded parking benefit districts • Collisions involving pedestrians or bicyclists • Transit and active transportation benefits (see all items above) delivered in frontline communities
Strategy 4: Institutionalize Low-Carbon Transportation	• EV, ZEV, and near-zero-emission vehicle registrations for light-, medium-, and heavy-duty vehicles, including transit fleets, County-owned fleet vehicles, and drayage trucks • Total sales of gasoline and diesel fuel within unincorporated Los Angeles County • Total number of gas stations decommissioned • Number of public, shared private, and private EVCSs installed • Number of EVCSs installed at County facilities • Number of e-scooters/e-bikes made available • Number of neighborhood EVs made available • Quantity of biomethane and biogas sold and consumed in unincorporated Los Angeles County • Number of County-owned ZEV buses, shuttles, and fleet vehicles in operation • Number of off-road equipment pieces electrified • Off-road vehicle and equipment fleet count, type, and fuel type • Quantity and fraction of new EV charging infrastructure provided in frontline communities
Strategy 5: Decarbonize Buildings	• Number of existing buildings retrofitted with electric appliances (residential and nonresidential) • Number of new fully electric and ZNE buildings constructed (residential and nonresidential) • Total consumption of electricity and natural gas for buildings by sector • Proportion of biomethane in utility natural gas mix • Quantity of low-carbon concrete and materials used in new construction • Dollars invested into future Impact Mitigation Fund, and estimated energy savings and GHG emission reductions • Quantity of low-GWP refrigerants used/charged • Percent and quantity of building decarbonization projects in frontline communities, multifamily developments, and affordable housing

Table 4-1: Tracking Metrics for Monitoring Progress of 2045 Climate Action Plan Implementation (cont.)

STRATEGY	TRACKING METRICS
Strategy 6: Improve Efficiency of Existing Building Energy Use	• Number of new buildings that meet 2022 Title 24 requirements (and future Title 24 requirements) • Number of buildings and homes retrofitted for energy efficiency • Total electricity and natural gas savings achieved through retrofits • Total consumption of electricity and natural gas for buildings by sector • Number and area of cool and green roofs installed • Percent and quantity of energy efficiency projects in frontline communities, multifamily developments, and affordable housing
Strategy 7: Conserve Water	• Unincorporated Los Angeles County demand met by recycled water, graywater, or direct potable reuse • Per capita water consumption • Number of buildings and homes retrofitted with water-efficient devices • Percent and quantity of building water retrofit projects in frontline communities, multifamily developments, and affordable housing
Strategy 8: Minimize Waste and Recover Energy and Materials from the Waste Stream	• Annual waste tons to landfill and per-capita waste generation and landfilling rate • Landfill diversion rate and disposal tonnage • Total landfill emissions • Organic waste diversion rate and disposal tonnage • Annual quantity of organic waste treated in composing and anaerobic digestion facilities • Recycling diversion rate and disposal tonnage • Reported GHG emissions from waste-to-energy facilities (biogenic carbon dioxide and non-biogenic methane and nitrous oxide) • Recycling and composting services provided in frontline communities, multi-family developments, and affordable housing
Strategy 9: Conserve and Connect Wildlands and Working Lands	• Acres of wildlands conserved • Acres of wildlands restored • Acres of farmlands conserved • Acres of farmlands restored • Acres of wildlands managed for wildfire risk reduction and carbon stock savings • Acres of urban and peri-urban agriculture created • Percent and quantity of projects completed in frontline communities, multifamily developments, and affordable housing
Strategy 10: Sequester Carbon and Implement Sustainable Agriculture	• Quantity of compost used as fertilizer • Quantity of organic and synthetic fertilizers used/applied • Increase in number of acres of cover crops using regenerative agricultural techniques • Number of new trees planted • Urban tree canopy area • Area of impervious surfaces converted to urban forest • Urban tree canopy cover and number of new trees planted in frontline communities, multi-family developments, and affordable housing

Abbreviations: CAP = climate action plan; CARB = California Air Resources Board; CCS = capture and carbon and sequestration; County = County of Los Angeles government; CPA = Clean Power Alliance; DU = dwelling unit; EV = electric vehicle; EVCS = electric vehicle charging station; GHG = greenhouse gas; GWP = global warming potential; HQTA = high quality transit area; PV = photovoltaic; SCE = Southern California Edison; TOD = Transit Oriented District; unincorporated Los Angeles County = the unincorporated areas of Los Angeles County; VMT = vehicle miles traveled; ZNE = Zero Net Energy

4.3 CEQA

CEQA and the 2045 Climate Action Plan

CEQA and its implementing regulations (the CEQA Guidelines) require state and local government agencies to consider the environmental impacts of projects over which they have discretionary authority before taking action on those projects.

A program environmental impact report (EIR) is a type of EIR that evaluates a plan or program that has multiple components or actions that are related either geographically; as logical parts in the chain of contemplated actions; in connection with application of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways (California Code of Regulations Title 14, Section 15168[a]). It evaluates the general impacts of the plan or program but does not examine the potential site-specific impacts of the many individual projects that may be proposed in the future consistent with the plan.

The Program EIR describes planned activities that would implement the 2045 CAP and addresses related environmental impacts comprehensively, based on the information that was reasonably available at the time the environmental review process was initiated. The Program EIR is a "first-tier" document that anticipates later environmental review of specific projects.[39]

Later activities undertaken in furtherance of 2045 CAP measures and actions would be examined in light of the Program EIR to determine whether additional environmental review is needed. For example, if a later activity would have effects that are not examined in the EIR, then preparation of either a project-specific Negative Declaration or EIR could be appropriate. That later analysis may tier to the Program EIR as provided in CEQA Guidelines Section 15152. The County would incorporate the mitigation measures developed in the Program EIR into later activities in furtherance of 2045 CAP measures and actions. Alternatively, if DRP finds (pursuant to CEQA Guidelines Section 15162) that no subsequent Negative Declaration or EIR would be required, then the County could approve the activity as being within the scope of the Program EIR, and no additional environmental review would be required.

CEQA Streamlining Checklist

The 2045 CAP constitutes a qualified GHG emissions reduction plan under CEQA Guidelines Section 15183.5(b). Future non-CEQA-exempt projects requiring discretionary approvals may elect to use the voluntary 2045 CAP (as a qualified GHG emissions reduction plan) CEQA Streamlining Checklist if they are consistent with the General Plan's future growth projections, and the 2045 CAP CEQA streamlining requirements. Projects that comply with the CEQA streamlining requirements would not require additional GHG emissions analysis or mitigation under CEQA Guidelines Section 15183.5(b)(2), provided that the project's environmental document identifies the 2045 CAP CEQA streamlining requirements that are applicable to the project, and incorporates

[39] *Tiering* is defined in CEQA Guidelines Section 15385 as referring "to the coverage of general matters in broader EIRs (such as on general plans or policy statements) with subsequent narrower EIRs or ultimately site-specific EIRs incorporating by reference the general discussions and concentrating solely on the issues specific to the EIR subsequently prepared. Tiering is appropriate when the sequence of EIRs is from a…program EIR to a program, plan, or policy EIR of lesser scope or to a site-specific EIR."

these requirements as mitigation measures where they are not incorporated into the design of the project.

To demonstrate compliance with the 2045 CAP CEQA Streamlining Requirements when projects elect to use the CEQA Streamlining Checklist, all projects that do not screen out of the 2045 CAP consistency review process must implement either (1) all feasible applicable checklist measures or (2) for infeasible checklist measures, alternative project emissions reduction measures. The CEQA Streamlining Checklist can be used for projects consistent with the 2045 CAP, to demonstrate CAP consistency that allows for streamlined project-specific CEQA GHG analysis.

Offsite GHG Reduction Program

Action ES5.3 would establish an Offsite GHG Reduction Program (Offsite Program) for new development to use as a GHG reduction or mitigation pathway for 2045 CAP compliance and to fund programs for reducing GHG emissions in the built environment. This program would be used in tandem with the 2045 CAP Consistency Checklist for projects that propose GHG emissions reduction measures as alternatives to those identified in Table F-1 of the 2045 CAP Consistency Checklist, or that propose to include additional GHG emissions reduction measures beyond those described in Table F-1. Such projects must not otherwise be required by law or regulation and would not have happened on the 2045 CAP's proposed schedule but for the requirements placed on the project by the 2045 CAP Checklist. Section F.4 of Appendix F includes a framework for the forthcoming Offsite Program.

Developing a local voluntary off-site reduction program and associated GHG mitigation market will help the County provide local benefits.[40] CARB supports the idea of "off-site GHG mitigation" in Appendix D of the 2022 Scoping Plan for projects that have maxed-out their on-site GHG reduction actions: "If implementation of all feasible on-site GHG reduction measures is insufficient to reduce a project's impact to a less-than-significant level, the State recommends that the lead agency next explore options to fund or implement ***local***, off-site direct GHG reduction strategies."[41]

Carbon Removal and Sequestration

The 2045 CAP shows that unincorporated Los Angeles County can reduce emissions to 85 percent below 1990 levels by 2045 through numerous aggressive, forward-looking strategies and measures, but the 2045 CAP alone will not be enough for unincorporated Los Angeles County to achieve carbon neutrality. As discussed in Section 3.2 above, even with CAP implementation, there will still be almost 850,000 $MTCO_2e$ of residual emissions in 2045. To achieve carbon neutrality, all remaining emissions must be compensated for by removing carbon from the atmosphere. According to the 2022 Scoping Plan, "Carbon removal and sequestration will be an essential tool to achieve carbon neutrality, and the modeling clearly shows there is no path to carbon neutrality without carbon removal and sequestration."[42] The 2022 Scoping Plan includes

[40] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality*. Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed January 2023.

[41] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality*. Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed January 2023.

[42] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality*. November 16. Available: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan. Accessed in December 2022.

CO_2 removal and carbon capture targets of 20 million metric tons of CO_2 ($MMTCO_2$) and 100 $MMTCO_2$ by 2030 and 2045, respectively. A slate of legislation on carbon removal and sequestration was passed in 2022, including AB 1279, SB 905, SB 1137, and AB 1757 (see Table 1-2 above).

Action ES1.3 requires the development of a carbon removal strategy that considers direct air capture and carbon and sequestration (CCS). CCS will be an essential component of the County's carbon neutrality strategy. The first step would be to assess the feasibility of various carbon removal tools within areas of unincorporated Los Angeles County. This would include CCS, mechanical carbon removal, and nature-based carbon sequestration. The strategy would assess regional and statewide partnerships and programs, given that regional collaboration has the potential to address barriers to carbon removal and expand opportunities for successful local reductions of GHG emissions. Regional collaboration can also lend support to lead agencies and air districts as they seek opportunities for local GHG reduction programs; for example, the San Luis Obispo County Air Pollution Control District, County of Santa Barbara, County of Ventura, City of Santa Barbara, City of San Luis Obispo, and Community Environmental Council formed a tactical Regional GHG Collaborative Group to understand and identify opportunities for local carbon sequestration and GHG reduction projects.[43]

Evolving state regulations, programs, and financial incentives will provide new opportunities for the County to compensate for any residual emissions that cannot be directly eliminated. For example, almost $9 billion in in carbon capture and sequestration support was included in the $1 trillion Infrastructure Investment and Jobs Act of 2021, which includes funding to establish four direct air capture hubs. SB 27 of 2021 will provide carbon removal projects via an in-state project registry, which will serve as a database of projects in the state that drive climate action on natural and working lands. SB 905 of 2022 requires CARB to create the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate CCUS and CO_2 removal projects and technology; these projects could also support the County's aspirations to achieve carbon neutrality.

Carbon Offsets/Credits Feasibility Study

Measure ES5, *Establish GHG Requirements for New Development*, assesses the feasibility of developing a GHG offsets/credits program that would help enable the County to achieve its long-term aspirational goal of carbon neutrality by 2045, in the event that the strategies and measures in the 2045 CAP are insufficient to attain the County's carbon neutrality goal.

An offsets/credits program is not a 2045 CAP strategy, measure, or action currently proposed for implementation. The future offsets/credits program differs from the Offsite Program described above in that the offsets/credits program would consider the use of offset credits outside of the boundaries of unincorporated Los Angeles County, while the Offsite Program only encompasses projects within unincorporated Los Angeles County. Further, offset credits are not currently permitted to be used as alternative project emissions reduction measures for new development pursuant to the 2045 CAP Consistency Checklist. The offsets/credits program would be considered for potential implementation later, and only after completion of the feasibility study.

[43] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality*. Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed January 2023.

The potential offsets/credit program would be designed to be consistent with applicable CEQA case law requirements, including requirements that offsets be enforceable, real, permanent, quantifiable, verifiable, and additional. The potential offsets/credits program would provide clear, objective, and measurable performance standards for all allowable GHG offsets. For any potential future GHG offsets/credits program evaluated by the County, the County would prioritize implementation of offsets generated within or close to Los Angeles County.

APPENDIX A

Greenhouse Gas Accounting Methods, Business-as-Usual Forecast, and Emission Reduction Targets

Purpose

This Appendix describes the greenhouse gas (GHG) accounting and projections methods for calendar year 2015 and 2018 for unincorporated Los Angeles County (henceforth referred to as "Unincorporated Los Angeles County" unless otherwise specified). It also presents methods for the 1990 and 2010 emissions backcasts; the business-as-usual (BAU) forecasts for 2030, 2035, and 2045; and the derivation of the 2045 CAP's emission reduction targets for 2030, 2035, and 2045. The document is organized into four sections corresponding with the following objectives:

Section A.1: Greenhouse Gas Emissions Inventory: 2015 and 2018

This section describes the methods for estimating baseline 2015 GHG emissions from community-induced activities and sources along with updated emission for the year 2018. The community-scale inventory includes emissions from transportation; stationary energy; industrial processes and product use (IPPU); waste and wastewater; and agriculture, forestry, and other land use (AFOLU) emissions.

Section A.2: 1990 and 2010 Greenhouse Gas Inventory and Backcasting Methods

This section describes the approach for estimating unincorporated Los Angeles County's GHG emissions in the year 2010 and 1990. The backcast aligns the 2010 inventory with the updated methods and emission factors used in the 2015 and 2018 inventory updates, and projects emissions back to 1990 for purposes of aligning the 2045 CAP's target with the statewide target for 2030.

Section A.3: 2018 to 2045 Business-as-Usual Forecasts

This section describes the approach for modeling the BAU scenario, which projects future emissions based on current population and regional growth trends, land use growth patterns, and regulations or policies introduced before the 2018 inventory year. The BAU scenario demonstrates the growth in GHG emissions that would occur if no further action were to be taken by the County of Los Angeles (County) or the State of California after 2018.

Section A.4: Derivation of the 2045 CAP's Emission Reduction Targets

This section describes the approach taken to derive the 2045 CAP's GHG emission reduction targets for 2030, 2035, and 2045, and how these targets align with the statewide targets codified in SB 32 for 2030 and EO B-55-18 for 2045. This section provides substantial evidence for CEQA purposes that the 2045 CAP's targets represent levels of significance for the cumulative impact of unincorporated Los Angeles County's GHG emissions.

A.1 Greenhouse Gas Emissions Inventory: 2015 and 2018

2015 & 2018 GHG Emissions Inventories

Introduction

The 2015 and 2018 Community-scale GHG emissions inventories for unincorporated Los Angeles County were developed using the Global Protocol for Community-scale GHG Emission Inventories (GPC).[1] This protocol is used for calculating and reporting emissions from community activities and sources from seven gases: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), hexafluoride (SF_6), and nitrous trifluoride (NF_3). GHG emissions from these activities are organized into five sectors: transportation, stationary energy, waste (including wastewater), industrial processes and product use (IPPU) and agriculture, forestry and other land use (AFOLU). The protocol further offers two related frameworks—the Scopes Framework and the City-induced Framework—for reporting emissions from each sector:

Scopes Framework: This framework captures GHG emissions produced within a geographic boundary by categorizing emissions as scope 1, 2, and 3 emissions in each Sector:

- **Scope 1:** Emissions produced from activities and sources within unincorporated Los Angeles County boundaries.
- **Scope 2:** Emissions generated from the use of grid-supplied electricity, heat, steam and/or cooling within unincorporated Los Angeles County boundaries; and
- **Scope 3:** Emissions occurring outside unincorporated Los Angeles County boundaries due to activities taking place within unincorporated Los Angeles County boundaries.

[1] World Resources Institute, C40 Cities Climate Leadership Group, and ICLEI - Local Governments for Sustainability. *Global Protocol for Community-scale GHG Emission Inventories*, Version 1.1. December, 2014. Available at: https://ghgprotocol.org/greenhouse-gas-protocol-accounting-reporting-standard-cities. Accessed January 2021.

City-induced Framework: This framework measures GHG emissions attributable to activities and sources within a geographic boundary and covers selected scope 1, 2, and 3 emissions from each sector. This framework offers two reporting levels:

- **BASIC:** Includes emissions from transportation, stationary energy, and waste sectors.
- **BASIC+:** Includes all BASIC requirements as well as emissions from transmission and distribution grid losses, transboundary transportation, in-boundary generated waste emission sources, IPPU, and AFOLU.

The 2015 and 2018 GHG emissions inventories for unincorporated Los Angeles County use the City-induced BASIC+ Framework. This includes Scope 1, 2, and 3 emissions sources. In other words, the GHG inventories comprise emissions from activities occurring within unincorporated Los Angeles County areas, including emissions that occur elsewhere because of those activities. A good example is solid waste, which is generated locally but disposed of at a landfill outside the city, where it decomposes and generates GHGs. Solid waste is a Scope 3 emissions source.

The GHG inventories use global warming potential (GWP) values from the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5),[2] unless otherwise specified. The inventory is prepared using sector-specific generation and resource consumption data for relevant sub-sectors included in the BASIC+ protocol. The accounting methods, data sources and emission factors used for accounting 2015 and 2018 emissions are detailed in the subsequent sections.

The general methods used for the 2015 and 2018 inventories are the same and the descriptions herein apply to both of the inventory years.

It should also be noted that the Los Angeles County Sanitation Districts has prepared a separate GHG inventory using site-specific data rather than population-based estimates, which were used for certain sources in the Draft 2045 CAP's 2015 and 2018 inventories.[3,4] Los Angeles County and the Sanitation Districts will work cooperatively to achieve carbon neutrality.

[2] IPCC, Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. 2014. Available at: https://archive.ipcc.ch/report/ar5/syr/. Accessed January 2021.
[3] Los Angeles County Sanitation Districts, 2021 Greenhouse Gas Inventory Report. 2022.
[4] Environmental Science Associates, Positive Verification Opinion for Greenhouse Gas Emissions and Reductions for Emissions Year 2021. 2022.

Stationary Energy

This sector includes emissions from energy use (natural gas and electricity) in residential, commercial/ institutional/agricultural, and manufacturing/industrial buildings, energy generation facilities owned by the County, off-road equipment, and fugitive emissions from oil and natural gas systems. **Table A-1** presents scopes, activity data, and emissions for the stationary energy sector. **Figure A-1** compares 2015 and 2018 GHG emissions from energy use by sub-sector.

Table A-1: Stationary Energy Scope, Activity, and GHG Emissions by Sub-sector

		2015 INVENTORY		2018 INVENTORY	
CATEGORY	SCOPE	ACTIVITY	EMISSIONS ($MTCO_2E$)	ACTIVITY	EMISSIONS ($MTCO_2E$)
Stationary Energy					
Residential Buildings	All	Natural Gas: 99,802,009 therms Electricity: 2,032,945,391 kWh	1,030,285	Natural Gas: 100,918,233 therms Electricity: 1,855,862,580 kWh	962,743
Commercial, Institutional, and Agricultural Buildings	All	Natural Gas: 18,162,374 therms Electricity: 1,181,331,358 kWh	386,753	Natural Gas: 35,862,112 therms Electricity: 1,342,822,146 kWh	349,373
Manufacturing and Construction Buildings	All	Natural Gas: 17,177,369 therms Electricity: 686,002,430 kWh	309,449	Natural Gas: 13,143,126 therms Electricity: 1,025,769,024 kWh	244,417
Energy Industries	1 & 3	2 CHP and District Energy facilities 1 Waste to Energy facility[a] 3 Biomass and Auxiliary Power facilities[a]	121,252	2 CHP and District Energy facilities 1 Waste to Energy facility[a] 3 Biomass and Auxiliary Power facilities[a]	98,554
Fugitive Emissions from Oil and Natural Gas Systems	1	1 Natural Gas Distribution and Transportation facility 1 Crude Petroleum & Natural Gas Extraction site	58,222	1 Natural Gas Distribution and Transportation facility 1 Crude Petroleum & Natural Gas Extraction site	41,066
Agriculture, Forestry and Other Fishing Activities	1	Off-road agricultural vehicles using diesel or gasoline	2,675	Off-road agricultural vehicles using diesel or gasoline	2,658
TOTAL			**1,908,637**		**1,698,809**

NOTES:

[a] *Biogenic emissions from these facilities are not included in the inventory; only non-biogenic CH_4 and N_2O emissions are included, consistent with the GPC Protocol.*

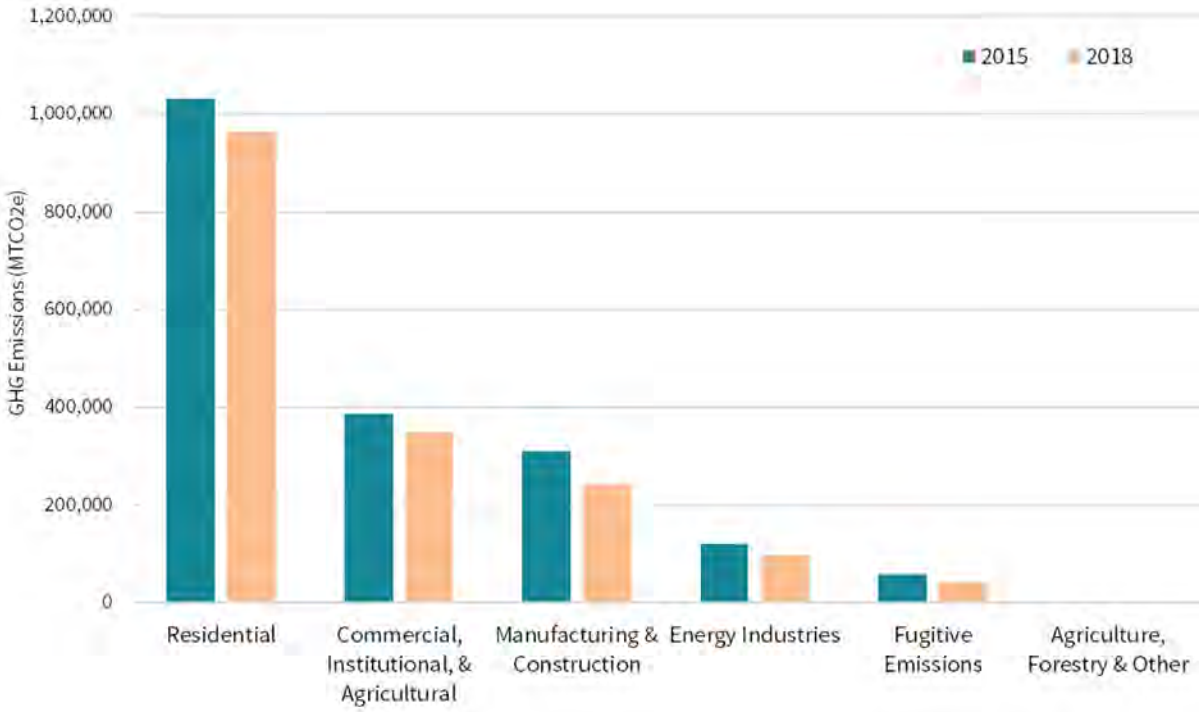

Figure A-1: 2015 & 2018 Energy Emissions by Sub-sector

RESIDENTIAL BUILDINGS

This category includes direct emissions from the consumption of natural gas and indirect emissions from grid-supplied electricity by residential buildings in unincorporated areas. Direct GHG emissions from natural gas consumption in residential buildings are calculated using SoCalGas natural gas consumption data and emission factors from the Climate Registry.[5] Indirect GHG emissions from electricity consumption in residential buildings are calculated using data from SCE including electricity consumption, emission factors, and power mix. In 2018, SCE's power mix was 36 percent eligible renewable, 10 percent hydropower and nuclear (carbon-free), 17 percent natural gas, and 37 percent unspecified fossil-fuel sources. SCE's emission rate for 2018 electricity was 513 pounds per MWh.[6] Emissions associated with transmission and distribution losses are accounted using a loss factor of 4.8 percent for California from EPA eGRID.[7]

Data Sources:

- SCE Consumption Data
  Provided by SoCal Edison via County DRP (2021)
- SoCalGas Consumption Data
  Provided by SoCalGas via County DRP (2021)
- SCE Emission Factor
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf

[5] The Climate Registry, Default Emission Factors. May 1, 2018. Available at: https://www.theclimateregistry.org/wp-content/uploads/2018/06/The-Climate-Registry-2018-Default-Emission-Factor-Document.pdf. Accessed January 2021.
[6] California Energy Commission (CEC), 2018 Power Content Label. July 2019. Available at: https://www.energy.ca.gov/sites/default/files/2020-01/2018_PCL_Southern_California_Edison.pdf. Accessed January 2021.
[7] EPA, eGRID. 2018. Available at: https://www.epa.gov/egrid. Accessed January 2021.

- Climate Registry
  Link: https://www.theclimateregistry.org/wp-content/uploads/2018/06/The-Climate-Registry-2018-Default-Emission-Factor-Document.pdf (the 2018 document was the latest available at the time the inventories were prepared)
- EPA eGRID
  Link: https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid

COMMERCIAL AND INSTITUTIONAL BUILDINGS

This category includes direct emissions from the consumption of natural gas and indirect emissions from grid-supplied electricity by non-residential buildings including commercial, municipal, institutional (such as schools, hospitals, and other public facilities) and agricultural buildings. Direct GHG emissions from natural gas consumption in non-residential buildings are calculated using SoCalGas natural gas consumption data and emission factors from The Climate Registry.[8]

In June 2018, non-residential customers in unincorporated Los Angeles County were automatically enrolled in the Clean Power Alliance's (CPA) "Clean" rate option. While participation data for 2018 were unavailable when the 2018 inventory was developed, a July 2021 member status report indicated a 98 percent participation rate for all non-residential customers in unincorporated Los Angeles County in 2021.[9] For purposes of the 2018 GHG inventory, it is conservatively assumed that half the annual electricity consumption is attributed to SCE and half to CPA because full CPA enrollment for non-residential customers was not completely in effect until 2019. Under the Clean rate option in 2018, non-residential customers received 61 percent of their electricity from eligible renewable sources via the CPA, 26 percent from carbon-free sources like hydropower, and 13 percent from unspecified fossil-fuel sources like natural gas and coal. GHG emissions from CPA-provided electricity are calculated using CPA data including electricity consumption, emission factors, and power mix.[10] CPA's emission rates for 2018 were 10.6 pounds per MWh for the "Lean" rate and 9.8 pounds per MWh for the Clean rate.[11] GHG emissions from SCE-provided electricity are calculated using SCE data including electricity consumption, emission factors, and power mix. SCE's emission rate for 2018 electricity was 513 pounds per MWh.[12] Emissions associated with transmission and distribution losses are accounted using a loss factor of 4.8 percent for California from the U.S. EPA's eGRID2018 Summary Table (WECC California subregion).[13]

Data Sources:

- SCE Consumption Data
  Provided by SoCal Edison via County DRP (2021)
- SoCalGas Consumption Data
  Provided by SoCalGas via County DRP (2021)

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8 The Climate Registry, Default Emission Factors. May 1, 2018. Available at: https://www.theclimateregistry.org/wp-content/uploads/2018/06/The-Climate-Registry-2018-Default-Emission-Factor-Document.pdf. Accessed January 2021.
9 CPA, Member Status Report: Los Angeles County. July 28, 2021.
10 CEC, 2018 CPA Power Content Label. July 2019. Available at: https://www.energy.ca.gov/sites/default/files/2020-01/2018_PCL_Clean_Power_Alliance.pdf. Accessed January 2021.
11 The Climate Registry, Utility-Specific Emission Factors. 2020. Available at: https://www.theclimateregistry.org/our-members/cris-public-reports/. Accessed January 2021.
12 Edison International, 2020 Sustainability Report. 2021. Available at: https://www.edison.com/content/dam/eix/documents/sustainability/eix-2020-sustainability-report.pdf. Accessed January 2021.
13 EPA, eGRID. 2018. Available at: https://www.epa.gov/egrid. Accessed January 2021.

- CPA Member Status Report (July 28, 2021)
  Provided by CPA via County CSO (July 28, 2021)
- SCE Emission Factor
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- CPA Emission Factor
  Link: (account required for download): https://cris4.org/(S(rtuopf12t5k5ymsx3rurxtg4))/frmLILogin.aspx
- Climate Registry
  Link: https://www.theclimateregistry.org/wp-content/uploads/2018/06/The-Climate-Registry-2018-Default-Emission-Factor-Document.pdf
- Climate Registry Information System (CRIS)
  Link: https://cris4.org/(S(zr3twbbnour5a5jfb1iykcxa))/frmLILogin.aspx
- EPA eGRID
  Link: https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid

MANUFACTURING AND INDUSTRIAL BUILDINGS

This category includes direct emissions from the consumption of natural gas and indirect emissions from grid-supplied electricity consumption in manufacturing and industrial buildings. This category also includes direct emissions from fossil fuel combustion for electricity and heat generation by stationary equipment (such as boilers, furnaces, burners, turbines, heaters, incinerators, engines and flares) and off-road equipment (such as vehicle and mobile machinery) that are used inside building property premises.

GHG emissions from natural gas and electricity consumption are estimated using the same assumptions and methods stated under Commercial and Institutional Buildings above.

Emissions from fuel combustion of other energy sources in manufacturing facilities are documented using the California Air Resource Board's (CARB) Pollution Mapping Tool.[14] This tool provides CH_4, CO_2 and N_2O from on-site combustion and industrial processes for each facility location. CARB's OFFROAD2017 ORION[15] tool is used to estimate emissions from fuel consumption by industrial and construction equipment used inside building premises. This tool provides daily CO_2 emissions and annual fuel consumption of diesel, gasoline and natural gas by manufacturing and construction sectors for Los Angeles County as a whole, including cities. (This area is referred to herein as "Countywide.") Emissions from unincorporated Los Angeles County are estimated by scaling countywide GHG emissions based on the number of jobs in manufacturing and construction sectors in unincorporated areas in 2017.

Note: This category only reports fossil fuel combustion-related emissions from CARB's Pollution Mapping Tool. These emissions do not include fugitive process emissions from manufacturing facilities since they are reported under the IPPU category. Emissions reported in CARB's Pollution Mapping tool are largely informed by emissions reported under the CARB's Mandatory GHG Reporting Regulations (MRR).[16] The MRR only requires facilities emitting more than 10,000 metric tons carbon dioxide equivalent ($MTCO_2e$) to report their emissions. Emissions from facilities emitting under 10,000 $MTCO_2e$ are not available and have therefore not been accounted in this inventory.

[14] CARB, Pollution Mapping Tool. 2018. Available: https://ww3.arb.ca.gov/ei/tools/pollution_map/. Accessed January 2021.
[15] CARB, OFFROAD ORION. 2018. Available at: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/msei-modeling-tools. Accessed January 2021.
[16] CARB, Mandatory GHG Reporting Regulations. April 1, 2019. Available at: https://ww2.arb.ca.gov/mrr-regulation. Accessed January 2021.

Data Sources:

- SCE Consumption Data
  Provided by SoCal Edison via County DRP (2021)
- SoCal Gas Data
  Provided by SoCal Gas via County DRP (2021)
- CPA Membership Report
  Provided by CPA via County CSO (July 28, 2021)
- SCE Emission Factor
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- EPA eGRID
  Link: https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid
- CARB OFFROAD2017 ORION
  Link: https://www.arb.ca.gov/orion/
- CARB Pollution Mapping Tool
  Link: https://www.arb.ca.gov/ei/tools/pollution_map/
- Jobs in Manufacturing and Construction
  Link: https://scag.ca.gov/sites/main/files/file-attachments/losangelescountylp.pdf?1605653130

ENERGY INDUSTRIES

The Energy Industries category includes emissions from primary fuel production (such as coal mining and oil and gas extraction), fuel processing and conversion (such as coal to coke in coke ovens) and on-site fuel combustion for auxiliary energy production (such as electricity generation and district heating).

Emissions from fuel and energy production in combined heat and power (CHP) plants, biomass power stations, and waste to energy facilities in unincorporated areas are documented using CARB's Pollution Mapping Tool.[17] For CHP and district energy source, the inventory includes direct natural gas combustion emissions from the Pitchess Cogeneration Station in Saugus and the Olive View Medical Center Cogeneration Station in Sylmar. Pitchess Cogeneration Station and the Olive View Medical Center Cogeneration Station were included because these facilities are both within unincorporated Los Angeles County and owned and operated by the County. Emissions data for all three facilities were obtained from CARB's 2021 MRR database.

Waste-to-Energy facilities include Bradley Landfill in Sun Valley and the Calabasas Landfill in Agoura. These facilities convert landfill methane to energy. Only non-biogenic CH_4 and N_2O emissions from these facilities were included in the inventory because the CO_2 emissions from landfill gas combustion are considered biogenic (not anthropogenic) emissions sources by the GPC and should therefore be excluded.[18] Biomass and auxiliary power facilities include Ameresco Chiquita Energy LLC in Castaic, Calabasas Landfill in Agoura, MM Lopez Energy LLC in Lake View Terrace, and Sunshine Gas Producers LLC in Sylmar. Similar to the waste to energy facilities above, only non-biogenic CH_4 and N_2O emissions from these facilities were included in the inventory.

[17] Emissions reported under CARB's Pollution Mapping Tool are largely informed by emissions reported under CARB's Mandatory GHG Reporting Regulations (MRR). The MRR only requires facilities emitting more than 10,000 MTCO2e to report their emissions. Emissions from facilities emitting under 10,000 MTCO2e are not available and have therefore not been accounted in this inventory.

[18] According to the GPC, "Biogenic emissions are those that result from the combustion of biomass materials that store and sequester CO_2, including materials used to make biofuels (e.g. trees, crops, vegetable oils, or animal fats)."

Data Sources:

- CARB Pollution Mapping Tool
  Link: https://www.arb.ca.gov/ei/tools/pollution_map/
- CARB MRR Database
  Link: https://ww2.arb.ca.gov/mrr-data

AGRICULTURE, FORESTRY AND OTHER FISHING ACTIVITIES

Emissions from direct fuel combustion associated with agricultural activities typically result from the operation of farm vehicles and machinery (stationary and mobile) and generators to power lights, pumps, heaters, coolers and other equipment. CARB's OFFROAD2017 ORION[19] tool was used to estimate Countywide emissions from direct fuel consumption by agricultural equipment (including plant and animal cultivation, afforestation and reforestation activities, and fishery activities). GHG emissions from the unincorporated Los Angeles County areas were estimated by scaling countywide GHG emissions using the cropland acres in unincorporated areas in 2016.

Note: For the agricultural sector, this category only reports emissions associated with off-road vehicles and equipment. Emissions from agricultural buildings (natural gas and electricity consumption) are reported under the commercial and institutional buildings category.

Data Sources:

- CARB OFFROAD ORION
  Link: https://www.arb.ca.gov/orion/
- NASS CropScape
  Link: https://nassgeodata.gmu.edu/CropScape/

FUGITIVE EMISSIONS FROM OIL AND NATURAL GAS SYSTEMS

Fugitive emissions include all intentional and unintentional emissions from the extraction, processing, storage and transport of oil and natural gas to the point of final use. The primary sources of fugitive emissions from oil and natural gas systems include equipment leaks, evaporation and flashing losses, venting, flaring, incineration, and accidental releases. GHG emissions from oil and natural gas systems in unincorporated areas are documented using CARB's Pollution mapping tool.[20]

Data Sources:

- CARB Pollution Mapping Tool
  Link: https://www.arb.ca.gov/ei/tools/pollution_map/

[19] CARB, OFFROAD ORION. 2018. Available at: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/msei-modeling-tools. Accessed January 2021.
[20] CARB, Pollution Mapping Tool. 2018. Available: https://ww3.arb.ca.gov/ei/tools/pollution_map/. Accessed January 2021.

Transportation

The transportation sector includes emissions from fuel (gasoline, diesel, and natural gas) and electricity consumption in on-road passenger vehicles (cars, light-, medium-, and heavy-duty trucks), buses, and rail systems. Note that while Metro and Metrolink have GHG inventories for the transportation services provided by the respective agencies, they do not estimate emissions by local jurisdiction. Therefore, bus and railway emissions are independently estimated for unincorporated Los Angeles County. **Table A-2** presents scopes, activity data, and emissions for the transportation sector. **Figure A-2** shows the contribution of each subsector to the Transportation sector for both the 2015 and 2018 inventories.

Table A-2: Transportation Scope, Activity, and GHG Emissions by Sub-sector

		2015 INVENTORY		2018 INVENTORY	
CATEGORY	SCOPE	ACTIVITY	EMISSIONS ($MTCO_2E$)	ACTIVITY	EMISSIONS ($MTCO_2E$)
Transportation					
Passenger Vehicles	1 & 3	18,982,668 miles/day	2,797,360	19,074,692 miles/day	2,665,824
Buses	1 & 3	1,392,461,970 miles/year	31,360	1,143,144,015 miles/year	29,371
Railway	1 & 3	Metro: 634,484,952 miles/year Metrolink: 24,798 riders/day	9,413	Metro: 689,995,896 miles/year Metrolink: 25,690 riders/day	9,490
TOTAL			**2,838,133**		**2,704,685**

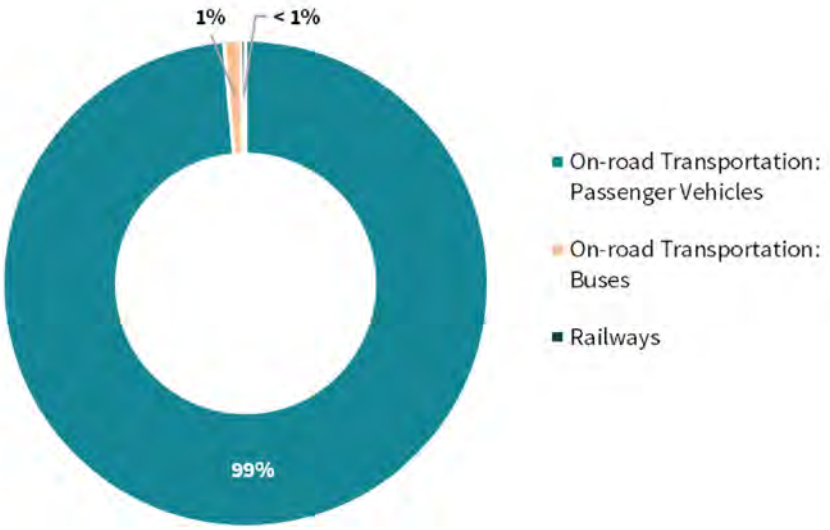

Figure A-2: 2015 & 2018 Transportation Emissions by Sub-sector

ON ROAD TRANSPORTATION: PASSENGER VEHICLES AND TRUCKS

Emissions from passenger vehicles and trucks are estimated based on daily vehicle trips and vehicle miles traveled (VMT) by each vehicle type. VMT for unincorporated Los Angeles County is estimated using a trip-based travel forecasting model developed by Southern California Association of Governments (SCAG). SCAG's 2016 Regional Travel Demand Model, the version for which a complete dataset was available at the time of modeling, was used by Fehr and Peers (F&P) to analyze the transportation network and socioeconomic data such as population, household, and employment, to forecast daily vehicle trips and VMT for each traffic analysis zone (TAZ) within unincorporated Los Angeles County.[21]

The 2016 SCAG model has a base year of 2012 and horizon year of 2040. VMT for the inventory years, including 2015 and 2016, was linearly interpolated from the 2012 and 2040 model values. Daily VMT are estimated using the origin-destination analysis approach (full accounting method). The Full Accounting Method accounts for VMT depending on where the trip is starting and ending. This method tracks (and "fully accounts" for) all the vehicle trips being generated by a geographic area (i.e., a city) across the entire regional network, and allows for the isolation of different types of VMT as follows.

- **Internal-internal (II) VMT:** Includes all trips that begin and end entirely within the geographic area of study.
- **One-half of internal-external (IX) VMT:** Includes one-half of trips with an origin within the geographic area of study and a destination outside of this area. This assumes that the geographic area under study shares half the responsibility for trips traveling to other areas.
- **One-half of external-internal (XI) VMT:** Includes one-half of trips with an origin outside of the geographic area of study and a destination within this area. Similar to the IX trips, the geographic area of study shares the responsibility of trips traveling from other areas.
- **External-external (XX) VMT:** Trips through the geographic area of study are not included. This approach is consistent with the concept used for the IX and XI trips. Therefore, the XX VMT would be assigned to other areas that are generating the trips.

The Full Accounting Method was utilized to develop the VMT estimates for unincorporated Los Angeles County because it more fully accounts for the length of regional travel generated in unincorporated Los Angeles County, not just the travel occurring on unincorporated Los Angeles County's in-boundary roadways. As noted above, the inventory includes emissions from trips that begin and/or end within unincorporated Los Angeles County. It does not include through trips that neither begin nor end within the unincorporated areas. Daily VMT is then multiplied by 347 to

[21] VMT estimates for large urban areas are commonly developed using regional travel demand models. These models are developed and periodically updated, calibrated, and validated for use in long range infrastructure planning, environmental impact assessments, and air quality conformity analyses by local and regional agencies. Trip-based travel forecasting models generate (output) daily vehicle trips for each TAZ across various trip purposes based on inputs such as the transportation network and socioeconomic data such as population, household, and employment. SCAG staff maintain a regional travel demand model that uses a four-step model process to arrive at a set of forecast vehicle trips based on the data described above.

calculate annual VMT.[22] VMT was estimated for passenger vehicles (light-duty cars and trucks) and trucks (medium- and heavy-duty trucks).

Emissions were calculated using CARB's EMission FACtors 2021 model (EMFAC2021).[23] EMFAC2021 generates vehicle emission rates by area, year, vehicle type, fuel type, speed, and other parameters. EMFAC2021 was run for Los Angeles County for 2015 and 2018 in "emission rate" mode to generate vehicle travel emission factors for all vehicle types and fuel types for aggregated (average) speeds. The EMFAC vehicle type categories were aligned with the two categories of VMT provided by Fehr & Peers (passenger and truck).[24] The EMFAC emission factors by vehicle type and fuel assigned to passenger VMT and truck VMT were then weighted using Countywide VMT and trip generation profiles for each vehicle type modeled in EMFAC2011.[25] GHG emissions were then calculated by multiplying the weighted emission factors for passenger vehicles and trucks by the origin-destination VMT for passenger vehicles and trucks supplied by Fehr & Peers.

Data Sources:

- 2016 SCAG Regional Travel Demand Model
  Provided by SCAG
- Fehr & Peers Modeling Analysis (July 29, 2019; December 2021; January 2022; February 2023)
- EMFAC2021 Model, v1.0.1
  Link: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9

ON ROAD TRANSPORTATION: BUSES

GHG emissions from fuel and energy consumption by bus transit systems and paratransit agencies are accounted from Federal Transit Administration's (FTA) National Transit database at the Countywide level (not for unincorporated Los Angeles County areas separately).[26] The agency included in the GHG inventory includes the Los Angeles County Metropolitan Transportation Authority (Metro). Electricity consumption was not available from the National Transit database. To account for electricity consumption and associated indirect GHG emissions, the total gasoline and diesel fuel use from the National Transit database was reapportioned based on the percentage of VMT by fuel type (diesel, gasoline, natural gas, electricity) from EMFAC2021 for the aggregated OBUS, SBUS, and UBUS categories in EMFAC. The CPA Clean emission factor is applied to all electricity consumption by electric buses serving unincorporated Los Angeles County areas. Emission factors for gasoline, diesel, and compressed natural (CNG) gas-powered buses are taken from EMFAC2021 to calculate CO_2 and N_2O emissions. Total estimated Countywide GHG emissions were then scaled by Metro ridership forecasts for unincorporated county areas to estimate GHG emissions for the unincorporated Los Angeles County areas.[27]

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[22] The annualization factor of 347 was provided by Fehr & Peers to estimate annual vehicle activity based on daily vehicle activity generated by SCAG's 2016 Regional Travel Demand Model.

[23] CARB, EMFAC2021 Model. Version v.1.0.1. 2021. Available at: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9. Accessed October 2021.

[24] The "passenger vehicle" category corresponds to EMFAC vehicle categories LDA, LDT1, LDT2, MCY, and MD. The "trucks" category corresponds to EMFAC vehicle categories LHDT1, LHDT2, MHDT, HHDT, and MH.

[25] For example, if the LDA vehicle type represents 70% of VMT at an emission rate of 300 grams CO2 per mile and the LDT1 vehicle type represents 30% of VMT at an emission rate of 350 grams CO2 per mile, the VMT-weighted emission rate for LDA and LDT1 vehicles combined is calculated as follows: 70% * 300 + 30% * 350 = 315 grams CO2 per mile.

[26] FTA, National Transit Database. 2018. Available at: https://www.transit.dot.gov/ntd/ntd-data. Accessed January 2021.

[27] Metro, Interactive Estimated Ridership Stats. 2021. Available at: https://isotp.metro.net/MetroRidership/Index.aspx. Accessed January 2021.

Data Sources:

- FTA National Transit Database
  Link: https://www.transit.dot.gov/ntd/ntd-data
- EMFAC2021 Model, v1.0.1
  Link: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9
- Metro Bus Ridership
  Link: https://isotp.metro.net/MetroRidership/Index.aspx

RAILWAY

Diesel fuel and electricity consumed by commuter rail systems are obtained from FTA's NTD.[28] The database reports diesel fuel consumption by Southern California Regional Rail Authority (Metrolink) and electricity consumption by Metro Rail. GHG emission factors for diesel locomotives were obtained from the EPA national GHG inventory and emission factors for electric propulsion were obtained from the EPA's Emissions & Generation Resource Integrated Database (eGRID).[29] These emission factors were multiplied by the diesel fuel and electricity consumption values obtained from NTD to generate GHG emissions for Los Angeles County as a whole. Total Countywide GHG emissions were then scaled based on Metro and Metrolink ridership forecasts for unincorporated county areas to estimate GHG emissions for the unincorporated Los Angeles County areas.

Data Sources:

- FTA National Transit Database
  Link: https://www.transit.dot.gov/ntd/ntd-data
- EPA National GHG Inventory Emission Factors
  Link: https://www.epa.gov/sites/production/files/2015-12/documents/emission-factors_nov_2015.pdf
- EPA eGRID Database
  Link: https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid
- Metro Ridership
  Link: http://media.metro.net/projects_studies/union_station/images/LAUSMP_Presentation_2013_0315.pdf

[28] FTA, National Transit Database. 2018. Available at: https://www.transit.dot.gov/ntd/ntd-data. Accessed January 2021.
[29] EPA, eGRID. 2018. Available at: https://www.epa.gov/egrid. Accessed January 2021.

Waste and Wastewater

Emissions generated at landfills, biological treatment (composting and anaerobic digestion) and incineration facilities, and wastewater treatment plants are reported under the waste sector. These subsectors are discussed in more detail below. **Table A-3** presents scopes, activity data, and emissions for the water and wastewater sector. **Figure A-3** compares 2015 and 2018 GHG emissions from waste and wastewater by sub-sector.

Table A-3: Waste and Wastewater Scope, Activity, and GHG Emissions by Sub-sector

		2015 INVENTORY		2018 INVENTORY	
CATEGORY	SCOPE	ACTIVITY	EMISSIONS ($MTCO_2E$)	ACTIVITY	EMISSIONS ($MTCO_2E$)
Waste and Wastewater					
Solid Waste Disposal	1 & 3	Disposal Tonnage: 721,493 tons	404,604	Disposal Tonnage: 935,512 tons	407,578
Biological Treatment of Solid Waste	1 & 3	Composting Tonnage: 51,111 tons	10,214	Composting Tonnage: 27,182 tons	5,309
Waste Incineration*	1 & 3	Incineration Tonnage: 3,303 tons	1,184	Incineration Tonnage: 1,876 tons	547
Wastewater Treatment	All	Population: 1,058,871	55,179	Population: 1,082,365	56,495
TOTAL			**469,997**		**469,382**

NOTE: Totals exclude Waste Incineration which is accounted for under Stationary Energy

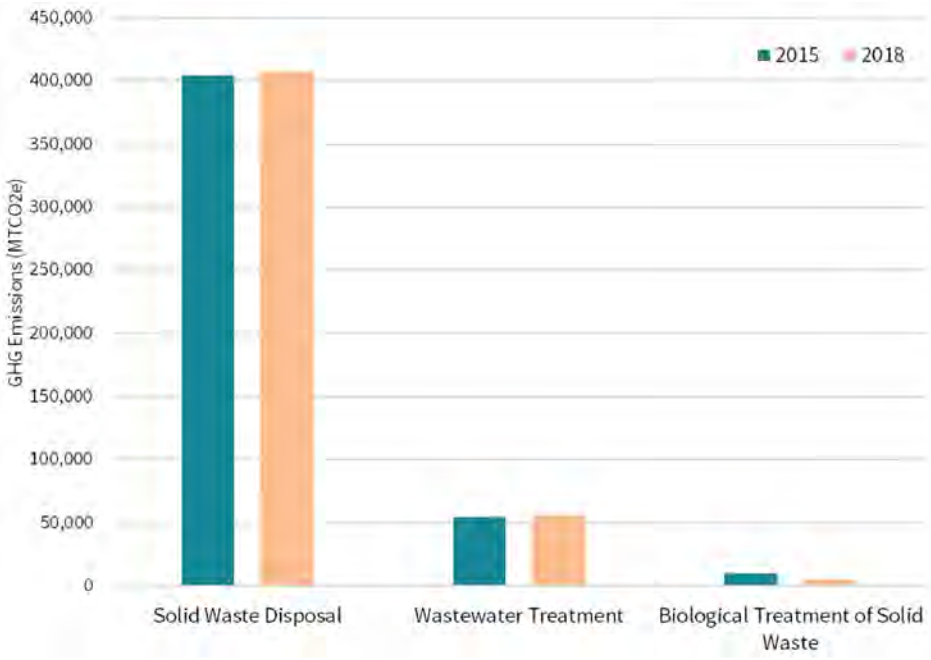

Figure A-3: 2015 & 2018 Waste and Wastewater Emissions by Sub-sector

SOLID WASTE DISPOSAL

Landfill-related emissions are estimated using CARB's first order of decay (FOD) model,[30] based on waste disposal tonnage and composition data from CalRecycle's Solid Waste Integrated System (SWIS)[31] and County Public Works Solid Waste Information Management System (SWIMS) reports.[32] Using these reports, unincorporated Los Angeles County disposal tonnage data were obtained for 62 open and closed landfills where unincorporated Los Angeles County residents and businesses disposed their municipal solid waste prior to 2018.

Most of the 62 in- and out-of-county landfills used by unincorporated Los Angeles County residents and businesses have landfill gas collection (LFG) systems with combustion control. These systems collect LFG for flaring, energy production, or for producing liquefied natural gas (LNG), CNG, and producer gas. GHG emissions from landfill gas collection are estimated based on LFG collection rate, LFG flow to energy, and methane content from CalRecycle's 2010 Landfill Gas Master.[33] To determine Los Angeles County's share of methane removal at these landfills (since many other jurisdictions contribute waste to these same landfills), total emissions from these landfills were apportioned based on waste disposed in the landfills by Los Angeles County versus California. California's disposal tonnage data are obtained using CalRecycle's SWIS reports for statewide disposal at the same facilities, where unincorporated Los Angeles County residents and businesses deposited municipal solid waste between 1998 and 2018. The same was done to estimate the unincorporated Los Angeles County's share of emissions at these landfills.

GHG emissions from landfills and landfill gas flaring for the unincorporated Los Angeles County are scaled based on waste volume directed to in- and out-of-county landfills between 1998 and 2018. Emissions associated with methane flaring and recovery from landfills are reported under the waste sector. However, if the methane is recovered (via biogas or digester gas) and used for electricity generation, then the emissions are reported under the stationary energy sector as waste-to-energy facilities or biomass and auxiliary power facilities.

Data Sources:

- CARB FOD Model
  Link: https://ww2.arb.ca.gov/resources/documents/landfill-methane-emissions-tool
- CalRecycle SWIS Reports
  Link: https://www2.calrecycle.ca.gov/SolidWaste/Site/Search
- LADPW SWIMS Reports
  Link: https://dpw.lacounty.gov/epd/swims/OnlineServices/reports.aspx
- CalRecycle Landfill Gas Master
  Link: https://www2.calrecycle.ca.gov/PublicNotices/Documents/1642

[30] CARB, Landfill Gas Tool. 2021. Available at: https://ww2.arb.ca.gov/resources/documents/carbs-landfill-gas-tool. Accessed January 2021.
[31] CalRecycle, SWIS Facility/Site Search. 2021. Available at: https://www2.calrecycle.ca.gov/SolidWaste/Site/Search. Accessed January 2021.
[32] LADPW, Solid Waste Information Management System (SWIMS). 2021. Available at: https://dpw.lacounty.gov/epd/swims/OnlineServices/reports.aspx. Accessed January 2021.
[33] CalRecycle, Landfill Gas Master. Available at: https://www2.calrecycle.ca.gov/PublicNotices/Documents/1642. Accessed January 2021.

BIOLOGICAL TREATMENT OF SOLID WASTE

Biological treatment of solid waste refers to the composting and anaerobic digestion of organic waste (such as food waste, garden and park waste, sludge, and other organic waste sources).

Composting

In 2018, the County diverted waste to eight in-county and over 50 out-of-county composting facilities. Waste volume diverted by unincorporated Los Angeles County areas for composting was obtained from County Public Works SWIMS reports for transfer stations and non-disposal facilities.[34] Waste composted at in-county facilities is assumed to be equivalent to annual waste processing capacity of in-county facilities. These data are obtained from 2019 Organics Waste Management Reports by County Department of Public Works. Waste composted at out-of-county facilities is considered to be the difference between total waste diverted and capacity of in-county facilities. GHG emissions are calculated using wet and dry waste parameters based on waste composition disposed at in and out-of-county recycling or diversion facilities. These data are obtained from Public Works Organics Waste Management Reports. [35] GHG emissions from composting for unincorporated Los Angeles County are scaled based on waste volume directed to in- and out-of-county facilities in 2018.

Anaerobic Digestion

The Joint Water Pollution Control Plant (JWPCP) serves 78 Cities as well as many unincorporated communities, also manages sewage sludge using Anaerobic Digester Units. Annual waste volume processed at these facilities is obtained from 2019 Organics Waste Management Reports by Public Works. [36] GHG emissions produced by this facility are estimated based on content of volatile solids in food waste and sewage sludge processed in respective facilities.

GHG emissions from anaerobic digestion facilities for unincorporated Los Angeles County are scaled based on population of unincorporated areas in 2018 compared to the total Countywide population. Since the JWPCP facility uses biogas or digester gas for energy production, emissions from anaerobic digestion are included under the waste sector for informational purposes, but they are reported under stationary energy (energy industries).

Data Sources:

- LADPW SWIMS Reports
  Link: https://dpw.lacounty.gov/epd/swims/
- Public Works 2019 Organics Waste Management Reports
  Link: https://dpw.lacounty.gov/epd/swims/News/swims-more-links.aspx?id=4

WASTE INCINERATION

Incineration is a controlled industrial process which is often paired with energy recovery. In 2018, the County diverted waste to three waste incineration facilities. Two of the facilities – the Commerce Refuse-to-Energy Facility (discontinued in June 2018) and the Southeast Resource Recovery Facility – are located in the county. Additionally, waste was diverted to Covanta

[34] LADPW, Solid Waste Information Management System (SWIMS). 2021. Available at: https://dpw.lacounty.gov/epd/swims/OnlineServices/reports.aspx. Accessed January 2021.
[35] Ibid
[36] Ibid

Stanislaus Inc., which is an out-of-county facility. GHG emissions from these facilities are obtained from CARB's MRR GHG database.[37]

To estimate unincorporated Los Angeles County's emissions, total countywide GHG emissions from waste incineration facilities are scaled based on waste diverted by unincorporated communities to these facilities in 2018. CalRecycle's 2018 SWIS reports are used to determine the waste volume diverted to these facilities.[38] Since these facilities are used for energy production, emissions are reported under stationary energy (energy industries).

Data Sources:

- CARB MRR Database
  Link: https://ww2.arb.ca.gov/mrr-data
- CalRecycle SWIS Reports
  Link: https://www2.calrecycle.ca.gov/swfacilities/Directory/

WASTEWATER TREATMENT

Emissions from wastewater treatment are estimated based on population served by sewer and septic systems in unincorporated areas. GHG emissions from wastewater treatment are estimated based on 2018 population data from the SCAG Growth and Forecast report.[39] Parameters and constants such as total organic carbon and protein consumption in wastewater are obtained from California GHG inventory documentation[40] and IPCC default parameters.[41]

Data Sources:

- SCAG Growth and Forecast Report
  Link: http://gisdata.scag.ca.gov/Pages/SocioEconomicLibrary.aspx?keyword=Forecasting
- California GHG Inventory
  Link: https://ww2.arb.ca.gov/ghg-inventory-data
- IPCC Default Parameters
  Link: https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/5_Volume5/V5_2_Ch2_Waste_Data.pdf

Industrial Processes and Product Use

Emissions from the industrial processes and product use (IPPU) sector include HFC and PFC emissions from products such as refrigerants, foams, aerosols and fossil fuel-based lubricants and solvents are estimated by scaling statewide emissions from the product use category. Statewide GHG emissions from product use in residential, commercial, and transportation sectors are scaled based on unincorporated Los Angeles County's population.[42] State-level HFC and PFC emissions from product use in industries including electronics, food processing, metal and

[37] CARB, Mandatory GHG Reporting Regulations. April 1, 2019. Available at: https://ww2.arb.ca.gov/mrr-regulation. Accessed January 2021
[38] CalRecycle, SWIS Facility/Site Search. 2021. Available at: https://www2.calrecycle.ca.gov/SolidWaste/Site/Search. Accessed January 2021.
[39] SCAG, Growth Forecasting. 2018. Available at: https://scag.ca.gov/data-tools-geographic-information-systems. Accessed January 2021.
[40] CARB, GHG Inventory Data Archive. 2021. Available at: https://scag.ca.gov/data-tools-geographic-information-systems. Accessed January 2021.
[41] IPCC, 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Chapter 2: Waste Generation, Composition and Management Data. 2006. Available at: https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/5_Volume5/V5_2_Ch2_Waste_Data.pdf. Accessed March 2022.
[42] CARB, GHG Inventory Data Archive. 2021. Available at: https://scag.ca.gov/data-tools-geographic-information-systems. Accessed January 2021.

machinery manufacturing, and others, are scaled based on state and unincorporated Los Angeles County industry output from respective industries and unincorporated Los Angeles County's population.[43] Impact Analysis For Planning (IMPLAN) data were used to tabulate the economic outputs by industry for Los Angeles County and the State of California, to estimate the emissions from industry sectors including the lime, cement, and nitrogenous fertilizer manufacturing sectors. GHG emissions are further adjusted based on HFC prohibitions for both Senate Bill 1013 and the CARB HFC Regulation by assuming that the use of prohibited HFCs are phase out over 30 years from prohibition date for all HFC policies before 2018.[44] **Table A-4** presents scopes, activity data, and emissions for the IPPU sector.

Table A-4: IPPU Scope, Activity, and GHG Emissions

		2015 INVENTORY		2018 INVENTORY	
CATEGORY	SCOPE	ACTIVITY	EMISSIONS ($MTCO_2E$)	ACTIVITY	EMISSIONS ($MTCO_2E$)
IPPU					
Product Use	1	Aerosols & fire retardants, residential & transportation refrigeration and air conditioning, foam use, industrial refrigeration and air conditioning, and non-aerosol solvents Population: 1,114,808	253,529	Aerosols & fire retardants, residential & transportation refrigeration and air conditioning, foam use, industrial refrigeration and air conditioning, and non-aerosol solvents Population: 1,082,365	239,505
TOTAL			**253,529**		**239,505**

Data Sources:

- California GHG Inventory
  Link: https://www.arb.ca.gov/cc/inventory/pubs/pubs.htm
- HFC Prohibitions
  Link: https://ww2.arb.ca.gov/resources/fact-sheets/hydrofluorocarbon-hfc-prohibitions-california
- SCAG Growth and Forecast Report
  Link: http://gisdata.scag.ca.gov/Pages/SocioEconomicLibrary.aspx?keyword=Forecasting
- IMPLAN Data (proprietary)[45]

[43] SCAG, Growth Forecasting. 2018. Available at: https://scag.ca.gov/data-tools-geographic-information-systems. Accessed January 2021.
[44] CARB, HFC Prohibitions in California. November 29, 2018. Available at: https://ww2.arb.ca.gov/resources/fact-sheets/hydrofluorocarbon-hfc-prohibitions-california. Accessed January 2021.
[45] Impact Analysis For Planning (IMPLAN) data contain 546 sectors representing all private industries in the United States (anything from grain farming to surgical appliance manufacturing) as defined by the North American Industry Classification System (NAICS) codes. Employment, employee compensation, industry expenditures, commodity demands, relationships between industries, and more are collected to form IMPLAN's ever-growing database. For more information, see: https://www.implan.com/data/.

Agriculture, Forestry, and Other Land Use

The AFOLU sector accounts for emissions from land-related changes and includes agriculture, forestry and aggregate sources (including biomass burning and fertilizer use). This sector also includes emissions from forest land conversion. Urban tree canopy and land cover statistics were tabulated by the California Center for Sustainable Communities at the University of California, Los Angeles (UCLA) Institute of Environment and Sustainability, using a tree canopy analysis developed by TreePeople and the University of Vermont with 2014 Los Angeles Region Imagery Acquisition Consortium (LARIAC) land cover data. Based on historic land conversion data from 2007-2016, approximately 212 hectares of forest land is converted to urban land each year in unincorporated county areas. The conversion of a single hectare results in a one-time emission of 169 $MTCO_2e$; this value was multiplied by 212 to estimate total annual land conversion emissions.[46]

This sector does not include natural carbon sequestration and storage in the unincorporated Los Angeles County's natural lands, working lands, and urban forests because these sinks are part of the natural carbon cycle and are not anthropogenic emissions sources. Further, forest sinks are not currently included in CARB's statewide inventory or SB 32's statewide GHG emission reduction target for 2030.[47,48] The statewide GHG inventory includes the "AB 32 GHG Inventory Sectors," which are anthropogenic emissions sources, a framework that is consistent with international and national GHG inventory practices and is aligned with requirements in AB 32.[49] CARB accounts for the exchange of ecosystem carbon between the atmosphere and the plants and soils in land, which includes forest sinks, in the Natural and Working Lands Ecosystem Carbon Inventory, which also includes the amount of carbon impacted by wildfire.[50] The 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan), for the first time, incorporates the contribution of natural and working lands (NWL) to the state's GHG emissions, as well as their role in achieving carbon neutrality by 2045 as mandated by AB 1279.[51] However, the 2045 CAP's target of reducing emissions 85 percent below 1990 levels by 2045 aligns with the AB 1279 statewide target of reducing *anthropogenic* emissions to 85 percent below 1990 levels by 2045. Neither this statewide target nor the 2045 CAP's target incorporate emissions and sinks from the NWL sectors.[52,53] Achieving the County's aspirational goal of carbon neutrality by 2045 may include a full accounting of natural carbon sequestration and storage in unincorporated Los Angeles County's natural lands in a future update to the 2045 CAP. The County may consider strategies to increase natural carbon removals through land management activities that prioritize restoring and enhancing ecosystem functions to improve resilience to climate change impacts, including more stable carbon stocks.

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46 NASS, CropScape. 2021. Available at: https://nassgeodata.gmu.edu/CropScape/. Accessed January 2021.
47 Moreno, Adam. Lead Natural and Working Lands Climate Scientist. California Air Resources Board. Email correspondence with ESA on November 15, 2021.
48 CARB, *California Greenhouse Gas Emissions for 2000 to 2020 Trends of Emissions and Other Indicators*. October 26, 2022. Available at: https://ww2.arb.ca.gov/ghg-inventory-data. Accessed February 2023.
49 Ibid.
50 Ibid.
51 CARB, *2022 Scoping Plan for Achieving Carbon Neutrality*. November 16, 2022. Available at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan. Accessed February 2023.
52 Ibid.
53 It should be noted that the statewide target of carbon neutrality by 2045 includes NWL sectors, and the state's CO_2 capture and removal target of 100 million MTCO2e by 2045 must compensate for any residual emissions from the AB 32 GHG Inventory sectors and NWL emissions to support achieving carbon neutrality.

Emissions from biomass burning (post-harvest agricultural burning) and fertilizer use (including liming, urea, organic and synthetic fertilizer) are reported under aggregate sources. Emissions from post-harvest biomass burning (barley, corn, wheat and almond) in unincorporated areas are estimated using 2016 cropland area from NASS CropScape[54] and relevant emission factors from the CARB 2000-2019 California GHG inventory.[55]

Emissions from fertilizer use for agriculture in Los Angeles County are estimated based on California Department of Food and Agriculture (CDFA) annual reports and scaled for unincorporated areas using 2016 cropland area from NASS CropScape.[56] **Table A-5** presents scopes, activity data, and emissions for the AFOLU sector. **Figure A-4** shows the contribution of each subsector to the AFOLU sector for both the 2015 and 2018 inventories.

Table A-5: AFOLU Scope, Activity, and GHG Emissions by Sub-sector

		2015 INVENTORY		2018 INVENTORY	
CATEGORY	SCOPE	ACTIVITY	EMISSIONS ($MTCO_2E$)	ACTIVITY	EMISSIONS ($MTCO_2E$)
AFOLU					
Land Use Change	1	Total Forest Land Area: 52,498 acres[a] Forest Land Conversion: -212 hectares/year Urban Tree Canopy: 11,938 hectares[a]	35,811	Total Forest Land Area: 52,498 acres[a] Forest Land Conversion: -212 hectares/year Urban Tree Canopy: 11,938 hectares[a]	35,811
Aggregate Sources and Non-CO2 Emissions Sources	1	Biomass Burning (Crops): 61 acres Liming: 152 tons Urea Application: 1,026 tons Managed Soils: 5,374 tons	25,048	Biomass Burning (Crops): 61 acres Liming: 152 tons Urea Application: 1,026 tons Managed Soils: 5,374 tons	25,048
TOTAL			**60,860**		**60,860**

NOTES:

a. Forest land area and urban tree canopy cover data are reported for informational purposes only. These data are not used to generate emissions sinks for inclusion in the GHG inventories.

[54] NASS, CropScape. 2021. Available at: https://nassgeodata.gmu.edu/CropScape/. Accessed January 2021.
[55] CARB, GHG Inventory Data Archive. 2021. Available at: https://scag.ca.gov/data-tools-geographic-information-systems. Accessed January 2021
[56] CDFA, California Agricultural Statistics Review 2015-2016. 2016. Available at: https://www.cdfa.ca.gov/statistics/PDFs/2016Report.pdf. Accessed January 2021.

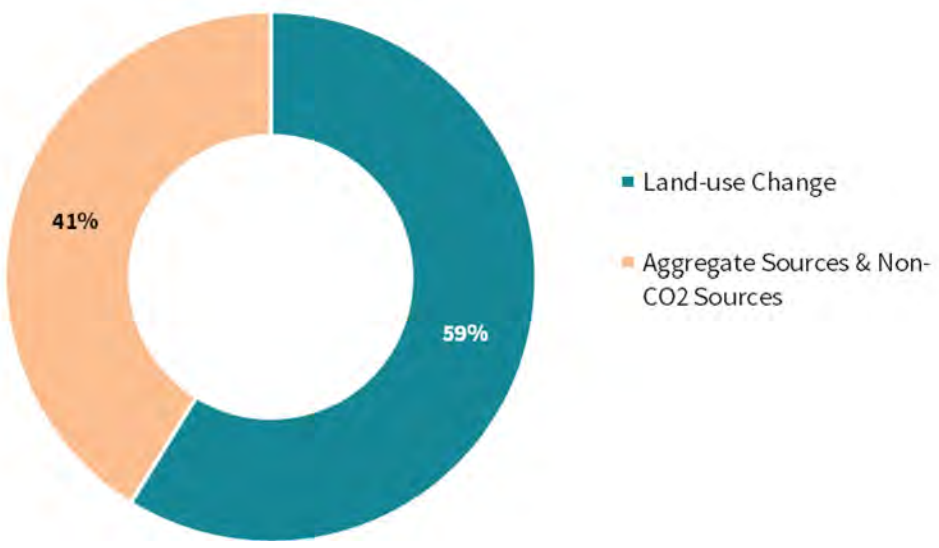


Figure A-4: 2015 & 2018 AFOLU Emissions by Sub-sector

Data Sources:

- NASS CropScape
  Link: https://nassgeodata.gmu.edu/CropScape/
- CDFA, California Agricultural Statistics Review 2015-2016
  Link: https://www.cdfa.ca.gov/statistics/PDFs/2016Report.pdf
- TreePeople, Los Angeles County Tree Canopy Map Viewer
  Link: https://www.treepeople.org/los-angeles-county-tree-canopy-map-viewer/
- California GHG Inventory
  Link: https://www.arb.ca.gov/cc/inventory/pubs/pubs.htm
- GIS analysis by UCLA Institute of Environmental Studies
  Link: https://lacounty.maps.arcgis.com/home/search.html?q=CURes%40lmu.edu&restrict=false

Summary Emissions

Table A-6 presents total GHG emissions for all sectors and subsectors in the 2015 and 2018 GHG inventories. **Figure A-5** compares the 2015 and 2018 inventories with a sector breakdown.

Table A-6: GHG Emissions by Sector and Sub-sector

CATEGORY	2015 EMISSIONS ($MTCO_2E$)	2018 EMISSIONS ($MTCO_2E$)
Transportation	**2,838,133**	**2,704,685**
Passenger Vehicles	2,797,360	2,665,824
Buses	31,360	29,371
Railway	9,413	9,490
Stationary Energy	**1,908,637**	**1,698,809**
Residential Buildings	1,030,285	962,743
Commercial, Institutional, and Agricultural Buildings	386,753	349,373
Manufacturing and Construction Buildings	309,449	244,417
Energy Industries	121,252	98,554
Fugitive Emissions from Oil and Natural Gas Systems	58,222	41,066
Agriculture, Forestry and Other Fishing Activities	2,675	2,658
Waste and Wastewater	**469,997**	**469,382**
Solid Waste Disposal	404,604	407,578
Biological Treatment of Solid Waste	10,214	5,309
Waste Incineration*	1,184	547
Wastewater Treatment	55,179	56,495
IPPU	**253,529**	**239,505**
Product Use	253,529	239,505
AFOLU	**60,860**	**60,860**
Land Use Change	35,811	35,811
Aggregate Sources and Non-CO2 Emissions Sources	25,048	25,048
TOTAL	**5,531,155**	**5,173,240**

NOTE: Waste and Wastewater totals exclude Waste Incineration which is accounted for under Stationary Energy.

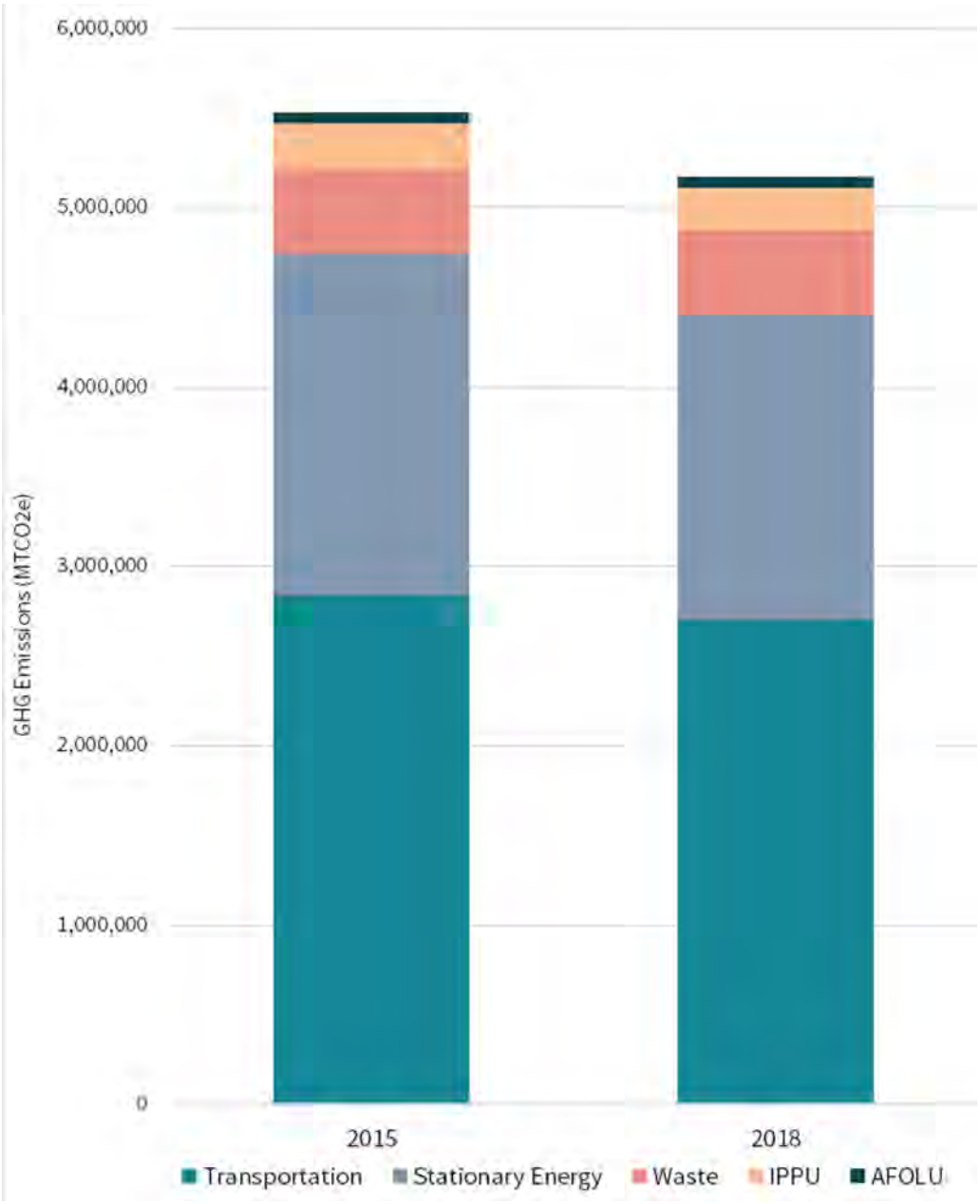


Figure A-5: 2015 and 2018 Emissions Inventory Comparison by Sector

A.2 1990 and 2010 Greenhouse Gas Inventory and Backcasting Methods

In 2015, the Los Angeles Regional Collaborative (LARC) and ICF International created a GHG emissions inventory for unincorporated Los Angeles County using the 2013 ICLEI U.S. Community Protocol.[57] The 2010 inventory accounted for Scope 1 and 2 emissions using AR4 GWP values. Additionally, Scope 3 emissions were estimated for additional sub-categories—including water conveyance, and water supply, treatment and distribution—that are not accounted for in the 2015 and 2018 GHG inventories. The 2015 and 2018 GHG emissions inventory methods follow the GPC protocol, as discussed above. The 2015 and 2018 inventories include GHG emissions from industrial processes, product use, fugitive emissions from oil and natural gas systems, and other aggregate carbon dioxide sources that were not included in the 2010 inventory. **Table A-7** shows the differences in sub-sectors included in the two protocols and respective inventories.

Table A-7: Sectors and Sub-sectors in ICLEI and GPC Protocol

2013 ICLEI US COMMUNITY PROTOCOL USED FOR 2010 INVENTORY	2019 GPC PROTOCOL USED FOR 2015 AND 2018 INVENTORY

• Transportation
  ○ On-Road Transportation
  ○ Off-Road Transportation and Equipment
	• Transportation
	  ○ On-Road Transportation
	  ○ Off-Road Transportation
	  ○ Railways

• Building Energy
• Stationary Sources
	• Stationary Energy
	  ○ Buildings
	  ○ Energy Industries
	  ○ Agriculture, Forestry and Other Fishing Activities
	  ○ Fugitive Emissions from Oil and Natural Gas Systems

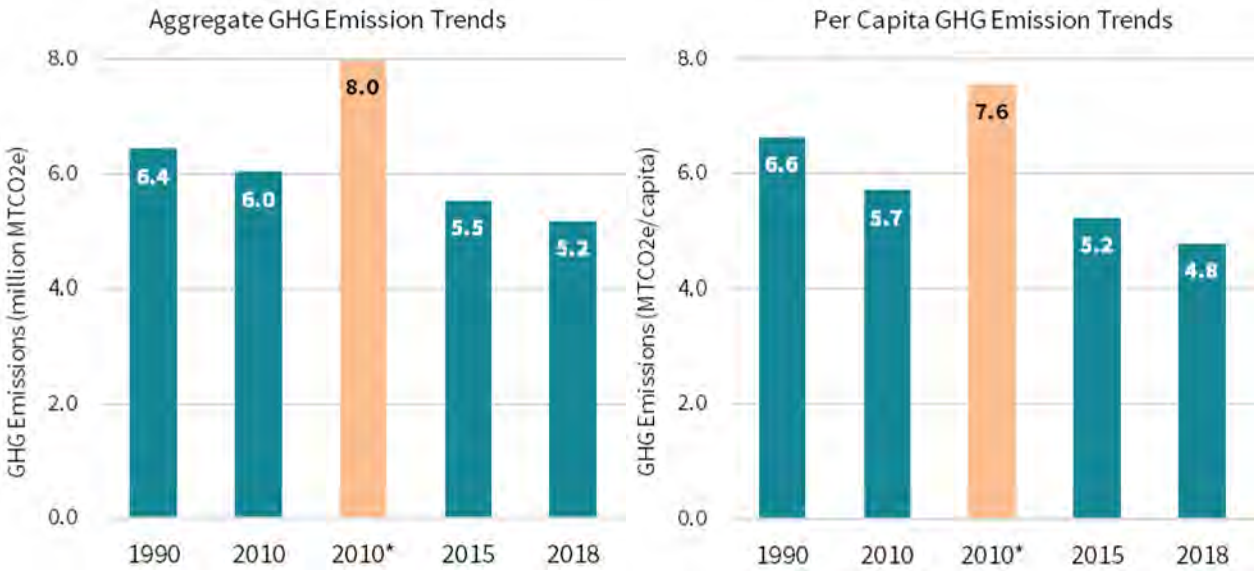
• Solid Waste
• Wastewater Treatment
	• Waste
	  ○ Solid Waste
	  ○ Biological Treatment of Solid Waste
	  ○ Waste Incineration
	  ○ Wastewater Treatment

• Agriculture (including livestock management)
• Urban and Natural Forests (for informational purposes only)
	• AFOLU
	  ○ Land and Land-use Change (including Urban and Natural Forests)
	  ○ Aggregate sources and non-CO2 emission sources

• Water Conveyance • Water Supply, Distribution and Treatment (for informational purposes only)	• IPPU ○ Product use

[57] ICLEI – Local Governments for Sustainability USA, *U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions*, Version 1.1, July 2013.

Due to differences in the two GHG protocols and accounting methods used for the 2010 inventory and the 2015 and 2018 inventories, it is not possible to directly compare emissions from each sector and sub-sector. To monitor emissions reduction between 2010 and 2015/2018 and to ensure consistency with previous County commitments (dating back to 1990), the GPC protocol was used to develop a backcasting model for unincorporated Los Angeles County's emissions. GHG emissions from each sector and sub-sector were scaled from 2015 to 1990 by using County and state parameters and datasets discussed in **Table A-8** below. Using the backcasting model, it is estimated that GHG emissions in 2015 are eight percent lower than 2010 and 14 percent lower than 1990. However, per-capita GHG emissions in 2015 are nine percent lower than 2010 and 21 percent lower than 1990 despite the increase in population, as illustrated in **Figure A-6**. 2018 emissions are estimated to be 14 percent below 2010 emissions and 20 percent below 1990 emissions; per-capita GHG emissions in 2018 are estimated to be 16 percent below 2010 emissions and 28 percent below 1990 emissions, illustrating a substantial decline in total emissions both at the aggregate level and at the per-capita level.



** 2010 GHG emissions inventory reported in unincorporated Los Angeles County 2020 CCAP.*

Figure A-6: 1990 to 2018 GHG Emissions Trends

Table A-8: Assumptions for Backcasting GHG Emissions to 2010 and 1990

SECTOR/SUB-SECTOR	BACKCASTING PARAMETERS
Transportation	**3,450,566 (1990); 3,015,442 (2010)**
On-Road Transportation	• VMT from on-road vehicles are estimated by interpolating VMT in unincorporated Los Angeles County for the years 2016 and 2040 as reported by Fehr & Peers using SCAG's 2016 regional travel demand model. • Emission factors for on-road vehicles (including passenger vehicles, trucks, and buses) are estimated by linearly interpolating EMFAC2021 emission rates from 2000-2020 to extrapolate emission rates to 1990.
Railways	GHG emissions are assumed to be constant from 1990 to 2015.
Stationary Energy	**2,226,141 (1990); 2,146,743 (2010)**
Residential Buildings	Emissions from energy use in residential buildings are backcasted based on Countywide residential natural gas and electricity consumption as reported by CEC from 1990 to 2014.
Commercial and Institutional Buildings	Emissions from energy use in commercial buildings are backcasted based on Countywide non-residential natural gas and electricity consumption as reported by CEC from 1990 to 2014.
Manufacturing and Construction: Buildings	Emissions from energy use in commercial buildings are backcasted based on Countywide non-residential natural gas and electricity consumption as reported by CEC from 1990 to 2014.
Manufacturing and Construction: Equipment	• 2015 emissions from stationary equipment are scaled down using countywide GHG emissions based on construction and manufacturing jobs in unincorporated Los Angeles County. • GHG emissions are assumed to be constant from 1990 to 2015.
Energy Industries	GHG emissions for 1990-2010 are estimated as the average of reported emissions from 2011-2017.
Agriculture, Forestry and Other Fishing Activities	GHG emissions are assumed to be constant from 1990 to 2015.
Fugitive Emissions from Oil and Natural Gas Systems	GHG emissions are assumed to be constant from 1990 to 2015.
Waste	**511,965 (1990); 564,503 (2010)**
Solid Waste Disposal	• Emissions from organic waste disposal between 2010 and 2014 are scaled based on waste disposal tonnage reported by PW's SWIMS database. • GHG emissions from 1990 to 2009 are backcasted based on population.
Biological Treatment of Solid Waste	• Emissions from biological treatment between 2010 and 2014 are scaled based on waste disposal tonnage reported by PW's SWIMS database. • GHG emissions from 1990 to 2009 are backcasted based on population.
Waste Incineration	GHG emissions are assumed to be constant from 1990 to 2015.
IPPU	**173,534 (1990); 243,456 (2010)**
Product Use*	GHG emissions from 1990 to 2014 are backcasted based on population.
AFOLU	**25,048 (1990); 60,860 (2010)**
Land-use Change	Average land conversion rates from 2006-2015 were used to estimate emissions back to 2006. Emissions were assumed to be zero from 1990-2006.
Aggregate Sources and Non-CO_2 Emissions Sources	GHG emissions are assumed to be constant from 1990 to 2015.

A.3 2018 to 2045 Business-as-Usual Forecasts

This section describes the approach for modeling business-as-usual (BAU) emissions, which represents future emissions based on current population and regional growth trends, land use growth patterns, and regulations or policies introduced before the 2018 baseline year. The BAU scenario demonstrates the growth in GHG emissions that would occur if no further action were to be taken by the County, the State of California, or the federal government after 2018.

The BAU forecast serves as a reference point for other forecasting scenarios, which include the Adjusted BAU that incorporates federal, state, and local actions (see CAP Appendix B: Adjusted Business-as-Usual Forecast and Emission Reduction Methods) and the GHG reductions from CAP implementation (see CAP Appendix B: GHG Reduction Measures and Actions). This section describes the BAU projections by sector, which are based on growth trends including current population and regional economic growth projections.

Additional details on the assumptions for each sector are included in the sections below. **Figure A-7** presents population and employment projections for unincorporated Los Angeles County from 2015 to 2045.

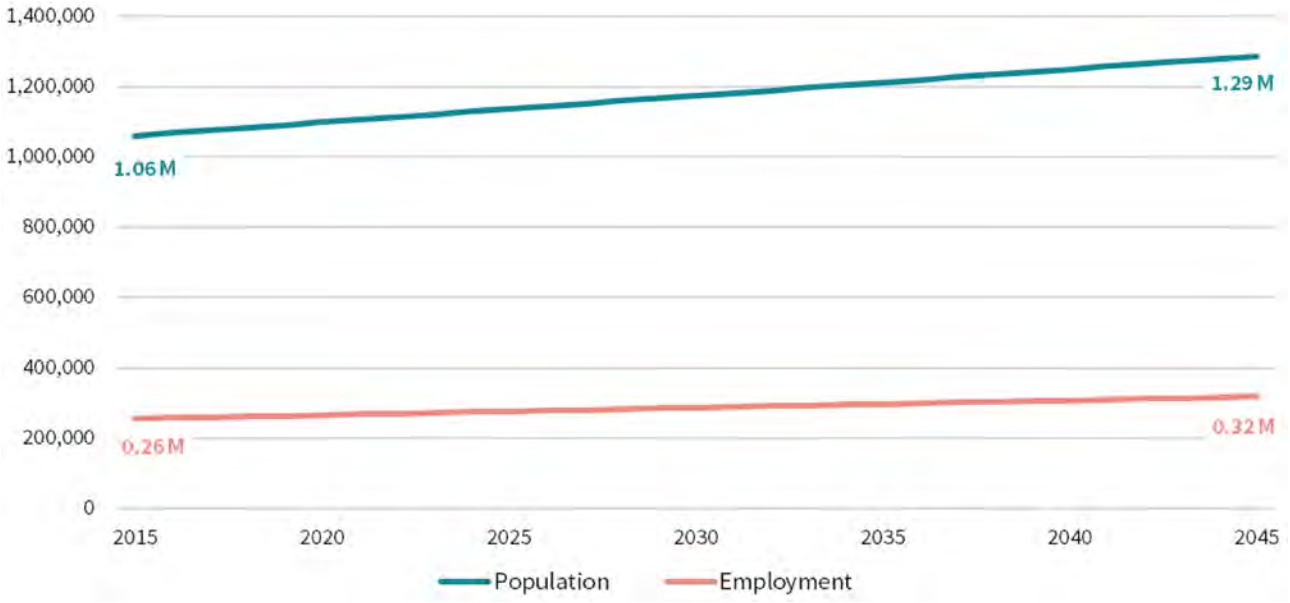


Figure A-7: Unincorporated Los Angeles County Population and Employment Projections

Stationary Energy

Table A-9 presents emissions for 2018 along with the BAU forecast for 2030, 2035, and 2045 for the stationary energy sector.

Table A-9: Stationary Energy GHG Emissions – 2018 Inventory and BAU Forecasts

STATIONARY ENERGY SUBSECTOR	ANNUAL GHG EMISSIONS ($MTCO_2E$)			
	2018	2030	2035	2045
Residential Buildings	962,743	869,099	889,314	944,823
Commercial, Institutional, and Agricultural Buildings	349,373	429,107	441,191	469,816
Manufacturing and Construction Buildings	244,417	301,729	309,350	324,331
Energy Industries	98,554	29,495	29,526	29,587
Fugitive Emissions from Oil and Natural Gas Systems	41,066	49,130	49,251	49,493
Agriculture, Forestry and Other Fishing Activities	2,658	2,600	2,580	2,562
TOTAL	**1,698,809**	**1,681,160**	**1,721,212**	**1,820,612**

Residential Buildings

Energy consumption (electricity and natural gas) in residential buildings is forecasted based on building footprint projections for residential building stock in unincorporated Los Angeles County. Building footprint projections are based on historical trends from the County Assessor Parcel Database (2006-2018).[58] In 2019, residential customers in unincorporated Los Angeles County were enrolled in CPA's Clean Power rate option (50 percent eligible renewable), leading to an initial decline in residential building emissions through 2025, before they rise in 2030, 2035, and 2045 alongside population and economic growth. For purposes of the BAU projections it is assumed that CPA customers in unincorporated areas continue to receive 50 percent eligible renewable electricity until 2045 and the remaining customers continue to receive electricity from SCE with the emissions factors and participation rates held constant. GHG emissions in 2019 are calculated using 2018 natural gas and electricity emission factors with 2019 CPA participation rates. GHG emissions between 2020-2045 are calculated using 2020 electricity emission factors.

Data Sources:

- SCE Emission Factor
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- CPA Emission Factor
  Link: (account required for download): https://cris4.org/(S(rtuopf12t5k5ymsx3rurxtg4))/frmLILogin.aspx
- CPA Member Status Report (July 28, 2021)
  Provided by CPA via County CSO
- Climate Registry Information System (CRIS)
  Link: https://cris4.org/(S(zr3twbbnour5a5jfb1iykcxa))/frmLILogin.aspx
- UCLA analysis of County Parcel Assessor's Data
  Provided by UCLA Institute of Environmental Studies

[58] UCLA Institute of Environmental Studies, Analysis of County Parcel Assessor's Data. 2018.

Commercial and Institutional Buildings

Energy consumption in commercial, institutional, and agricultural buildings is forecasted based on building footprint projections for non-residential building stock in unincorporated Los Angeles County. Commercial and Institutional building footprint projections are based on historical trends from the County Assessor Parcel Database (2006-2018). In June 2018, non-residential customers in unincorporated Los Angeles County were enrolled in CPA's Clean Power option. Under this program, over 95 percent of non-residential customers started receiving 50 percent eligible renewable electricity from CPA. For purposes of the BAU projections it is assumed that CPA customers in unincorporated areas continue to receive 50 percent eligible renewable electricity until 2045 and the remaining customers continue to receive electricity from SCE with the emissions factors and participation rates held constant. GHG emissions in 2019 are calculated using 2018 natural gas and electricity emission factors with 2019 CPA participation rates. GHG emissions between 2020-2045 are calculated using 2020 electricity emission factors. GHG emissions from agricultural buildings are assumed to remain constant.

Data Sources:

- SCE Emission Factor
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- CPA Emission Factor
  Link: (account required for download): https://cris4.org/(S(rtuopf12t5k5ymsx3rurxtg4))/frmLILogin.aspx
- UCLA analysis of County Parcel Assessor's Data
  Provided by UCLA Institute of Environmental Studies

Manufacturing and Construction Buildings

ELECTRICITY AND NATURAL GAS

Energy consumption (electricity and natural gas) in manufacturing and industrial buildings is forecasted based on building footprint projections for non-residential building stock in unincorporated Los Angeles County. Building footprint projections are based on historical trends from the County Assessor Parcel Database (2006-2018). [59] In June 2018, non-residential customers in unincorporated Los Angeles County were enrolled in CPA's Clean Power option. Under this program, over 95 percent of non-residential customers started receiving 50 percent eligible renewable electricity from CPA. For purposes of the BAU projections it is assumed that CPA customers in unincorporated areas continue to receive 50 percent eligible renewable electricity until 2045 and the remaining customers continue to receive electricity from SCE with the emissions factors and participation rates held constant. GHG emissions in 2019 are calculated using 2018 natural gas and electricity emission factors with 2019 CPA participation rates. GHG emissions between 2020-2045 are calculated using 2020 electricity emission factors.

OFF-ROAD EQUIPMENT

Countywide GHG emissions from off-road equipment used in the manufacturing and construction sector are obtained from CARB's OFFROAD2017 ORION tool.[60] The tool provides countywide

[59] UCLA Institute of Environmental Studies, Analysis of Los Angeles County Parcel Assessor's Data. 2018.
[60] CARB, OFFROAD ORION. 2018. Available at: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/msei-modeling-tools. Accessed January 2021.

carbon dioxide emissions and annual gasoline and diesel consumption by off-road equipment to 2045. Emission projections for unincorporated Los Angeles County are estimated by scaling Countywide emissions using construction and manufacturing jobs in 2017 for unincorporated Los Angeles County areas.

Data Sources:

- CARB OFFROAD2017 ORION
  Link: https://www.arb.ca.gov/orion/
- Jobs in Manufacturing and Construction
  Link: https://scag.ca.gov/sites/main/files/file-attachments/losangelescountylp.pdf?1605653130
- UCLA analysis of County Parcel Assessor's Data
  Provided by UCLA Institute of Environmental Studies

Energy Industries

Emission projections from energy production at CHP plants, district cooling facilities, biomass power stations, and waste-to-energy facilities, are extrapolated based on 2008 to 2020 GHG emissions reported by the CARB Pollution Mapping Tool and the CARB 2021 MRR Database.[61] For CHP facilities, emissions for Pitchess cogeneration station were assumed to remain constant (the facility was decommissioned in 2018); emissions for Olive View cogeneration station were forecasted using a linear trend in emissions from reported 2012-2020. Waste-to-energy facility biogenic emissions for 2019-2029 were forecasted using a linear trend in emissions reported from 2011-2018 and emission for 2030-2045 were forecasted assuming the Calabasas landfill shuts down and the remaining emissions decline following the trend from 2011 through the forecasting year. Biomass and auxiliary power facility biogenic emissions were forecasted using a linear trend in emissions reported from 2011-2018.

Data Sources:

- CARB Pollution Mapping Tool
  Link: https://www.arb.ca.gov/ei/tools/pollution_map/
- CARB MRR Database
  Link: https://ww2.arb.ca.gov/mrr-data

Agriculture, Forestry and Other Fishing Activities

Countywide GHG emissions from agricultural equipment are obtained from CARB's OFFROAD2017 ORION tool. The tool provides countywide carbon dioxide emissions and annual gasoline and diesel consumption by off-road equipment to 2045. Emission projections for unincorporated Los Angeles County are estimated by scaling Countywide emissions using 2016 crop acreage for unincorporated Los Angeles County from USDA's NASS Cropscape database.[62]

Data Sources:

- CARB OFFROAD2017 ORION
  Link: https://www.arb.ca.gov/orion/
- USDA NASS Cropscape
  Link: https://nassgeodata.gmu.edu/CropScape/

[61] CARB, Mandatory GHG Reporting Regulations. April 1, 2019. Available at: https://ww2.arb.ca.gov/mrr-regulation. Accessed January 2021.
[62] NASS, CropScape. 2021. Available at: https://nassgeodata.gmu.edu/CropScape/. Accessed January 2021.

Fugitive Emissions from Oil and Natural Gas Systems

Emissions from extraction, processing, and distribution of crude oil and natural gas, are extrapolated based on 2008 to 2018 GHG emissions reported by the CARB Pollution Mapping Tool.[63]

Data Sources:

- CARB Pollution Mapping Tool
  Link: https://www.arb.ca.gov/ei/tools/pollution_map/

Transportation

Table A-10 presents emissions for 2018 along with the BAU forecast for 2030, 2035, and 2045 for the transportation sector.

Table A-10: Transportation GHG Emissions – 2018 Inventory and BAU Forecasts

	ANNUAL GHG EMISSIONS ($MTCO_2E$)			
TRANSPORTATION SUBSECTOR	2018	2030	2035	2045
Passenger Vehicles	2,665,824	2,738,675	2,769,029	2,829,737
Buses	29,371	35,589	35,676	35,852
Railways	9,490	10,255	10,389	10,658
TOTAL	**2,704,685**	**2,784,518**	**2,815,094**	**2,876,247**

On-road Transportation: Passenger Vehicles and Trucks

VMT from passenger vehicles and trucks were estimated using SCAG's 2016 Regional Travel Demand Model, which forecasts VMT for the year 2040. This model is a trip-based travel forecasting model that generates daily vehicle trips for each TAZ across various trip purposes based on inputs such as the transportation network and socioeconomic data such as population, household, and employment. VMT was provided by F&P for years 2016 and 2040 and was linearly interpolated for 2030 and 2035. VMT for years 2041 through 2045 were linearly extrapolated based on the 2016 to 2040 VMT projection.

GHG emissions from unincorporated areas are calculated using VMT and the weighted emission factors for 2018 by vehicle type (passenger vehicles and trucks)[64] from the EMFAC2021 model (see transportation section of A.1 above for discussion).[65] The 2018 emission factor was applied to every year from 2018 through 2045 to represent no changes in the vehicle fleet due to federal, state, or local action.

It should be noted that the transportation modeling for the 2045 CAP shows a five percent decrease in transportation emissions between 2015 and 2018. This decrease is due to declining emission factors from the EMFAC2021 model, which outpace the increase in total VMT as

[63] CARB, Pollution Mapping Tool. 2018. Available: https://ww3.arb.ca.gov/ei/tools/pollution_map/. Accessed January 2021.
[64] Passenger vehicles correspond to EMFAC categories LDA, LDT1, LDT2, MCY, and MD. Trucks correspond to EMFAC categories LHDT1, LHDT2, MHDT, HHDT, and MH.
[65] CARB, EMFAC2021 Model. 2021. Available at: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9. Accessed October 2021.

modeled with SCAG's 2016 Regional Travel Demand Model. The California Department of Tax and Fee Administration reports that statewide taxable sales of gasoline and diesel fuel increased by two percent from 2015 to 2018.[66] This increase is also consistent with the statewide GHG inventory prepared by CARB, which also shows a two percent increase in total on-road transportation emissions from 2015 to 2018.[67] Statewide gasoline and diesel fuel sales may not trend precisely with unincorporated Los Angeles County gasoline and diesel fuel sales, and VMT apportioned to unincorporated Los Angeles County areas may not correlate perfectly with gasoline sales, which could explain the difference. In addition, the VMT used in the inventory is based on the SCAG model, not actual reported VMT or fuel sales data, consistent with the GPC Protocol.

Data Sources:

- EMFAC2021 Model, v1.0.1
  Link: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9
- SCAG Regional Travel Demand Model
  Provided by SCAG
- Fehr & Peers Modeling Analysis (July 29, 2019; December 2021; January 2022; February 2023)

On-road Transportation: Buses

Emissions for 2015 and 2018 were calculated using fuel consumption data from FTA's NTD[68] and standard emission factors for diesel, gasoline, and compressed natural gas from EMFAC2021.[69] Emissions from Metro buses are extrapolated from 2018 through 2045 based on Metro's bus miles and ridership statistics between 2010 and 2017.[70]

Data Sources:

- EMFAC2021 Model, v1.0.1
  Link: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9
- Metro Bus Ridership
  Link: https://isotp.metro.net/MetroRidership/Index.aspx
- FTA National Transit Database
  Link: https://www.transit.dot.gov/ntd/ntd-data

Railways

Emissions by Southern California Regional Rail Authority (SCRRA or Metrolink) are forecasted based on projected weekday ridership until 2025 as documented in Metrolink's 10 Year Strategic Plan. Emissions from 2025 to 2045 are extrapolated based ridership estimates between 2014 and

[66] California Energy Commission, California Retail Fuel Outlet Annual Reporting (CEC-A15) Results. 2022. Available at: California Retail Fuel Outlet Annual Reporting (CEC-A15) Results. Accessed April 2022.
[67] California Air Resources Board, Data used to generate figures in the California Greenhouse Gas Emissions for 2000 to 2019- Trends of Emissions and Other Indicators report. Figure 3. 2022. Available at: https://ww2.arb.ca.gov/ghg-inventory-data. Accessed April 2022.
[68] FTA, National Transit Database. 2018. Available at: https://www.transit.dot.gov/ntd/ntd-data. Accessed January 2021.
[69] CARB, EMFAC2021 Model. 2021. Available at: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9. Accessed October 2021.
[70] Metro, Interactive Estimated Ridership Stats. 2021. Available at: https://isotp.metro.net/MetroRidership/Index.aspx. Accessed January 2021.

2025. Emissions from Metro Rail are extrapolated based on Metro rail miles and ridership statistics between 2010 and 2017.[71]

Data Sources:

- Metrolink Strategic Plan
  Link: https://www.metrolinktrains.com/globalassets/about/metrolink_10-year_strategic_plan_2015-2025.pdf
- Metro Ridership
  Link: http://isotp.metro.net/MetroRidership/Index.aspx

Waste and Wastewater

BAU emissions are forecasted for years 2018 through 2045 for emissions generated at landfills, biological treatment (composting and anaerobic digestion) and incineration facilities, and wastewater treatment plants are reported under the waste sector. **Table A-11** presents emissions for 2018 along with the BAU forecast for 2030, 2035, and 2045 for the waste and wastewater sector.

Table A-11: Waste and Wastewater GHG Emissions – 2018 Inventory and BAU Forecast

	ANNUAL GHG EMISSIONS ($MTCO_2E$)			
WASTE & WASTEWATER SUBSECTOR	2018	2030	2035	2045
Solid Waste Disposal	407,578	386,285	386,541	410,702
Biological Treatment of Solid Waste	5,309	6,180	6,184	6,579
Waste Incineration*	547	647	687	711
Wastewater Treatment	56,495	59,454	61,372	65,208
TOTAL	**469,382**	**451,919**	**454,097**	**482,489**

NOTE: Totals exclude Waste Incineration which is accounted for under Stationary Energy

Solid Waste Disposal

Emissions from landfills are determined by extrapolating the 2018 GHG emissions intensity ($MTCO_2e$/person) based on solid waste and organic waste disposal projections from the Public Works SWIMS database[72] and population projections by SCAG[73] and Caltrans.[74] Solid waste diversion rate and organics diversion rate are assumed to remain constant at 70 percent and 38 percent respectively, as is the future methane capture rates at all landfills.

Data Sources:

- LADPW SWIMS Database
  Link: https://dpw.lacounty.gov/epd/swims/OnlineServices/reports.aspx
- SCAG Population Projections
  Link: http://gisdata.scag.ca.gov/Pages/SocioEconomicLibrary.aspx?keyword=Forecasting

[71] FTA, National Transit Database. 2018. Available at: https://www.transit.dot.gov/ntd/ntd-data. Accessed January 2021.
[72] LADPW, Solid Waste Information Management System (SWIMS). 2021. Available at: https://dpw.lacounty.gov/epd/swims/OnlineServices/reports.aspx. Accessed January 2021.
[73] SCAG, Growth Forecasting. 2018. Available at: https://scag.ca.gov/data-tools-geographic-information-systems. Accessed January 2021.
[74] Caltrans, California County-Level Economic Forecast 2017-2050. September 2017. Available at: https://www.shastaedc.org/wp-content/uploads/2018/07/CalTrans-2017-2050.pdf. Accessed January 2021.

- Caltrans Population Projections
  Link: https://www.shastaedc.org/wp-content/uploads/2018/07/CalTrans-2017-2050.pdf

Biological Treatment of Solid Waste

Emissions from composting and anaerobic digestion are estimated by extrapolating the 2018 GHG emissions intensity ($MTCO_2e$/person) based on solid waste and organic waste disposal projections from Public Works SWIMS database.[75] Solid waste diversion rate and proportion of organic waste diverted from landfills to composting and grinding/mulching facilities remains constant.

GHG emissions from Anaerobic Digestion at JWPCP are scaled based on population growth from 2018 to 2045. These emission projections are reported under Energy Industries.

Data Sources:

- LADPW SWIMS Database
  Link: https://dpw.lacounty.gov/epd/swims/OnlineServices/reports.aspx

Waste Incineration

See Energy Industries.

Wastewater Treatment

Emissions from wastewater treatment are determined by extrapolating the 2018 GHG emissions intensity ($MTCO_2e$/person) based on population projections by SCAG[76] and Caltrans.[77]

Data Sources:

- SCAG Population Projections
  Link: http://gisdata.scag.ca.gov/Pages/SocioEconomicLibrary.aspx?keyword=Forecasting
- Caltrans Population Projections
  Link: https://www.shastaedc.org/wp-content/uploads/2018/07/CalTrans-2017-2050.pdf

Industrial Processes and Product Use

HFC and PFC emissions from the use of foam, solvents and industrial refrigerants, aerosols, fire retardants and refrigerants in residential and transportation sectors are extrapolated based on population projections by SCAG[78] and Caltrans.[79] It is assumed that per capita emissions from products remain constant between 2018 to 2045. **Table A-12** presents emissions for 2018 along with the BAU forecast for 2030, 2035, and 2045 for the IPPU sector.

[75] LADPW, Solid Waste Information Management System (SWIMS). 2021. Available at: https://dpw.lacounty.gov/epd/swims/OnlineServices/reports.aspx. Accessed January 2021.
[76] SCAG, Growth Forecasting. 2018. Available at: https://scag.ca.gov/data-tools-geographic-information-systems. Accessed January 2021.
[77] Caltrans, California County-Level Economic Forecast 2017-2050. September 2017. Available at: https://www.shastaedc.org/wp-content/uploads/2018/07/CalTrans-2017-2050.pdf. Accessed January 2021.
[78] SCAG, Growth Forecasting. 2018. Available at: https://scag.ca.gov/data-tools-geographic-information-systems. Accessed January 2021.
[79] Caltrans, California County-Level Economic Forecast 2017-2050. September 2017. Available at: https://www.shastaedc.org/wp-content/uploads/2018/07/CalTrans-2017-2050.pdf. Accessed January 2021.

Table A-12: IPPU GHG Emissions – 2018 Inventory and BAU Forecast

SECTOR	ANNUAL GHG EMISSIONS ($MTCO_2E$)			
	2018	2030	2035	2045
IPPU	239,505	259,605	267,981	284,731
TOTAL	**239,505**	**259,605**	**267,981**	**284,731**

Data Sources:

- SCAG Population Projections
  Link: http://gisdata.scag.ca.gov/Pages/SocioEconomicLibrary.aspx?keyword=Forecasting
- Caltrans Population Projections
  Link: https://www.shastaedc.org/wp-content/uploads/2018/07/CalTrans-2017-2050.pdf

AFOLU

GHG Emissions are assumed to be constant between 2018 to 2045. **Table A-13** presents emissions for 2018 along with the BAU forecast for 2030, 2035, and 2045 for the AFOLU sector.

Table A-13: AFOLU GHG Emissions – 2018 Inventory and BAU Forecast

SECTOR	ANNUAL GHG EMISSIONS ($MTCO_2E$)			
	2018	2030	2035	2045
AFOLU	60,860	60,860	60,860	60,860
TOTAL	**60,860**	**60,860**	**60,860**	**60,860**

Summary Emissions

Table A-14 and **Figure A-8** present GHG emissions for all sectors for the 2018 GHG inventory and the 2030, 2035, and 2045 BAU forecasts.

Table A-14: GHG Emissions by Sector – 2018 Inventory and BAU Forecast

SECTOR	ANNUAL GHG EMISSIONS ($MTCO_2E$)			
	2018	2030	2035	2045
Stationary Energy	1,698,809	1,681,160	1,721,212	1,820,612
Transportation	2,704,685	2,784,518	2,815,094	2,876,247
Waste	469,382	451,919	454,097	482,489
IPPU	239,505	259,605	267,981	284,731
AFOLU	60,860	60,860	60,860	60,860
TOTAL	**5,173,240**	**5,238,062**	**5,319,243**	**5,524,939**

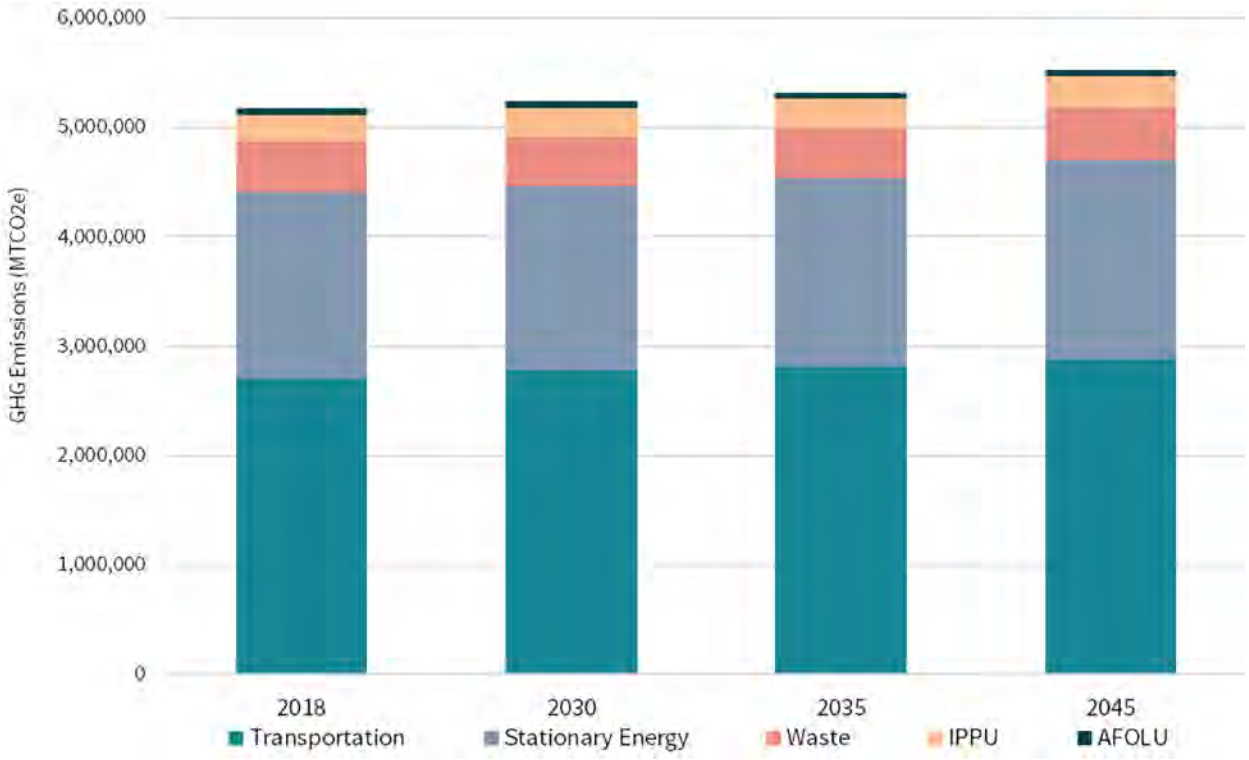


Figure A-8: GHG Emissions by Sector – 2018 Inventory and BAU Forecast

A.4 Derivation of the 2045 CAP's Emission Reduction Targets

Origin of Emission Reduction Targets

The 2045 CAP includes three separate targets and one aspirational goal for three future milestone years:

- By 2030, reduce unincorporated Los Angeles County GHG emissions 40 percent below 2015 baseline levels;
- By 2035, reduce unincorporated Los Angeles County GHG emissions 50 percent below 2015 baseline levels;
- By 2045, reduce unincorporated Los Angeles County GHG emissions 83 percent below 2015 baseline levels; and
- By 2045, achieve carbon neutrality in unincorporated Los Angeles County (long-term aspirational goal).

The 2045 CAP's targets and 2045 aspirational goal are based on the OurCounty Sustainability Plan and CARB's 2022 Scoping Plan. A primary objective of the 2045 CAP is to align with the OurCounty Sustainability Plan targets and state targets. The OurCounty Sustainability Plan conducted a community-wide, Countywide greenhouse gas emissions inventory. That process resulted in individual greenhouse gas inventories for all 88 cities and the unincorporated areas of Los Angeles County. At the time of the OurCounty Plan's preparation, 2015 was the year with the most up-to-date data for all 88 cities and the unincorporated areas, including account-level energy consumption data from the UCLA Energy Atlas. Thus, the OurCounty Plan used 2015 as the baseline year against which to set the Plan's greenhouse gas related targets. During the development of the OurCounty Plan, the County evaluated a series of GHG reduction target options. The targets selected represent the County's commitment to doing its fair share to help California achieve its ambitious statewide GHG targets.

In 2005, Governor Arnold Schwarzenegger's Executive Order (EO) S-3-05 established the 2050 statewide GHG reduction target of 80 percent below 1990 levels, expressing the intent of the State of California to address the issue of climate change by reducing GHGs. Following EO S-3-05, the California legislature passed Assembly Bill 32 (AB 32, Health and Safety Code § 38500, et seq.) in 2006. AB 32 requires the CARB to design and implement feasible and cost-effective emissions limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). In 2015, Governor Edmund G. Brown, Jr.'s EO B-30-15 established the 2030 statewide GHG reduction target of 40 percent below 1990 levels. In 2016, Senate Bill (SB) 32 and its companion bill AB 197 amended the Health and Safety Code by establishing a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and included provisions to ensure the benefits of state climate policies accrue to disadvantaged communities. Further, in 2018, Governor Brown signed EO B-55-18, committing California to total, economy-wide carbon neutrality by 2045. In December 2017, CARB approved the 2017 Climate Change Scoping Plan Update (2017 Scoping

Plan), which outlines the proposed framework of action for achieving the 2030 GHG target of 40 percent reduction in GHG emissions relative to 1990 levels as codified by SB 32.[80]

In August 2022, the California Legislature enacted a package of significant climate legislation that included a codification of the state's goal to reach net-zero GHG emissions by 2045. With the passage of AB 1279, California is committed to reach net zero by no later than 2045. Critically, this goal requires California to cut anthropogenic GHG emissions by 85 percent compared to 1990 levels, ensuring that the state uses all available solutions to sharply cut GHG emissions from industrial facilities, vehicles, power plants, and more. Governor Gavin Newsom signed AB 1279 into law on September 16, 2022.

On December 15, 2022, CARB adopted the 2022 Scoping Plan in response to AB 1279 and other legislation.[81] The 2022 Scoping Plan lays out a path to achieve carbon neutrality no later than 2045 and to reduce anthropogenic GHG emissions by 85 percent below 1990 levels by 2045, as directed by AB 1279. The actions and outcomes in the plan will achieve the following: significant reductions in fossil fuel combustion by deploying clean technologies and fuels; further reductions in short-lived climate pollutants; support for sustainable development; increased action on natural and working lands to reduce emissions and sequester carbon; and the capture and storage of carbon.[82] Appendix D of the 2022 Scoping Plan includes recommendations for local government actions to align with the state's climate goals, focusing on local GHG emissions reduction strategies.[83] According to CARB, "local government actions are crucial for supporting attainment of the state's climate goals" and local government leadership is "critical to implementing State-level measures to address GHG emissions associated with transportation and the built environment."

Table A-15 outlines the state's GHG reduction targets.

The 2045 CAP retains OurCounty's target for 2035 and identifies OurCounty's 2045 carbon neutrality target as a long-term aspirational goal. The 2045 CAP adds a new GHG emission reduction target for 2030 to align with SB 32.[84] The Draft 2045 CAP's 2030 target was selected based on guidance provided in the 2017 Scoping Plan and was developed to demonstrate consistency with the statewide 2030 target shown in Table A-15, above. The Draft 2045 CAP's 2030 target is established based on a reduction from 2015 baseline levels (just like the OurCounty targets for 2025 and 2035) and is equal to 40 percent below 2015 emissions or 4.9 million $MTCO_2e$. This compares to unincorporated Los Angeles County's 2030 BAU forecast of 5.2 million $MTCO_2e$, as presented in Table A-14 above. A 40 percent reduction below 2015 levels

[80] California Air Resources Board, *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target.* November 2017. Available at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2017-scoping-plan-documents. Accessed January 2022.

[81] California Air Resources Board, *Resolution 22-21: 2022 Climate Change Scoping Plan for Achieving Carbon Neutrality*. Agenda Item No. 22-16-1. December 15, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/barcu/board/res/2022/res22-21.pdf. Accessed December 2022.

[82] California Air Resources Board, *2022 Scoping Plan for Achieving Carbon Neutrality*. November 16, 2022. Available: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents. Accessed December 2022.

[83] California Air Resources Board, *2022 Scoping Plan for Achieving Carbon Neutrality, Appendix D Local Actions*. November 16, 2022. Available: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents. Accessed December 2022.

[84] The 2045 CAP excludes OurCounty's 2025 target because implementation of the CAP will barely be underway by 2025. Instead, the 2045 CAP focuses on the closest reasonable target timeframes of 2030 and 2035, and also to align with state planning for 2030 (SB 32 does not stipulate an interim target for 2025).

is also equivalent to a 48 percent reduction below unincorporated Los Angeles County's 1990 GHG emissions levels, which is more stringent than the state target of a 40 percent reduction below 1990 levels by 2030 (for additional discussion, see section below).

Table A-15: State of California Greenhouse Gas Emission Reduction Targets

TARGET YEAR	STATE GHG TARGET	CORRESPONDING STATE LEGISLATION
2020	1990 levels	Assembly Bill 32, the California Global Warming Solutions Act (2006)
2030	40% below 1990 levels	Senate Bill 32, the Global Warming Solutions Act (2006)
2045	85% below 1990 levels and net zero GHG emissions [a]	Assembly Bill 1279, the California Climate Crisis Act (2022) [b]

NOTES:

a. Net zero means that emissions of GHGs to the atmosphere are balanced by removals of greenhouse gases (GHGs) over a period of time, as determined by the California Air Resources Board. In other words, it means that GHG emissions generated by sources such as transportation, power plants, and industrial processes must be less than or equal to the amount of carbon dioxide that is removed from the atmosphere, both in natural sinks (such as trees) and through mechanical sequestration (such as direct air capture), over the same time period.

b. Executive Order S-3-05 (2005) set a target of 80% below 1990 levels, which was superseded by Assembly Bill 1279.

The Draft 2045 CAP's 2035 target was selected based on guidance provided in both the 2017 Scoping Plan and the 2022 Scoping Plan and was chosen as a milestone target to put unincorporated Los Angeles County on the trend to achieve the 2045 CAP's 2045 target and the long-term aspirational goal of carbon neutrality by 2045. This 2035 target was developed to demonstrate consistency with the pathway needed to achieve the statewide 2045 targets shown in Table 2-4, above. The Draft 2045 CAP's 2035 target is established based on a reduction from 2015 baseline levels and is equal to 50 percent below 2015 emissions (2.8 million $MTCO_2e$). This compares to unincorporated Los Angeles County's 2035 BAU forecast of 5.3 million $MTCO_2e$. A 50 percent reduction below 2015 levels is also equivalent to a 57 percent reduction below unincorporated Los Angeles County's 1990 GHG emissions levels.

The Draft 2045 CAP's target for 2045 was selected based on guidance for CAP targets provided in the 2022 Scoping Plan and was developed to demonstrate consistency with the statewide 2045 target shown in Table A-15, above. It is based on a reduction from 2015 baseline levels and is equal to 83 percent below 2015 emissions (958,000 $MTCO_2e$). This compares to unincorporated Los Angeles County's 2045 BAU forecast of 5.5 million $MTCO_2e$. An 83 percent reduction below 2015 levels is also equivalent to an 85 percent reduction below unincorporated Los Angeles County's 1990 GHG emissions levels, which in turn is equivalent to the state target of an 85 percent reduction below 1990 levels by 2045. **Table A-16** presents a comparison between the 2045 CAP's targets for 2030 and 2035, along with its aspirational 2045 goal, and the OurCounty Sustainability Plan targets for each future milestone year.

Table A-16: GHG Emissions Targets and Goals for the Draft 2045 Cap and OurCounty Sustainability Plan

YEAR	2045 CAP (UNINCORPORATED COUNTY ONLY)	OURCOUNTY SUSTAINABILITY PLAN (UNINCORPORATED COUNTY AND CITIES)	GHG EMISSIONS ($MTCO_2E$) (UNINCORPORATED COUNTY)
2025	n/a	25% below 2015 baseline levels	4,148,366
2030	40% below 2015 levels	n/a	3,318,693
2035	50% below 2015 levels	50% below 2015 levels	2,765,578
2045	83% below 2015 levels (85% below 1990 levels) Carbon neutrality[a]	Carbon neutrality by 2045 for county operations (by 2050 countywide)	958,088

NOTE:

[a] The Draft 2045 CAP includes an aspirational goal, rather than a target, of carbon neutrality by 2045.

The Targets as Levels of Significance for GHG Impacts under CEQA

CEQA Guidelines Section 15183.5(b) stipulates that project-specific environmental documents can find that project-level GHG emissions are not cumulatively considerable if the project complies with the requirements of a qualified GHG emissions reduction plan. As discussed in the Draft Environmental Impact Report for the 2045 CAP, upon certification of the EIR and approval of the 2045 CAP, the 2045 CAP would meet the requirements of a qualified GHG emission reduction plan per CEQA Guidelines Section 15183.5(b)(1) for projects through 2035.

To meet the requirements of CEQA Guidelines Section 15183.5(b), a qualified GHG emissions reduction plan must include several important elements, and must:

> Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable (§ 15183.5(b)(1)(B)).

The Draft 2045 CAP identifies a GHG emissions reductions target for the year 2030 that is 40 percent below baseline 2015 levels, which is equivalent to 47 percent below 1990 levels. This 2030 target for unincorporated Los Angeles County is therefore more stringent than the statewide target of 40 percent below 1990 levels by 2030 pursuant to SB 32. The Draft 2045 CAP's 2035 target of 50 percent below 2015 levels puts unincorporated Los Angeles County on a pathway to achieve the Draft CAP's 2045 target and the statewide 2045 target in AB 1279. The Draft 2045 CAP's 2045 target of 83 percent below 2015 levels is equivalent to an 85 percent reduction below 1990 levels, which aligns with the State of California's target of 85 percent below 1990 levels. The 2045 CAP's long-term aspirational goal of carbon neutrality by 2045 is also consistent with AB 1279 and the 2035 target puts unincorporated Los Angeles County on a path to achieve carbon neutrality.

Consistency with State Target as a Threshold of Significance

While several state-level initiatives will help reduce GHG emissions, they alone will not be sufficient to meet the 2030 target mandated by SB 32. This is one of the many reasons why the

County has prepared the 2045 CAP: so it can contribute its fair share of emission reductions to achieve the statewide targets for 2030 and beyond.

Consistency with the CARB 2022 Scoping Plan and the state's statutory GHG emissions reduction targets is an appropriate metric by which to determine the significance of the Draft 2045 CAP's GHG emissions. CEQA Guidelines Section 15064.4(b)(3) states that a lead agency "may consider a project's consistency with the state's long-term climate goals or strategies" when determining the significance of a project's impacts. Additionally, in *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal.4th 204 (Newhall), the California Supreme Court sanctioned the use of such a threshold: The Court stated that assessing a project's GHG impacts based on a "consistency with a GHG emission reduction plan" threshold of significance is legally permissible under CEQA.

The 2030 unincorporated Los Angeles County target above is derived using the 2017 Scoping Plan's recommendations for local land use development to contribute their "fair share" of emission reductions to the statewide GHG target for 2030. This is also consistent with the Association of Environmental Professionals (AEP) 2016 white paper recommendation for "Substantial Progress" thresholds for land use development to show consistency with statewide targets.[85] As discussed above, the Draft 2045 CAP's 2030 target of 40 percent below 2015 levels (a gross emissions target) exceeds the statewide 2030 target as codified in SB 32 and the 2017 Scoping Plan. Unincorporated Los Angeles County's emissions in 2015 are estimated to be 12 percent lower than 1990 emissions;[86] this compares to statewide emissions that were 2.3 percent higher in 2015 compared to 1990.[87] Additionally, unincorporated Los Angeles County's emissions in 2018 are estimated to be 20 percent lower than 1990 emissions; this compares to statewide emissions that were 1.3 percent lower in 2018 compared to 1990.[88] In other words, unincorporated Los Angeles County has been more successful than the state as a whole in reducing gross emissions since 1990. Consequently, the Draft 2045 CAP's gross emissions target is *more* stringent than the corresponding state target when comparing to 1990 levels and approximately equivalent when using a per-capita metric.[89] The Draft 2045 CAP's 2030 target also sets unincorporated Los Angeles County on a path to achieve California's 2045 GHG emission reduction target in AB 1279.

The Draft 2045 CAP's 2045 target of 83 percent below 2015 levels aligns with the statewide 2045 target, as codified in AB 1279 and implemented in the 2022 Scoping Plan. This is because the County's 2045 target of 85 percent below 2015 levels is equivalent to an 85 percent reduction below 1990 levels, which aligns with the State of California's target of 85 percent below 1990

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[85] Association of Environmental Professionals (AEP). 2016, *Final White Paper - Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California*, October 18. Available at: https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf. Accessed December 2021.

[86] To demonstrate consistency with statewide targets, to assess unincorporated Los Angeles County's progress since 1990, and to ensure that interim emissions reduction targets align with commitments prior to 2015, a backcasting model was developed (see section A.2 of this appendix).

[87] California Air Resources Board, *California's Greenhouse Gas Inventory by Scoping Plan Category*, Fourteenth Edition: 2000 to 2019, Last updated on 6/1/2021. Available at: https://ww2.arb.ca.gov/ghg-inventory-data. Accessed January 2022.

[88] Ibid.

[89] Per-capita emissions for unincorporated Los Angeles County are 19 percent lower in 2015 (6.1 $MTCO_2e$/capita) compared to 1990 (7.6 $MTCO_2e$/capita) and 28 percent lower in 2018 (5.4 $MTCO_2e$/capita) compared to 1990. This compares to total statewide per-capita emissions that were 22 percent lower in 2015 (11.3 $MTCO_2e$/capita) compared to 1990 (14.5 $MTCO_2e$/capita) and 26 percent lower in 2018 (10.8 $MTCO_2e$/capita) compared to 1990. The 2030 statewide target of 6.2 $MTCO_2e$/capita is 57 percent below 1990 statewide levels, whereas the 2045 CAP's 2030 target of 3.3 $MTCO_2e$/capita is 56 percent below 1990 unincorporated Los Angeles County levels.

levels. Consequently, the Draft 2045 CAP's target is equivalent to the state target. The Draft 2045 CAP's 2045 target also sets unincorporated Los Angeles County on a trend to achieve California's 2045 carbon neutrality target. Consequently, pursuant to CEQA Guidelines Section 15064.4(b)(3), the Draft 2045 CAP's 2045 target represents the level below which GHG emissions would not be cumulatively considerable through the year 2045.

The Draft 2045 CAP's 2035 target of 50 percent below 2015 levels puts unincorporated Los Angeles County on a pathway to achieve the statewide 2045 targets as stipulated in AB 1279. Although the state does not have a target for 2035, the 2045 CAP's target for 2035 of 50 percent below 2015 levels is equivalent to a 57 percent reduction below 1990 levels, which puts unincorporated Los Angeles County on a path to achieve its 2045 targets. Consequently, pursuant to CEQA Guidelines Section 15064.4(b)(3), the Draft 2045 CAP's 2035 target represents the level below which GHG emissions would not be cumulatively considerable through the year 2035.

The Draft 2045 CAP's 2045 aspirational goal of carbon neutrality aligns with the statewide 2045 target of carbon neutrality stipulated in AB 1279.

GHG emissions and global climate change represent cumulative impacts of human activities and development projects locally, regionally, statewide, nationally, and worldwide. GHG emissions from all these sources cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature; instead, the combination of GHG emissions from past, present, and future projects around the world have contributed and will continue to contribute to global climate change and its associated environmental impacts. Given that analysis of GHG emissions is cumulative in context, the emissions targets discussed above represent the level by which the 2045 CAP's emissions are not cumulatively considerable.

A.5 Attachment A: Fehr & Peers Modeling Analysis

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APPENDIX B

Emissions Forecasting and Reduction Methods

Purpose

This appendix describes the greenhouse gas (GHG) accounting and projection methods for the Adjusted Business-as-Usual (BAU) forecasts for 2030, 2035, and 2045, and the methods for quantifying GHG emissions reductions for the measures and actions listed in the *2045 Los Angeles County Climate Action Plan* (2045 CAP).

Section B.1: 2018–2045 Adjusted Business-as-Usual Forecasts

This section describes the approach for modeling an Adjusted BAU scenario that projects future emissions based on current population and regional growth trends; land use growth patterns; and implementation of federal, state, and County of Los Angeles (County) regulations and policies, including renewable-energy targets pursuant to the California Renewables Portfolio Standard (RPS) and Senate Bill (SB) 100, Title 24 Building Energy Efficiency updates, and the Advanced Clean Cars regulations and Pavley vehicle efficiency standards.

Section B.2: Greenhouse Gas Reduction Measures and Actions

This section describes the calculation methods for estimating local GHG emissions reductions for the 2045 CAP measures and actions. These emissions reductions occur beyond federal, state, and County regulations and policies accounted for in the Adjusted BAU forecast. The quantified measures and actions include:

- ES1: Develop a Sunset Strategy for All Oil and Gas Operations
- ES2: Procure Zero-Carbon Electricity
- ES3: Increase Renewable Energy Production
- E1: Decarbonize Existing Buildings
- E2: Decarbonize New Development

- E4: Improve Energy Efficiency of Existing Buildings
- E6: Reduce Indoor and Outdoor Water Consumption
- T1: Increase Density Near High-Quality Transit Areas
- T2: Develop Land Use Plans Addressing Jobs-Housing Balance and Increase Mixed Use
- T3: Expand Bicycle and Pedestrian Network to Serve Residential, Employment, and Recreational Trips
- T4: Broaden Options for Transit, Active Transportation, and Alternative Modes of Transportation
- T6: Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales
- T7: Electrify County Fleet Vehicles
- T8: Accelerate Freight Decarbonization
- T9: Expand Use of Zero-Emission Technologies for Off-Road Vehicles and Equipment
- W1: Institutionalize Sustainable Waste Systems and Practices
- A1: Conserve Agricultural and Working Lands, Forest Lands, and Wildlands
- A3: Expand Unincorporated Los Angeles County's Tree Canopy and Green Spaces

B.1 2018–2045 Adjusted Business-as-Usual Forecasts

Like the standard BAU forecast, the Adjusted BAU forecast provides an estimate of future emissions levels based on the continuation of existing trends in demographic growth (such as population and housing), activity or resource consumption (such as electricity use), technology changes, and regulation. Unlike the BAU forecast, the Adjusted BAU forecast accounts for expected outcomes of federal, state, and local measures. Specifically, the Adjusted BAU forecast includes the following programs and policies:

1. California's RPS program and SB 100 targets for renewable energy.
2. Updates to Title 24 standards.
3. Implementation of the Advanced Clean Cars regulations and Pavley standards.

These three adjustments are explained in the following sections.

Renewables Portfolio Standard and Senate Bill 100

The Clean Energy and Pollution Reduction Act of 2015, or SB 350 (Chapter 547, Statutes of 2015) was approved by then-Governor Jerry Brown on October 7, 2015. SB 350 increased the standards of the California RPS program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased from 33 percent to 50 percent by December 31, 2030. On September 10, 2018, Governor Brown signed SB 100, establishing that 100 percent of all electricity in California must be obtained from renewable and zero-carbon energy resources by December 31, 2045. SB 100 also creates new standards for the RPS goals that were established by SB 350 in 2015. Specifically, the bill increases required energy from renewable sources for both investor-owned utilities and publicly owned utilities from 50 percent to 60 percent by 2030. Incrementally, these energy providers must also have a renewable energy supply of 33 percent by 2020, 44 percent by 2024, and 52 percent by 2027. The updated RPS goals are considered achievable, because many California energy providers are already meeting or exceeding the RPS goals established by SB 350. The Adjusted BAU forecasts accounts for these renewable energy targets, as discussed below.

Electricity Emission Factors under the Renewables Portfolio Standard

To account for California's RPS targets under SB 100 in the Adjusted BAU forecast, the GHG emission factors for electricity consumption were adjusted. These emissions factors represent indirect GHG emissions generated at power plants and are applied to electricity consumption in unincorporated Los Angeles County (see Appendix A for discussion). The RPS has the effect of lowering indirect emissions associated with electricity consumption because it mandates increasing percentages of renewable sources of power supplied by electricity utilities in future years. The RPS requires 60 percent eligible renewables by 2030 and 100 percent RPS-eligible renewable resources by 2045.[1]

The two utilities supplying electricity to unincorporated Los Angeles County are Southern California Edison (SCE) and the Clean Power Alliance (CPA). To adjust for the RPS in future years, indirect electricity emission factors reported by SCE and CPA along with the energy power mix were collected for the years 2015–2020. SCE reports its emission factors in their annual sustainability reports and has values for 2015–2019. CPA reports its emission factors to the Climate Registry and has values for 2018–2020. The California Energy Commission (CEC) reports power mix data in Power Content Labels; these are available through 2020 for both SCE and CPA.[2]

Based on data reported for 2016–2020, a composite "non-RPS" emission intensity factor was generated for each year. This factor is calculated based on the reported total emission factor and the non-RPS power mix. For example, SCE's total reported emission factor in 2019 is 396.8 pounds (lb) of carbon dioxide equivalent (CO_2e) per megawatt-hour (MWh) for a non-RPS power mix of 65 percent; the "non-RPS" emission intensity factor is therefore 612.4 lb CO_2e/MWh. Then, for each forecast year (2030, 2035, and 2045), an emission factor for total delivered electricity was calculated based on these composite "non-RPS" emission intensity factors for each reported year and the projected RPS requirement for eligible renewables for each year. For example, a 60 percent eligible renewable mix (required by 2030) applied to the "non-RPS" emission intensity factor of 612.4 lb CO_2e/MWh results in a total emission factor of 245 lb CO_2e/MWh.

Table B-1 presents the electricity power mix values reported (2016–2020) and forecasted (2030, 2035, 2045) for SCE and CPA, incorporating the RPS. **Table B-2** presents the electricity emission factors reported for SCE and CPA for 2016–2020 along with the Adjusted BAU forecast for 2030, 2035, and 2045, incorporating the RPS.

[1] RPS-eligible resources include solar, wind, geothermal, small hydroelectric, or biopower facilities that are located within the Western Electricity Coordinating Council (WECC) region, which encompasses 14 Western U.S. states and portions of Canada and Mexico. The majority of RPS-eligible electricity currently comes from solar and wind. Large hydroelectric dams and nuclear facilities, two major sources of carbon-free power, are not RPS-eligible.

[2] California Energy Commission. 2019. 2018 Power Content Label. July 2019. Available: https://www.energy.ca.gov/sites/default/files/2020-01/2018_PCL_Southern_California_Edison.pdf. Accessed January 2021.

Table B-1: SCE and CPA Electricity Power Mix

	REPORTED					FORECASTED		
ELECTRICITY POWER MIX	2016	2017	2018	2019	2020	2030	2035	2045
SCE								
Eligible Renewables	28%	32%	36%	35%	n/a	60%	73%	100%
Nuclear & Hydroelectric	25%	28%	21%	24%	n/a	n/a	n/a	n/a
Natural Gas & Unspecified	60%	54%	54%	49%	n/a	n/a	n/a	n/a
CPA Lean Rate								
Eligible Renewables	n/a	n/a	65%	36%	41%	60%	73%	100%
Nuclear & Hydroelectric	n/a	n/a	24%	1%	5%	n/a	n/a	n/a
Natural Gas & Unspecified	n/a	n/a	11%	63%	55%	n/a	n/a	n/a
CPA Clean Rate								
Eligible Renewables	n/a	n/a	61%	51%	50%	60%	73%	100%
Nuclear & Hydroelectric	n/a	n/a	26%	14%	9%	n/a	n/a	n/a
Natural Gas & Unspecified	n/a	n/a	13%	36%	41%	n/a	n/a	n/a

NOTES:
Abbreviations: CPA = Clean Power Alliance; n/a = data not available or not applicable; SCE = Southern California Edison.
Reported values are shown for 2016–2020. Estimated (forecasted) values based on Renewables Portfolio Standard are shown for 2030, 2035, and 2045.

Table B-2: SCE and CPA Electricity Emission Factors under The Renewables Portfolio Standard

UTILITY AND CATEGORY OF ELECTRICITY SUPPLY	EMISSION FACTORS (LB CO_2E/MWH)							
	2016	2017	2018	2019	2020	2030	2035	2045
SCE								
Non-RPS Electricity	734.7	807.4	801.6	606.5	n/a	738.6	738.6	n/a
Total Delivered Electricity	529	549	513.0	393.0	n/a	295.5	197.0	0.0
CPA Lean								
Non-RPS Electricity	n/a	n/a	30.3	590.0	1029.6	809.8	809.8	n/a
Total Delivered Electricity	n/a	n/a	10.6	377.6	608.5	323.9	215.9	0.0
CPA Clean								
Non-RPS Electricity	n/a	n/a	25.1	342.2	685.7	513.9	513.9	n/a
Total Delivered Electricity	n/a	n/a	9.8	169.4	342.2	205.6	137.0	0.0

NOTES:
Abbreviations: CO_2e = carbon dioxide equivalent; lb = pounds; MWh = megawatt-hour; n/a = data not available or not applicable.
Reported values are shown for 2016–2020. Estimated (forecasted) values based on RPS are shown for 2030, 2035, and 2045.

Data Sources:

- SCE Emission Factors
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- CPA Emission factors
  Link: (account required for download): https://cris4.org/(S(rtuopf12t5k5ymsx3rurxtg4))/frmLILogin.aspx
- Power Content Labels
  Link: https://www.energy.ca.gov/programs-and-topics/programs/power-source-disclosure/power-content-label
- California RPS Program Overview
  Link: https://www.cpuc.ca.gov/RPS_Overview/
- SB 100
  Link: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100

Residential Buildings

Like the BAU Forecast, energy consumption in residential buildings is projected based on building footprint projections for residential stock in unincorporated Los Angeles County (see Appendix A). As discussed above, the electricity emission factors for electricity supplied by SCE are based on SCE's historical power mix (2015–2019) and RPS targets.[3] To account for the RPS and SB 100, SCE emission factors were applied to total residential electricity consumption for 2018, 2030, 2035, and 2045. As reported in Table B-2 above, SCE emission factors were estimated to be 513 lb CO_2e/MWh in 2018, 295.5 lb CO_2e/MWh in 2030, 197 lb CO_2e/MWh in 2035, and 0 lb CO_2e/MWh in 2045.

Beginning in 2019, residential customers in unincorporated Los Angeles County were automatically enrolled in the Clean Power Alliance's (CPA) "Clean" electricity rate option. While participation data for 2019 were unavailable when the 2018 inventory was developed, a July 2021 member status report indicated a 96 percent participation rate for all residential customers in unincorporated Los Angeles County in 2021.[4] Under the Clean rate option in 2019, residential customers received 61 percent of their electricity from eligible renewable sources via the CPA, 26 percent from carbon-free sources like hydropower, and 13 percent from unspecified fossil-fuel sources like natural gas and coal (see Table B-1 above). The remaining 4 percent of residential customers were enrolled in CPA's "Lean" electricity rate option. Under the Lean rate option in 2019, residential customers received 65 percent of their electricity from eligible renewable sources via the CPA, 24 percent from carbon-free sources like hydropower, and 11 percent from unspecified fossil-fuel sources like natural gas and coal (see Table B-1 above).

GHG emissions from CPA-provided electricity are calculated using CPA data including electricity consumption, emission factors, and power mix.[5] As reported in Table B-2 above, CPA's Lean emission rates are estimated to be 10.6 lb CO_2e/MWh in 2018, 323.9 lb CO_2e/MWh in 2030, 215.9 lb CO_2e/MWh in 2035, and 0 lb CO_2e/MWh in 2045.[6] CPA's Clean emission rates are estimated to be 9.8 lb CO_2e/MWh in 2018, 205.6 lb CO_2e/MWh in 2030, 137 lb CO_2e/MWh in 2035, and 0 lb

[3] California Energy Commission. 2019. 2018 Power Content Label. July 2019. Available: https://www.energy.ca.gov/sites/default/files/2020-01/2018_PCL_Southern_California_Edison.pdf. Accessed January 2021.
[4] Clean Power Alliance. 2021. *Member Status Report: Los Angeles County*. July 28, 2021.
[5] California Energy Commission. 2019. 2018 CPA Power Content Label. July 2019. Available: https://www.energy.ca.gov/sites/default/files/2020-01/2018_PCL_Clean_Power_Alliance.pdf. Accessed January 2021.
[6] The Climate Registry. 2020. Utility-Specific Emission Factors. Available: https://www.theclimateregistry.org/our-members/cris-public-reports/. Accessed January 2021.

CO_2e/MWh in 2045.[7] CPA emission factors were applied to total residential electricity consumption in 2018, 2030, 2035, and 2045 and emissions for interim years were linearly interpolated.

For emissions associated with natural gas consumption, emission factors are held constant from 2018.[8] RPS and SB 100 do not affect natural gas usage or emissions, and there are no federal, state, or local policies that would result in changes to the natural gas emission factors in the Adjusted BAU forecast.

Data Sources:

- SCE Emission Factors
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- CPA Emission factors
  Link: (account required for download): https://cris4.org/(S(rtuopf12t5k5ymsx3rurxtg4))/frmLILogin.aspx
- Power Content Labels
  Link: https://www.energy.ca.gov/programs-and-topics/programs/power-source-disclosure/power-content-label
- California RPS Program Overview
  Link: https://www.cpuc.ca.gov/RPS_Overview/
- SB 100
  Link: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100

Commercial and Institutional Buildings

Like the BAU Forecast, energy consumption in commercial, institutional, and agricultural buildings is forecasted based on building footprint projections for nonresidential building stock in unincorporated Los Angeles County (see Appendix A). In June 2018, nonresidential customers in unincorporated Los Angeles County were enrolled in CPA's Clean Power option, with less than 5 percent of customers opting out; the year-end CPA participation rate is held constant with the remaining customers continuing to receive electricity from SCE. The emission factors for CPA are based on historical power mix (2018–2020) and California's RPS targets, as discussed above and presented in Table B-1.[9] Emission factors for SCE and CPA are described under *Electricity Emission Factors under the Renewables Portfolio Standard*, above. Natural gas emission factors are held constant from 2018.

Data Sources:

- SCE Emission Factors
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- CPA Emission factors
  Link: (account required for download): https://cris4.org/(S(rtuopf12t5k5ymsx3rurxtg4))/frmLILogin.aspx
- Power Content Labels
  Link: https://www.energy.ca.gov/programs-and-topics/programs/power-source-disclosure/power-content-label
- California RPS Program Overview
  Link: https://www.cpuc.ca.gov/RPS_Overview/

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7 The Climate Registry. 2020. Utility-Specific Emission Factors. Available: https://www.theclimateregistry.org/our-members/cris-public-reports/. Accessed January 2021.

8 The Climate Registry. 2018. Default Emission Factors. May 1, 2018. Available: https://www.theclimateregistry.org/wp-content/uploads/2018/06/The-Climate-Registry-2018-Default-Emission-Factor-Document.pdf. Accessed January 2021.

9 California Public Utilities Commission. 2018. Renewables Portfolio Standards (RPS). Available: https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/rps/rps-program-overview. Accessed January 2021.

- SB 100
  Link: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100

Manufacturing and Industrial Buildings

ELECTRICITY AND NATURAL GAS

Like the BAU Forecast, energy consumption in manufacturing and industrial buildings are forecasted based on building footprint projections for nonresidential stock in unincorporated Los Angeles County (see Appendix A).[10] As discussed above, beginning in 2018, nonresidential customers in unincorporated Los Angeles County were enrolled in CPA's Clean Power rate option (50 percent eligible renewable), with less than 5 percent of customers opting out; the year-end CPA participation rate is held constant with the remaining customers continuing to receive electricity from SCE. The emission factors for CPA are based on historical power mix (2018–2020) and California's RPS targets, as discussed above and presented in Table B-1.[11] Emission factors for SCE and CPA are the same as described under *Electricity Emission Factors under the Renewables Portfolio Standard*, above.

California Building and Energy Efficiency Standards (Title 24)

The CEC first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically (typically every three years) to allow for the consideration and inclusion of new energy efficiency technologies and methods (CEC, 2016). The current Title 24, Part 6 standards (2019 standards) were made effective on January 1, 2020. The new Title 24, Part 6 standards (2022 standards) were adopted by the CEC in August 2021 and will be made effective on January 1, 2023. The Adjusted BAU forecasts accounts for these updates to Title 24, as discussed below.

Residential Buildings

Under the Adjusted BAU scenario, energy use in residential buildings was adjusted to reflect the effects of Title 24 standards. Title 24 Building Efficiency Standards are updated every three years by the California Energy Commission. The model uses approximate increased energy efficiency percentages for the 2019 Title 24 standards[12] implemented in 2020, and the 2022 standards to be implemented in 2023.[13] The 2019 percentages are based on CEC estimates for residential and nonresidential buildings and assume that the solar photovoltaic (PV) requirement is met. The

[10] UCLA Institute of Environmental Studies. 2018. Analysis of County of Los Angeles Parcel Assessor's Data.
[11] California Public Utilities Commission. 2018. Renewables Portfolio Standards (RPS). Available: https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/rps/rps-program-overview. Accessed January 2021.
[12] California Energy Commission. 2020. 2019 Building Energy Efficiency Standards FAQ. Available: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf. Accessed December 2021.
[13] California Energy Commission. 2021. 2022 Building Energy Efficiency Standards Summary. Available: https://www.energy.ca.gov/sites/default/files/2021-08/CEC_2022_EnergyCodeUpdateSummary_ADA.pdf. Accessed December 2021.

2022 percentages were calculated based on CEC's draft environmental impact report for the 2022 standards.[14] This document outlined the changes in building energy use from the 2019 to 2022 standards on a project-by-project basis. Weighted averages were taken to generate efficiency change values for single-family and multifamily residential buildings for both electricity and natural gas. These efficiency changes are applied to 2019 energy use intensity (EUI) values to generate 2022 EUI values for each building type, which are then applied to the square footage of new construction. In the model, the adjusted EUI is also applied to 15 percent of the total square footage of existing buildings to account for the approximately 15 percent of buildings that are retrofitted each year. Because Title 24 is updated on a three-year cycle, the 2022 changes in energy efficiency are applied every three years in the model.

Data Sources:

- Title 24 2019 Update
  Link: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf
- Title 24 2022 Update
  Link: https://www.energy.ca.gov/sites/default/files/2021-08/CEC_2022_EnergyCodeUpdateSummary_ADA.pdf
- Title 24 2022 Environmental Impact Report
  Link: https://www.energy.ca.gov/publications/2021/environmental-impact-report-amendments-building-efficiency-standards-2022-energy

Commercial and Institutional Buildings

Under the Adjusted BAU scenario, energy use in commercial, institutional, and agricultural buildings was adjusted to reflect the effects of Title 24 standards. The methods for adjusting energy use under new Title 24 standards are the same as described for *Residential Buildings*, above.

Data Sources:

- Title 24 2019 Update
  Link: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf
- Title 24 2022 Update
  Link: https://www.energy.ca.gov/sites/default/files/2021-08/CEC_2022_EnergyCodeUpdateSummary_ADA.pdf
- Title 24 2022 Environmental Impact Report
  Link: https://files.ceqanet.opr.ca.gov/268487-2/attachment/MNZKECIHPRRVXPxfeMxJjloL-VXe6AFxDecdnxi8c5vzAkZWPhhj5GPnAarnDp4zd7reUQfLY0fV2AI70

Manufacturing and Industrial Buildings

Under the Adjusted BAU scenario, energy use in manufacturing and construction buildings was adjusted to reflect the effects of Title 24 standards. The methods for adjusting energy use under new Title 24 standards are the same as described for *Residential Buildings*, above. Title 24 Building Efficiency Standards are updated every three years by the California Energy Commission.

[14] California Energy Commission. 2021. Draft Environmental Impact Report: Amendments to the Building Energy Efficiency Standards (2022 Energy Code). Available: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency. Accessed December 2021.

Data Sources:

- Title 24 2019 Update
  Link: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf
- Title 24 2022 Update
  Link: https://www.energy.ca.gov/sites/default/files/2021-08/CEC_2022_EnergyCodeUpdateSummary_ADA.pdf
- Title 24 2022 Environmental Impact Report
  Link: https://files.ceqanet.opr.ca.gov/268487-2/attachment/MNZKECIHPRRVXPxfeMxJjloL-VXe6AFxDecdnxi8c5vzAkZWPhhj5GPnAarnDp4zd7reUQfLY0fV2AI70

Advanced Clean Cars Regulations and Pavley Vehicle Efficiency Standards

In 2002, Governor Gray Davis signed Assembly Bill (AB) 1493. AB 1493 requires that the California Air Resources Board (CARB) develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State." To meet the requirements of AB 1493, in 2004 CARB approved amendments to the California Code of Regulations, adding GHG emissions standards to California's existing standards for motor vehicle emissions. All mobile sources are required to comply with these regulations as they are phased in from 2009 through 2016. These regulations are known as the "Pavley standards" (named for the bill's author, State Senator Fran Pavley).

In January 2012, pursuant to Recommended Measures T-1 and T-4 of the Original Scoping Plan, CARB approved the Advanced Clean Cars Program, an emissions-control program for model year 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions. The program also requires car manufacturers to offer for sale an increasing number of zero-emission vehicles (ZEVs) each year, including battery electric, fuel cell, and plug-in hybrid electric vehicles. In December 2012, CARB adopted regulations allowing car manufacturers to comply with California's GHG emissions requirements for model years 2017–2025 through compliance with the EPA GHG requirements for those same model years.[15]

The Adjusted BAU forecasts accounts for these vehicle fleet efficiency standards, as discussed below.

On-road Transportation: Passenger Vehicles and Trucks

Like the BAU forecast, vehicle miles traveled (VMT) from passenger vehicles and trucks were estimated using SCAG's 2016 Regional Travel Demand Model, which forecasts VMT for the year 2040 (see Appendix A). GHG emissions under the Advanced Clean Cars regulations and Pavley standards in unincorporated Los Angeles County are calculated using VMT and corresponding weighted emission factors by vehicle type (passenger vehicles and trucks)[16] for years 2018, 2030,

[15] Advanced Clean Cars Program information available online: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about. Accessed on February 7, 2020.

[16] Passenger vehicles correspond to EMFAC categories LDA, LDT1, LDT2, MCY, and MD. Trucks correspond to EMFAC categories LHDT1, LHDT2, MHDT, HHDT, and MH.

2035, and 2045 from the EMFAC2021 model.[17] Interim year emissions were interpolated for 2019 through 2029, 2031 through 2034, and 2036 through 2044.

Data Sources:

- EMFAC2021 Model, v1.0.1
  Link: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9
- SCAG Regional Travel Demand Model
  Provided by SCAG

On-road Transportation: Buses

Fuel consumption from Metro buses for years 2019 through 2045 was calculated using fuel consumption and VMT data from the EMFAC2021 model. The EMFAC2021 model was run for years 2018, 2030, 2035, and 2045 and the fuel efficiency (miles per gallon, miles per gallon equivalent, or kWh/mile) were calculated.[18] An efficiency factor for diesel, gasoline, compressed natural gas, and electricity was then developed by dividing the 2030, 2035, and 2045 fuel efficiency by the baseline fuel efficiency in 2018. The efficiency factor was then applied to the 2018 fuel consumption by fuel type to determine the project fuel consumption for years 2030, 2035, and 2045. Emission factors for gasoline, diesel and compressed natural (CNG) gas-powered buses are taken from EMFAC2021 database to calculate GHG emissions. Electricity emissions were calculated using CPA Clean option emission factors for the corresponding year. Emissions for interim years were interpolated for years 2019 through 2030, 2031 through 2034, and 2036 through 2044.

Data Sources:

- Metro Bus Ridership
  Link: https://isotp.metro.net/MetroRidership/Index.aspx
- EMFAC2021 Model, v1.0.1
  Link: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9

Adjusted BAU Forecast Results

Table B-3 presents emissions for 2018 along with the Adjusted BAU forecast for 2030, 2035, and 2045 for the Stationary Energy sector.

[17] California Air Resources Board. 2021. EMFAC2021 Model. Version v1.0.1. Available: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9. Accessed October 2021.
[18] California Air Resources Board. 2021. EMFAC2021 Model. Version v1.0.1. Available: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9. Accessed October 2021.

Table B-3: Stationary Energy GHG Emissions – 2018 Inventory and Adjusted BAU Forecasts

STATIONARY ENERGY SUBSECTOR	ANNUAL GHG EMISSIONS ($MTCO_2E$) 2018	2030	2035	2045
Residential Buildings	962,743	825,053	755,555	617,836
Commercial, Institutional, and Agricultural Buildings	349,373	344,421	291,764	185,682
Manufacturing and Construction Buildings	244,417	251,607	212,726	133,633
Energy Industries	98,554	29,495	29,526	29,587
Fugitive Emissions from Oil and Natural Gas Systems	41,066	49,130	49,275	49,493
Agriculture, Forestry and Other Fishing Activities	2,658	2,600	2,580	2,562
TOTAL	**1,698,809**	**1,502,306**	**1,341,401**	**1,018,793**

NOTES:
Abbreviations: BAU = business-as-usual; GHG = greenhouse gas; $MTCO_2e$ = metric tons of carbon dioxide equivalent
These emissions account for the RPS, SB 100, and Title 24 updates.

Table B-4 presents emissions for 2018 along with the adjusted BAU forecast for 2030, 2035, and 2045 for the Transportation sector.

Table B-4: Transportation GHG Emissions – 2018 Inventory and Adjusted BAU Forecasts

TRANSPORTATION SUBSECTOR	ANNUAL GHG EMISSIONS ($MTCO_2E$) 2018	2030	2035	2045
Passenger Vehicles	2,665,824	2,166,604	2,047,769	1,977,297
Buses	29,371	29,026	22,076	5,326
Railways	9,490	10,255	10,389	10,658
TOTAL	**2,704,685**	**2,205,885**	**2,080,234**	**1,993,281**

NOTES:
Abbreviations: BAU = business-as-usual; GHG = greenhouse gas; $MTCO_2e$ = metric tons of carbon dioxide equivalent.
These emissions account for the Advanced Clean Cars regulations and Pavley vehicle efficiency standards.

Table B-5 presents total emissions for 2018 along with the Adjusted BAU forecast for 2030, 2035, and 2045 for all sectors.

Table B-5: Total GHG Emissions by Sector – 2018 Inventory and Adjusted BAU Forecasts

SECTOR	ANNUAL GHG EMISSIONS ($MTCO_2E$)			
	2018	2030	2035	2045
Stationary Energy	1,698,809	1,502,306	1,341,401	1,018,793
Transportation	2,704,685	2,205,885	2,080,234	1,993,281
Waste	469,382	451,919	454,097	482,489
IPPU	239,505	259,605	267,981	284,731
AFOLU	60,860	60,860	60,860	60,860
TOTAL	**5,173,240**	**4,480,574**	**4,204,572**	**3,840,154**

NOTES:
Abbreviations: AFOLU = Agriculture, Forestry, and Other Land Use; BAU = business-as-usual; GHG = greenhouse gas; IPPU = Industrial Processes and Product Use; $MTCO_2e$ = metric tons of carbon dioxide equivalent.
Compared to the BAU forecasts, the Adjusted BAU forecast only differs for the Stationary Energy and Transportation sectors. Waste, IPPU, and AFOLU are not changed.

Figure B-1 presents total emissions for 2018 along with the BAU and Adjusted BAU forecast for 2030, 2035, and 2045 for all sectors.

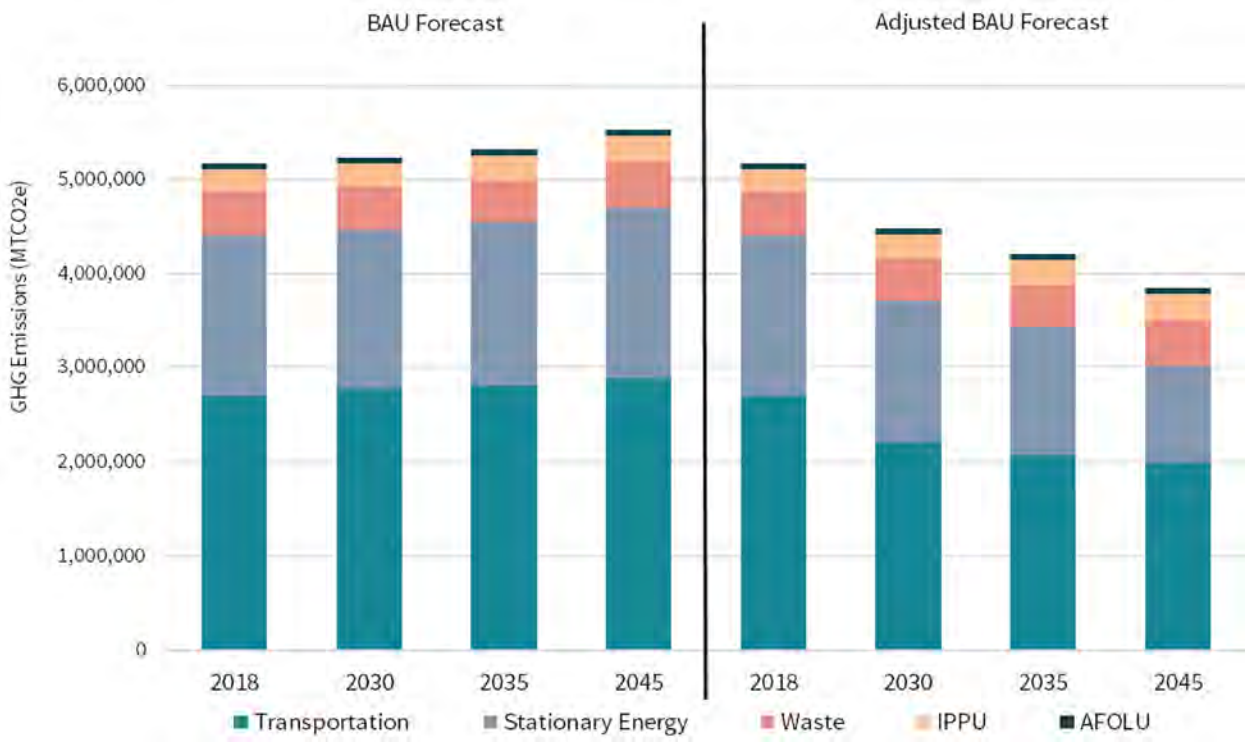

Figure B-1: GHG Emissions by Sector – 2018 Inventory, BAU Forecast, and Adjusted BAU Forecast

B.2 Greenhouse Gas Reduction Measures and Actions

Energy Supply

Strategy 1: Decarbonize the Energy Supply

MEASURE ES1: DEVELOP A SUNSET STRATEGY FOR ALL OIL AND GAS OPERATIONS

Table B-6: Measure ES1 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	28,368
2035	40,178
2045	52,148

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

Develop a sunset strategy for all oil and gas operations that prioritizes disproportionately affected communities and develop a strategy for carbon removal.

Performance Objectives

The goal of Measure ES1 is to reduce oil and gas operations by 40 percent by 2030, 60 percent by 2035, and 80 percent by 2045 (compared to 2015 baseline levels). The aspirational goal of Measure ES1, based on the OurCounty Sustainability Plan, is to cease all oil and gas operations by 2040.

Modeling Approach

Measure ES1 would apply to emissions occurring in the Energy Industries subsector of the Stationary Energy sector of unincorporated Los Angeles County's GHG inventory. Specifically, Measure ES1 would reduce emissions from combined heat and power facilities and fugitive emissions from oil and natural gas systems. There are two combined heat and power facilities that would reduce emissions under this measure: the Pitchess Cogeneration Station in Saugus and the Olive View Medical Center Cogeneration Station in Sylmar. Both facilities combust natural gas to generate heat and electricity.

Both the Pitchess Cogeneration Station and the Olive View Medical Center Cogeneration Station are owned and operated by the County. The Pitchess Cogeneration Station was decommissioned in 2018 and its emissions decreased by 90 percent from 2017 to 2018. Under Measure ES1, these emissions were assumed to remain constant through 2045. The Olive View Medical Center Cogeneration Station will be decommissioned by 2023, so its emissions were reduced by 90 percent consistent with the reduction in emissions achieved when the Pitchess Cogeneration Station was decommissioned.

Measure ES1 would also reduce fugitive emissions from oil and natural gas systems equivalent to the measure's performance objectives: 40 below 2015 levels by 2030, 60 percent by 2035, and

80 percent by 2045. These percentages were multiplied by 2015 emissions to estimate emissions reductions for each future year.

Assumptions

- The decommissioning of the Olive View Medical Center Cogeneration Station would reduce natural gas-related GHG emissions by 90 percent.
- Under Measure ES1, both the Pitchess Cogeneration Station and the Olive View Medical Center Cogeneration Station would continue to combust residual natural gas at 10 percent of their fully operational levels through 2045.
- Measure ES1 will reduce fugitive emissions from oil and natural gas systems linearly with the measure's overall performance objectives for each future year.

Data Sources

- CARB Pollution Mapping Tool
  Link: https://www.arb.ca.gov/ei/tools/pollution_map/
- CARB MRR Database
  Link: https://ww2.arb.ca.gov/mrr-data

MEASURE ES2: PROCURE ZERO-CARBON ELECTRICITY

Table B-15: Measure ES2 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	477,188
2035	317,915
2045	0

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

Supplying unincorporated Los Angeles County's power demand with zero-carbon electricity[19] is critical to achieving significant GHG emissions reductions. The CPA is a nonprofit and community choice energy provider that currently serves 32 communities across Southern California.

Performance Objectives

The goal of Measure ES2 is to enroll 100 percent of municipal facilities in CPA's Green Power rate option (100 percent Renewables), SCE's Green Rate option, or other available 100 percent zero carbon electricity service by 2030 and 96 percent of unincorporated Los Angeles County in CPA's Green Power rate option, SCE's Green Rate option, or other available 100 percent zero carbon electricity service by 2030 (4 percent opt-out rate).

Modeling Approach

The Measure ES2 calculations use Adjusted BAU electricity activity data and GHG emissions for residential and nonresidential uses in 2030, 2035, and 2045 as a baseline. The default participation rate in the CPA Lean and CPA Clean rate options was changed from 47 percent Clean and 48 percent Lean to 95.6 percent Green and 4.4 percent Lean by 2030 and 2035, and to 95.6 percent Green and 4.4 percent Clean by 2045. GHG emissions were calculated using the

[19] "Zero-carbon electricity" means energy resources that either qualify as "renewable" in the most recent Renewables Portfolio Standard (RPS) Eligibility Guidebook or generate zero greenhouse gas emissions on-site, such as hydropower.

Measure ES2 participation rates and CPA emission factors for 2030, 2035, and 2045 (as described in B.1, *Stationary Energy*). GHG emissions after implementation of Measure ES2 were then subtracted from the Adjusted BAU forecast emissions to estimate the GHG emissions reductions produced by Measure ES2.

Assumptions

- CPA and SCE emission factors for electricity are the same as those reported in section B.1 above.
- CPA Lean and SCE emission factors are equal; the SCE emission factors are applied to the to the "Opt Out/CPA Lean" category of electricity use in unincorporated Los Angeles County.
- The overall CPA participation rate (95.6 percent) remains constant through 2045.
- Measure ES2 is the first energy measure implemented; therefore, GHG emissions reductions associated with electricity savings as calculated in subsequent energy measures incorporate Measure ES2 participation rates and electricity emission factors.

Data Sources

- SCE Emission Factors
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- CPA Emission factors
  Link: (account required for download): https://cris4.org/(S(rtuopf12t5k5ymsx3rurxtg4))/frmLILogin.aspx
- CPA Member Status Report, July 28, 2021

MEASURE ES3: INCREASE RENEWABLE ENERGY PRODUCTION

Table B-18: Measure ES3 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	5,919
2035	5,219
2045	0

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

Expand local solar power generation on existing and new development and for County projects.

Performance Objectives

The goal of Measure ES3 is to increase on-site solar electricity production for existing and new multifamily residential buildings, existing commercial buildings, and municipal buildings. The measure aims to install rooftop PV on 20 percent of existing multifamily residential buildings by 2030, 25 percent by 2035, and 35 percent by 2045; install rooftop solar PV on 15 percent of existing commercial buildings by 2030, 22 percent by 2035, and 32 percent by 2045; install rooftop solar PV on 80 percent of new multifamily residential buildings by 2030, 85 percent by 2035, and 95 percent by 2045; install rooftop solar PV on 40 percent of new commercial buildings by 2030, 50 percent by 2035, and 70 percent by 2045; and install 20,000 kilowatts (kW) of rooftop solar PV at county facilities. This measure also aims to install solar PV for community use and rooftop solar PV at all affordable housing developments.

Modeling Approach

Residential

GHG emissions reductions from rooftop solar PV were calculated using multifamily and single-family housing data and projections from the California Department of Finance. The baseline year for existing residential buildings is assumed to be 2023 because this is the earliest date that the 2045 CAP could be adopted and go into effect. Installation of rooftop solar PV on existing multifamily and single-family residential buildings therefore assumes a baseline year of 2023, and installation of rooftop solar PV on new multifamily residential buildings in 2030, 2035, and 2045 is based on the cumulative number of new multifamily households constructed from 2023 through each target years (e.g., the number of new multifamily residential buildings in 2030 is equal to the sum of all new multifamily housing built between 2023 and 2030).

The total number of existing and new households for each target year was then multiplied by the solar PV installation rate for each target year to obtain the number of participating households installing rooftop solar PV through implementation of Measure ES3. The average multifamily solar system size of 6.1 kW was calculated using data from Center for Sustainable Energy's *Fostering a Future for Multifamily Solar* study for the City of Santa Monica.[20] The average annual system electricity production (or system output) in kWh was then determined by inputting the 6.1 kW average system size into the National Renewable Energy Laboratory (NREL) PVWatts calculator for a project located in Los Angeles.[21] The average system output was then multiplied by the number of participating households for both existing and new multifamily development to determine the total solar production (in kWh) for each target year. GHG emissions reductions were calculated by multiplying the total solar production by the relevant SCE and CPA electricity emission factors, using the same participation rates and electricity emission factors implemented under Measure ES2.

For existing single-family residential buildings, the total number of households was multiplied by the solar PV installation rate for each target year to obtain the number of participating households installing rooftop solar PV through implementation of Measure ES5. The average single-family solar system size of 6.3 kW was calculated using data from using statewide data from Berkeley Laboratory's *Tracking the Sun* database.[22] The average annual system electricity production (or system output) in kWh was then determined by inputting the 6.3 kW average system size into the NREL PVWatts calculator for a project located in Los Angeles.[23] The average system output was then multiplied by the number of participating households for existing single-family development to determine the total solar production (in kWh) for each target year. GHG emissions reductions were calculated by multiplying the total solar production by the relevant SCE and CPA electricity emission factors, using the same participation rates and electricity emission factors implemented under Measure ES2.

[20] Center for Sustainable Energy. 2018. *Fostering a Future for Multifamily Solar in Santa Monica, CA*. February 2018. Available: https://energycenter.org/sites/default/files/docs/nav/programs/smp/SantaMonicaMarketProfile.pdf. Accessed November 2021.
[21] National Renewable Energy Laboratory. 2021. PVWatts Calculator. Available: https://pvwatts.nrel.gov/. Accessed November 2021.
[22] Berkeley Laboratory. 2021. Tracking the Sun. September 2021. Available: https://emp.lbl.gov/tracking-the-sun. Accessed November 2021.
[23] National Renewable Energy Laboratory. 2021. PVWatts Calculator. Available: https://pvwatts.nrel.gov/. Accessed November 2021.

Measure E6 does not include rooftop solar PV installations on new single-family residential buildings because this is already required through the current 2019 Title 24 standards and also the new 2022 Title 24 standards and is therefore accounted for in the Adjusted BAU forecast.

Commercial

GHG emissions reductions from rooftop solar PV were calculated using existing and new commercial building square footage data from UCLA.[24] Like residential buildings above, the baseline year for existing commercial buildings is assumed to be 2023. Installation of rooftop solar PV on existing commercial buildings therefore assumes a baseline year of 2023, and installation of rooftop solar PV on new commercial buildings in 2030, 2035, and 2045 is based on the cumulative number of new commercial square footage constructed from 2023 through each target year (e.g., the number of new commercial square footage in 2030 is equal to the sum of all new commercial square footage built between 2023 and 2030).

Similar to residential buildings, the building square footage was multiplied by the solar PV installation rate for each target year to obtain the total participating commercial square footage installing rooftop solar PV through implementation of Measure ES3. The total number of commercial solar systems was determined by dividing the participating square footage by the average square footage of a commercial building in California of 15,599 square feet.[25] The average commercial solar system size was estimated using statewide data from Berkeley Laboratory's *Tracking the Sun* database; this value is 137.1 kW per commercial system.[26] The average annual electricity production (or system output) in kWh was then determined by inputting the average system size into the NREL PVWatts calculator for a project located in Los Angeles.[27] The average system output was then multiplied by the number of commercial solar systems for both existing and new development to determine the total solar production (in kWh) for each target year. GHG emissions reductions were calculated by multiplying the total solar production by the relevant SCE and CPA electricity emission factors, using the same participation rates and electricity emission factors implemented under Measure ES2.

Municipal

GHG emissions reductions from municipal solar PV installations assumes that the County will install a total of 30 solar systems on County facilities, producing a total capacity of 20 MW. The average system output was then determined by inputting a 20 MW production value into the NREL PVWatts calculator for a project located in Los Angeles.[28] The total system output for 20 MW of solar was then multiplied by the relevant SCE and CPA electricity emission factors, using the same participation rates and emission factors implemented under Measure ES2.

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[24] UCLA Institute of Environmental Studies. 2018. Analysis of County of Los Angeles Parcel Assessor's Data.

[25] Energy Information Administration. 2021. *2018 Commercial Buildings Energy Consumption Survey*. September 2021. Available: https://www.eia.gov/consumption/commercial/data/2018/pdf/CBECS_2018_Building_Characteristics_Flipbook.pdf. Accessed November 2021.

[26] Berkeley Laboratory. 2021. Tracking the Sun. September 2021. Available: https://emp.lbl.gov/tracking-the-sun. Accessed November 2021.

[27] National Renewable Energy Laboratory. 2021. PVWatts Calculator. Available: https://pvwatts.nrel.gov/. Accessed November 2021.

[28] National Renewable Energy Laboratory. 2021. PVWatts Calculator. Available: https://pvwatts.nrel.gov/. Accessed November 2021.

Assumptions

- CPA and SCE emission factors for electricity are the same as those reported in Section B.1 above.
- CPA participation rates after implementation of Measure ES2.
- Existing building stock represents the built environment through the year 2023.
- New building stock represents new development starting in 2025.
- The average multifamily solar PV system size is 6.1 kW; each system produces 10,067 kWh per year.
- The average single-family solar PV system size is 6.3 kW; each system produces 10,466 kWh per year.
- The average commercial building solar PV system size is 137.1 kW; each system produces 227,758 kWh per year.
- 20 MW of solar PV is installed at municipal facilities; these systems produce 36,068,108 kWh per year.
- Annual GHG emissions reductions for each target year (2030, 2035, and 2045) reflect all buildings electrified in all previous years (e.g., all buildings electrified from 2025–2030 contribute to annual emissions reductions in 2030).
- New single-family residential buildings are required to install solar PV pursuant to the 2019 and 2022 Title 24 standards.

Data Sources

- SCE Emission Factors
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- CPA Emission factors
  Link: (account required for download): https://cris4.org/(S(rtuopf12t5k5ymsx3rurxtg4))/frmLILogin.aspx
- CPA Member Status Report, July 28, 2021
- California Department of Finance Demographic data
  Link: https://www.dof.ca.gov/Forecasting/Demographics/
- UCLA analysis of County of Los Angeles Parcel Assessor's Data
  Provided by UCLA Institute of Environmental Studies
- Center for Sustainable Energy, Fostering a Future for Multifamily Solar in Santa Monica, CA.
  Link: https://energycenter.org/sites/default/files/docs/nav/programs/smp/SantaMonicaMarketProfile.pdf
- USEIA, 2018 Commercial Buildings Energy Consumption Survey
  Link: https://www.eia.gov/consumption/commercial/data/2018/pdf/CBECS_2018_Building_Characteristics_Flipbook.pdf
- Berkeley Laboratory, Tracking the Sun
  Link: https://emp.lbl.gov/tracking-the-sun
- NREL, PVWatts Calculator
  Link: https://pvwatts.nrel.gov/

Transportation

GHG emissions reductions modeled for Measures T1, T2, T3, and T4 are based on changes to planned land use and transportation infrastructure (such as bikeways and transit) already envisioned in existing County plans and programs, such as the 2021 Housing Element Update and its Program EIR, the Los Angeles County Bike Master Plan (2012), the LA Metro NextGen Plan (2020), and LA Metro Long Range Transportation Plan (2020). The 2045 CAP does not result in any new changes to land use or transportation infrastructure than what was already analyzed in these existing plans and their CEQA documents. Consequently, the 2045 CAP merely models the GHG emissions reductions associated with the changes to land use and transportation infrastructure that were already analyzed elsewhere.

Strategy 2: Increase Densities and Diversity of Land Uses Near Transit

MEASURE T1: INCREASE DENSITY NEAR HIGH-QUALITY TRANSIT AREAS

Table B-7: Measure T1 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	27,357
2035	26,019
2045	25,276

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

Increase housing opportunities that are affordable and near transit, to reduce VMT.

Performance Objectives

The goal of Measure T1 is to increase residential density by achieving a minimum of 20 dwelling units (DU) per acre (maximum of 30–150 DU/acre) for High Quality Transit Areas (HQTAs), locate residential and employment centers in unincorporated Los Angeles County within one mile of an HQTA, and increase the dwelling units within HQTAs by 27 percent.

Modeling Approach

VMT reductions were estimated using research documented in the 2021 California Air Pollution Control Officers Association (CAPCOA) publication *Quantifying Greenhouse Gas Mitigation Measures* (referred to herein as the "CAPCOA handbook").[29] To quantify VMT reductions, appropriate equations were used based on factsheets in the CAPCOA handbook. Using data from a County GIS shapefile layer showing the 2021–2029 Housing Element Rezone Areas and a major transit stop GIS layer developed as part of the County's SB 743 VMT Tool released in late 2020, along with CAPCOA equations, percent reductions in VMT were estimated for Measure T1. Specifically, it was assumed that the residential density within HQTAs as planned for in the 2021–2029 Housing Element would be 20 DU per acre (the Housing Element analyzed densities from 20 DU/acre to 50 du/acre) compared to the typical density value of 9.1 DU/acre, resulting in a 26.4 percent reduction in passenger vehicle VMT for affected areas. This reduction was applied to the specific home-based VMT occurring within the affected transit-oriented design (TOD) areas in unincorporated Los Angeles County.

VMT was calculated at the transportation analysis zone (TAZ) level.[30] Once the percent VMT reductions were determined, based on the geographic scope and VMT category of Measure T1, the appropriate VMT was aggregated across the relevant TAZs within which residential densities would increase. Percent reductions were then applied to appropriate VMT subtotals to obtain the VMT reduction estimates. The sum of these reductions was then subtracted from total light-duty

[29] California Air Pollution Control Officers Association. 2021. *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity, California Air Pollution Control Officers Association*. December 2021. Available: http://www.airquality.org/air-quality-health/climate-change/ghg-handbook-caleemod. Accessed January 2022.

[30] TAZs are comparable in size and shape to census tracts or block groups depending on the travel demand model used and level of modeling detail.

vehicle VMT to estimate adjusted daily VMT. This adjusted daily VMT was then projected to obtain VMT reductions and adjusted totals in each analysis year (2030, 2035, and 2045).

GHG reductions from Measure T1 are calculated using daily VMT reductions, as described above.[31] The average daily VMT reductions achieved through implementation of Measure T1 were annualized by multiplying by 347 days, consistent with the GHG Inventory and Adjusted BAU forecast (see Appendix A). GHG emissions reductions were then calculated by multiplying the annual VMT reductions by the Adjusted BAU passenger vehicle emission factors for each target year as derived from EMFAC2021 (see Section B.1 above).[32]

Assumptions

- The residential density within HQTAs as planned for in the County's 2021–2029 Housing Element would be 20 DU per acre.
- The typical residential density without the County's 2021 Housing Element Update is 9.1 DU per acre.
- VMT reductions apply to home-based VMT occurring within the affected TOD and HQTA areas in unincorporated Los Angeles County.
- Daily VMT reductions are annualized by multiplying by 347 days.
- Passenger vehicle category corresponds to the EMFAC vehicle categories LDA, LDT1, LDT2, MCY, and MD.

References

- County of Los Angeles GIS shapefile layer for the 2021–2029 Housing Element Rezone Areas
- Major transit stop GIS layer developed as part of the County's SB 743 VMT Tool (2020)
- California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures Link: http://www.airquality.org/air-quality-health/climate-change/ghg-handbook-caleemod
- Fehr & Peers, County of Los Angeles CAP VMT Reduction Estimate Summary (February 22, 2023)
- Fehr & Peers, County of Los Angeles 2045 Climate Action Plan Update - VMT Technical Memorandum (February 23, 2023)
- EMFAC2021 Model, v1.0.1
  Link: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9

MEASURE T2: DEVELOP LAND USE PLANS ADDRESSING JOBS-HOUSING BALANCE AND INCREASE MIXED USE

Table B-8: Measure T2 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	39,184
2035	37,267
2045	36,204

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

Increasing density and the mix of land uses can help reduce single-occupancy trips, the number of trips, and trip lengths.

[31] Fehr & Peers. 2021. County of Los Angeles CAP VMT Reduction Estimate Summary. February 22, 2023.
[32] California Air Resources Board. 2021. EMFAC2021 Model. Version v1.0.1. Available: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9. Accessed October 2021.

Performance Objectives

The goal of Measure T2 is to increase job density to 300 jobs per acre by 2030.

Modeling Approach

To quantify VMT reductions for Measure T2, appropriate equations were used based on factsheets in the CAPCOA handbook. Using data from a County GIS shapefile layer showing the 2021–2029 Housing Element Rezone Areas and a major transit stop GIS layer developed as part of the County's SB 743 VMT Tool released in late 2020, along with CAPCOA equations, percent reductions in VMT were estimated for Measure T2. Specifically, it was assumed that the transit mode share as planned for in the as planned for in the County's SB 743 VMT Tool would be 27 percent compared to the typical transit mode share of 15 percent, resulting in a 31.8 percent reduction in passenger vehicle VMT for affected areas. This reduction was applied to the total VMT occurring within the affected TOD areas in unincorporated Los Angeles County.

VMT was calculated at the TAZ level. Once the percent VMT reductions were determined, based on the geographic scope and VMT category of Measure T2, the appropriate VMT was aggregated across the relevant TAZs within which transit mode shift would increase. Percent reductions were then applied to appropriate VMT subtotals to obtain the VMT reduction estimates. The sum of these reductions was then subtracted from total light-duty vehicle VMT to estimate adjusted daily VMT. This adjusted daily VMT was then projected to obtain VMT reductions and adjusted totals in each analysis year (2030, 2035, and 2045).

GHG reductions from Measure T2 are calculated using daily VMT reductions, as described above.[33] The average daily VMT reductions achieved through implementation of Measure T2 were annualized by multiplying by 347 days, consistent with the GHG Inventory and Adjusted BAU forecast (see Appendix A). GHG emissions reductions were then calculated by multiplying the annual VMT reductions by the Adjusted BAU passenger vehicle emission factors for each target year as derived from EMFAC2021 (see Section B.1 above).[34]

Assumptions

- The transit mode share would increase from 15 percent to 27 percent under this measure, based on the County's 2021 Housing Element Update and the County's SB 743 VMT Tool.
- VMT reductions apply to the total VMT occurring within the affected TOD areas in unincorporated Los Angeles County.
- Daily VMT reductions are annualized by multiplying by 347 days
- Passenger vehicle category corresponds to the EMFAC vehicle categories LDA, LDT1, LDT2, MCY, and MD.

References

- County of Los Angeles GIS shapefile layer for the 2021–2029 Housing Element Rezone Areas
- Major transit stop GIS layer developed as part of the County's SB 743 VMT Tool (2020)
- 2012 California Household Travel Survey
  Link: https://www.nrel.gov/transportation/secure-transportation-data/tsdc-california-travel-survey.html
- California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures
  Link: http://www.airquality.org/air-quality-health/climate-change/ghg-handbook-caleemod
- Fehr & Peers, County of Los Angeles CAP VMT Reduction Estimate Summary (February 22, 2023)

[33] Fehr & Peers. 2021. County of Los Angeles CAP VMT Reduction Estimate Summary, February 22, 2023.
[34] California Air Resources Board. 2021. EMFAC2021 Model. Version v1.0.1. 2021. Available: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9. Accessed October 2021.

- Fehr & Peers, County of Los Angeles 2045 Climate Action Plan Update – VMT Technical Memorandum (February 22, 2023)
- EMFAC2021 Model, v1.0.1
  Link: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9

Strategy 3: Reduce Single-Occupancy Vehicle Trips

MEASURE T3: EXPAND BICYCLE AND PEDESTRIAN NETWORK TO SERVE RESIDENTIAL, EMPLOYMENT, AND RECREATIONAL TRIPS

Table B-9: Measure T3 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	0
2035	2,811
2045	2,730

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

Travel options that serve a variety of land uses and trip purposes can help shift some trips away from single-occupancy vehicles.

Performance Objectives

The goal of Measure T3 is to increase bikeway miles by 300 percent by 2035.

Modeling Approach

To quantify VMT reductions for Measure T3, appropriate equations were used based on factsheets in the CAPCOA handbook. Using data from a County GIS shapefile layer showing the 2021–2029 Housing Element Rezone Areas and the 2012 County of Los Angeles Bicycle Master Plan, along with CAPCOA equations, percent reductions in VMT were estimated for Measure T3. Specifically, it was assumed that the bikeway network as planned for in the 2012 County of Los Angeles Bicycle Master Plan would be increased by more than threefold by 2035 as compared to existing conditions, resulting in a 0.5 percent reduction in Countywide passenger vehicle VMT. This reduction was applied to the total VMT occurring within unincorporated Los Angeles County. The sum of these VMT reductions was then subtracted from total light-duty vehicle VMT to estimate adjusted daily VMT. This adjusted daily VMT was then projected to obtain VMT reductions and adjusted totals in each analysis year (2030, 2035, and 2045).

GHG reductions from Measure T3 are calculated using daily VMT reductions, as described above.[35] The average daily VMT reductions achieved through implementation of Measure T3 were annualized by multiplying by 347 days, consistent with the GHG Inventory and Adjusted BAU forecast (see Appendix A). GHG emissions reductions were then calculated by multiplying

[35] Fehr & Peers. 2021. County of Los Angeles CAP VMT Reduction Estimate Summary, February 22, 2023.

the annual VMT reductions by the Adjusted BAU passenger vehicle emission factors for each target year as derived from EMFAC2021 (see Section B.1 above).[36]

Assumptions

- The County's bikeway network as planned for in the 2012 County of Los Angeles Bicycle Master Plan would be increased by more than threefold by 2035 as compared to existing conditions.
- The reduction in VMT applies to the total VMT occurring within unincorporated Los Angeles County.
- Daily VMT reductions are annualized by multiplying by 347 days.
- Passenger vehicle category corresponds to EMFAC vehicle categories LDA, LDT1, LDT2, MCY, and MD.

References

- County of Los Angeles GIS shapefile layer for the 2021–2029 Housing Element Rezone Areas
- 2012 County of Los Angeles Bicycle Master Plan
  Link: https://pw.lacounty.gov/tpp/bike/masterplan.cfm
- California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measure
  Link: http://www.airquality.org/air-quality-health/climate-change/ghg-handbook-caleemod
- Fehr & Peers, County of Los Angeles CAP VMT Reduction Estimate Summary (February 23, 2023)
- Fehr & Peers, County of Los Angeles 2045 Climate Action Plan Update - VMT Technical Memorandum (February 23, 2023)
- EMFAC2021 Model, v1.0.1
  Link: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9

MEASURE T4: BROADEN OPTIONS FOR TRANSIT, ACTIVE TRANSPORTATION, AND ALTERNATIVE MODES OF TRANSPORTATION

Table B-10: Measure T4 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	11,465
2035	10,904
2045	10,593

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

Transit service, micro mobility services (such as bike-share, scooter-share, and drone deliveries), and access to these transportation options can help reduce VMT.

Performance Objectives

The goal of Measure T4 is to, by 2030, double transit service hours from 560,000 to 1.12 million hours, install bus-only lanes on all major transit thoroughfares, and that 75 percent of unincorporated Los Angeles County residents will live within one-half mile of shuttle or mobility service. Measure T4 has several additional performance goals, such as that all transit corridors will have micro mobility service and to prioritize micro mobility along equity areas and high-quality transit corridors.

[36] California Air Resources Board. 2021. EMFAC2021 Model. Version v1.0.1. Available: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9. Accessed October 2021.

Modeling Approach

To quantify VMT reductions for Measure T4, appropriate equations were used based on factsheets in the CAPCOA handbook. VMT reductions and associated GHG emissions reductions were quantified for two separate implementing actions that support Measure T4: Action T4.1 (Expand and improve frequency of County shuttles and explore new mobility services, such as micro transit, autonomous vehicles, micro mobility, and on-demand autonomous shuttles) and Action T4.2 (Install bus-only lanes and signal prioritization along major thoroughfares, and work with transit agencies and neighboring jurisdictions to plan and install full bus rapid transit infrastructure along priority corridors, as appropriate).

VMT reductions from Action T4.1 were calculated using a major transit stop GIS layer developed as part of the County's SB 743 VMT Tool released in late 2020 and information from the LA Metro NextGen Bus Plan (2020) and the LA Metro Long Range Transportation Plan (2020), along with CAPCOA equations. Specifically, the transit mode share of 4.6 percent per the 2012 California Household Travel Survey was used, and it was assumed that implementation of Action T4.1 would increase the total number of transit service hours in unincorporated Los Angeles County from 560,000 to 1.12 million after transit expansion. This value is based on the Metro NextGen report. This increase in transit service hours would result in a 1.9 percent reduction in Countywide passenger vehicle VMT. This reduction was applied to the total VMT occurring within unincorporated Los Angeles County. This VMT reduction was then subtracted from total light-duty vehicle VMT to estimate adjusted daily VMT. This adjusted daily VMT was then projected to obtain VMT reductions and adjusted totals in each analysis year (2030, 2035, and 2045).

VMT reductions from Action T4.2 were calculated using a major transit stop GIS layer developed as part of the County's SB 743 VMT Tool released in late 2020 and information from the LA Metro NextGen Plan and LA Metro Long Range Transportation Plan, along with CAPCOA equations. Specifically, the transit mode share of 4.6 percent per the 2012 California Household Travel Survey was used, and it was assumed that implementation of Action T4.2 would result in 100 percent of all transit routes in unincorporated Los Angeles County will receive bus-only lanes, signal prioritization along major thoroughfares, and full bus rapid transit infrastructure along priority corridors. This value is based on the LA Metro NextGen Plan and LA Metro Long Range Transportation Plan. This infrastructure would result in a 0.6 percent reduction in total VMT occurring in unincorporated Los Angeles County's TOD areas and HQTAs. VMT was calculated at the TAZ level. Once the percent VMT reductions were determined, based on the geographic scope and VMT category of Measure T4.2, the appropriate VMT was aggregated across the relevant TAZs within which transit mode shift would increase. Percent reductions were then applied to appropriate VMT subtotals to obtain the VMT reduction estimates. The sum of these reductions was then subtracted from total light-duty vehicle VMT to estimate adjusted daily VMT. This adjusted daily VMT was then projected to obtain VMT reductions and adjusted totals in each analysis year (2030, 2035, and 2045).

GHG reductions from Measure T4 are calculated using daily VMT reductions, as described above.[37] The average daily VMT reductions achieved through implementation of Measure T4 were annualized by multiplying by 347 days, consistent with the GHG Inventory and Adjusted BAU forecast (see Appendix A). GHG emissions reductions were then calculated by multiplying

[37] Fehr & Peers. 2021. County of Los Angeles CAP VMT Reduction Estimate Summary, February 22, 2023.

the annual VMT reductions by the Adjusted BAU passenger vehicle emission factors for each target year as derived from EMFAC2021 (see Section B.1 above).[38]

Assumptions

- The baseline transit mode share is 4.6 percent, per the 2012 California Household Travel Survey.
- For Action T4.1, the total number of transit service hours in unincorporated Los Angeles County would increase from 560,000 to 1.12 million after transit expansion.
- For Action T4.1, the reduction in VMT applies to the total VMT occurring within unincorporated Los Angeles County.
- For Action T4.2, 100 percent of all transit routes in unincorporated Los Angeles County will receive bus-only lanes, signal prioritization along major thoroughfares, and full bus rapid transit infrastructure along priority corridors.
- For Action T4.2, VMT reductions apply to the relevant TAZs within which transit mode shift would increase.
- Daily VMT reductions are annualized by multiplying by 347 days.
- Passenger vehicle category corresponds to the EMFAC vehicle categories LDA, LDT1, LDT2, MCY, and MD.

References

- County of Los Angeles GIS shapefile layer for the 2021–2029 Housing Element Rezone Areas
- Major transit stop GIS layer developed as part of the County's SB 743 VMT Tool (2020)
- LA Metro 2020 Long Range Transportation Plan, March 2020.
  Link: https://www.metro.net/about/plans/long-range-transportation-plan/
- LA Metro NextGen Bus Plan, October 2020
  Link: https://www.metro.net/about/plans/nextgen-bus-plan/
- 2012 California Household Travel Survey
  Link: https://www.nrel.gov/transportation/secure-transportation-data/tsdc-california-travel-survey.html
- California Air Pollution Control Officers Association, *Quantifying Greenhouse Gas Mitigation Measures*
  Link: http://www.airquality.org/air-quality-health/climate-change/ghg-handbook-caleemod
- Fehr & Peers, County of Los Angeles CAP VMT Reduction Estimate Summary (February 22, 2023)
- Fehr & Peers, County of Los Angeles 2045 Climate Action Plan Update - VMT Technical Memorandum (February 22, 2023)
- EMFAC2021 Model, v1.0.1
  Link: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9

Strategy 4: Institutionalize Low-Carbon Transportation

MEASURE T6: INCREASE ZEV MARKET SHARE AND REDUCE GASOLINE AND DIESEL FUEL SALES

Table B-11: Measure T6 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	482,515
2035	820,125
2045	1,535,101

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

[38] California Air Resources Board. 2021. EMFAC2021 Model. Version v1.0.1. Available: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9. Accessed October 2021.

Description

Increase unincorporated Los Angeles County's ZEV market share and vehicle penetration to the maximum extent feasible. Set targets for reducing total gasoline and diesel vehicle fuel sales.

Performance Objectives

The goal of Measure T6 is to increase the total amount of light-duty vehicles in unincorporated Los Angeles County that are ZEVs to 30 percent by 2030, 50 percent by 2035, and 90 percent by 2045; to increase the sales of new light-duty vehicles in unincorporated Los Angeles County that are ZEVs to 68 percent by 2030 and 100 percent by 2035; to install 38,000 total new public and private shared EVCS (including EVCS at County facilities and properties) by 2030, 74,000 total new EVCS by 2035, and 140,000 total new EVCS by 2045; and to install 5,000 total new EVCS at County facilities and properties, 10,000 total new EVCS by 2035, and 25,000 total new EVCS by 2045.

Modeling Approach

The Measure T6 calculations use Adjusted BAU GHG emissions from passenger vehicles as a baseline. To calculate the portion of the passenger vehicle fleet that are ZEVs under Measure T6, the passenger vehicle electrification performance goals for each future year were applied to the total vehicle population and Countywide VMT outputs of the applicable EMFAC2021 model passenger vehicle types (LDA, LDT1, LDT2, MCY, and MDV). The remaining non-ZEV population and Countywide VMT by fuel type (diesel, gasoline, and plug-in hybrid) was distributed proportionally for each vehicle type based on Countywide fuel type distribution data from EMFAC2021. The adjusted ZEV population and VMT values with implementation of Measure T6 were then factored back in to the VMT-weighted emission factor calculations used for the Adjusted BAU forecast (see section B.2 above) to calculate new fleetwide vehicle emission rates under Measure T6. The recalculated weighted emission factors for passenger vehicles were then applied to the total passenger vehicle VMT by year to estimate GHG emissions with implementation of Measure T6.

Electric vehicle miles traveled (e-VMT) were then calculated for the Adjusted BAU forecast and for the scenario with implementation of Measure T6 by multiplying the total passenger vehicle VMT for each year by the electric vehicle share under each scenario. The e-VMT was then multiplied by electricity factors (kWh/mile) derived from EMFAC2021 to determine the total electricity consumption from electric vehicles. GHG emissions associated with this electricity use were estimated using the same participation rates and emission factors implemented under Measure ES2, as described below. Total GHG emissions reductions from Measure T6 were calculated by subtracting GHG emissions associated with Measure T6 implementation for passenger vehicles and electric vehicle charging from GHG emissions under the Adjusted BAU forecast for passenger vehicles and electric vehicle charging.

Measure T6 substantially reduces GHG emissions in the county; this measure is the most effective measure in the 2045 CAP.

Assumptions

- Increased electric vehicle adoption displaces all other vehicle types (diesel, gasoline, plug-in hybrid) and non-ZEV VMT is redistributed proportional to each fuel type's share of total population and VMT (from EMFAC2011).
- The efficiency of electric vehicles remains constant throughout all future years.

- The County passenger fleet vehicle population remains constant through 2045.
- CPA and SCE emission factors for electricity are the same as those reported in section B.1 below.
- CPA participation rates after implementation of Measure ES2.

Data Sources

- EMFAC2021 Model, v1.0.1
  Link: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9
- Alternative Fuels Data Center, Annual Average VMT per Vehicle
  Link: https://afdc.energy.gov/data/10309
- SCE Emission Factors
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- CPA Emission factors
  Link: (account required for download): https://cris4.org/(S(rtuopf12t5k5ymsx3rurxtg4))/frmLILogin.aspx
- CPA Member Status Report, July 28, 2021

MEASURE T7: ELECTRIFY COUNTY FLEET VEHICLES

Table B-12: Measure T7 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	29,743
2035	24,335
2045	10,119

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

Electrify the County bus, shuttle, and light-duty vehicle fleet and shuttles.

Performance Objectives

The goals of this measure are to increase the total amount of light-duty vehicles in the County-owned fleet that are ZEVs to 35 percent by 2030, 60 percent by 2035, and 100 percent by 2045; to electrify the entire County bus and shuttle fleet by 2035; and to electrify 15 of the County's inmate buses by 2030, 30 inmate buses by 2035, and 68 inmate buses by 2045.

Modeling Approach

GHG emissions reductions associated with electrification of County passenger fleet vehicles were calculated for Measure T7. The total number of County fleet passenger vehicles was provided by the County's Internal Services Department (ISD).[39] Total VMT for these vehicles were estimated based on an annual average VMT per vehicle from the Alternative Fuels Data Center.[40] This average VMT value was then multiplied by the number of vehicles to estimate the total annual VMT for County fleet passenger vehicles. The baseline (Adjusted BAU) e-VMT was estimated based on the number of electric vehicle purchases in fiscal year 2019–20 as a percentage of total passenger fleet vehicles from the County's Annual Clean Fuel Sustainability Report. e-VMT under implementation of Measure T6 was estimated using the total passenger fleet vehicle VMT and electric vehicle fleet goals specific to the County fleet (35 percent by 2030, 60 percent by 2035,

[39] County of Los Angeles Internal Services Department. 2021. *Annual Clean Fuel Sustainability Report*.
[40] Alternative Fuels Data Center. 2020. Annual Average VMT per Vehicle. February 2020. Available: https://afdc.energy.gov/data/10309. Accessed November 2021.

and 100 percent by 2045). GHG emissions for electrified passenger fleet vehicles with implementation of Measure T6 were then calculated by multiplying total VMT by adjusted VMT-weighted emission factors from EMFAC2021 using the same method as discussed above for the Countywide fleet, scaled to match the light-duty fleet electrification performance objectives of this measure. These emissions were subtracted from the Adjusted BAU forecast GHG emissions for the County passenger vehicle fleet in order to estimate GHG emissions reductions for Measure T7 for county light-duty fleet vehicles. Only the portion of GHG emissions reductions for county fleet vehicles that exceed the ZEV goals of Measure T6 were included in Measure T7, to avoid double-counting the effects of Measure T6 on the county-owned fleet.

The Measure T7 calculations use Adjusted BAU fuel use and GHG emissions from public transit buses as a baseline. Measure T7 assumes a 100 percent electrification rate of all County fleet buses by 2030. To calculate GHG emissions reductions associated with Measure T7, fuel use from diesel, gasoline, and compressed natural gas under the Adjusted BAU forecast was converted to electricity using specific energy effectiveness ratios (EERs) by fuel type and conversion factors from gallons to British thermal units (Btu) and Btu to electricity use.[41,42] The EERs account for the change in vehicle energy efficiency when substituting one fuel for another. GHG emissions associated with implementation of Measure T7 were calculated using the same participation rates and emission factors implemented under Measure ES2, as discussed below. GHG emissions after implementation of Measure T7 were then subtracted from the Adjusted BAU GHG emissions to estimate the emissions reductions from Measure T7.

Measure T7 also includes electrification of the County's inmate bus fleet. The total number of inmate buses in the County's fleet (88) was provided by the Los Angeles County Sheriff's Department.[43] Annual VMT for the County's inmate bus fleet was estimated based on an annual average VMT value of 12,000 per bus from the Alternative Fuels Data Center.[44] The average inmate bus VMT was then multiplied by the total number of inmate buses to estimate the total annual VMT for inmate buses. The baseline e-VMT was assumed to be zero given that the Sheriff's Department does not currently operate any electric inmate buses. e-VMT from implementation of Measure T7 was determined using data provided by the Los Angeles County Sheriff's Department on planned electrification of the inmate bus fleet: 15 buses electrified by 2030, 30 buses electrified by 2035, and 68 buses electrified by 2045.[45] GHG emissions associated with the electrification of inmate buses under Measure T7 were calculated using weighted average bus emission factors from EMFAC2021 multiplied by the annual diesel VMT and e-VMT; these emissions were then subtracted from the GHG emissions in the Adjusted BAU forecast to determine emissions reductions.

[41] Navius Research. 2018. *Analysis of Energy Effectiveness Ratios for Light- and Heavy-Duty Vehicles.* November 6, 2018. Available: https://www.naviusresearch.com/wp-content/uploads/2018/11/BC-EER-Review-Final-Report-2018-11-06.pdf. Accessed November 2021.
[42] Alternative Fuels Data Center. 2021. Fuel Properties. January 2021. Available: https://afdc.energy.gov/fuels/properties. Accessed November 2021.
[43] County of Los Angeles Internal Services Department. 2021. *Annual Clean Fuel Sustainability Report*.
[44] Alternative Fuels Data Center. 2020. Annual Average VMT per Vehicle. February 2020. Available: https://afdc.energy.gov/data/10309. Accessed November 2021.
[45] Los Angeles County Sheriff's Department email correspondence (2021).

Assumptions

- The County passenger fleet vehicle annual average VMT per vehicle value of 11,467 remains constant through 2045.
- Complete electrification of the transit bus fleet by 2030.
- CPA and SCE emission factors for electricity are the same as those reported in section B.1 below.
- CPA participation rates after implementation of Measure ES2.
- EERs applied to each non-electric fuel type to convert to electricity.
- The County inmate bus fleet vehicle annual average VMT per bus value of 12,000 remains constant through 2045.

References

- County of Los Angeles Internal Services Department, Annual Clean Fuel Sustainability Report, 2021.
- Navius Research, Analysis of Energy Effectiveness Ratios for Light- and Heavy-Duty Vehicles Link: https://www.naviusresearch.com/wp-content/uploads/2018/11/BC-EER-Review-Final-Report-2018-11-06.pdf.
- Alternative Fuels Data Center, Fuel Properties. Link: https://afdc.energy.gov/fuels/properties. Accessed November 2021.
- County of Los Angeles Internal Services Department, Annual Clean Fuel Sustainability Report, 2021.
- Alternative Fuels Data Center, Annual Average VMT per Vehicle Link: https://afdc.energy.gov/data/10309.
- Los Angeles County Sheriff's Department email correspondence (2021)
- SCE Emission Factors Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- CPA Emission factors Link: (account required for download): https://cris4.org/(S(rtuopf12t5k5ymsx3rurxtg4))/frmLILogin.aspx
- CPA Member Status Report, July 28, 2021

MEASURE T8: ACCELERATE FREIGHT DECARBONIZATION

Table B-13: Measure T8 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	86,168
2035	103,528
2045	176,638

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

Incentivize and implement freight decarbonization technologies, specifically focusing on charging infrastructure.

Performance Objectives

The goal of this measure is to achieve a total market share of ZEVs for medium- and heavy-duty vehicles of 40 percent by 2030, 60 percent by 2035, and 90 percent by 2045; transition 50 percent of medium- and heavy-duty vehicles in the County-owned fleet to ZEVs by 2030, 70 percent by 2035, and 95 percent by 2045; ensure that 100 percent of the drayage truck fleet is ZEV by 2035; ensure that 100 percent of sales of medium- and heavy-duty trucks are ZEV by

2045; require that all new warehouse loading docks have EVCS by 2030; and require that all existing warehouse loading docks have EVCS by 2030.

Modeling Approach

The Measure T8 calculations use Adjusted BAU GHG emissions from medium- and heavy-duty trucks as a baseline. To calculate the portion of the medium- and heavy-duty truck fleet that are ZEVs under Measure T8, the truck electrification performance goals for each future year were applied to the total vehicle population and Countywide VMT outputs of the applicable EMFAC2021 model medium- and heavy-duty vehicle types (LHDT1, LHDT2, MHDT, HHDT, and MH). The remaining non-ZEV population and Countywide VMT by fuel type (diesel, gasoline, and natural gas) was distributed proportionally for each vehicle type based on Countywide fuel type distribution data from EMFAC2021. The adjusted ZEV population and VMT values with implementation of Measure T8 were then factored back into the VMT-weighted emission factor calculations used for the Adjusted BAU forecast (see section B.2 above) to calculate new fleetwide vehicle emission rates under Measure T8. The recalculated weighted emission factors for trucks were then applied to the total medium- and heavy-duty truck VMT by year to estimate GHG emissions with implementation of the Measure T8.

The e-VMT were then calculated for the Adjusted BAU forecast and for the scenario with implementation of Measure T8 by multiplying the total medium- and heavy-duty truck VMT for each year by the electric vehicle share under each scenario.[46] The e-VMT was then multiplied by electricity factors (kWh/mile) derived from EMFAC2021 to determine the total electricity consumption from electric vehicles. GHG emissions associated with this electricity use were estimated using the same participation rates and emission factors implemented under Measure ES2, as described below. Total GHG emissions reductions from Measure T8 were calculated by subtracting GHG emissions associated with Measure T8 implementation for medium- and heavy-duty trucks and electric vehicle charging from GHG emissions under the Adjusted BAU forecast for medium- and heavy-duty trucks and electric vehicle charging.

GHG emissions reductions associated with electrification of the County's medium- and heavy-duty fleet vehicles were also calculated for Measure T8. The total number of County fleet medium- and heavy-duty trucks was provided by ISD.[47] Total VMT for these vehicles were estimated based on an annual average VMT per truck from the Alternative Fuels Data Center.[48] This average VMT value was then multiplied by the number of trucks to estimate the total annual VMT for the County's medium- and heavy-duty fleet vehicles. The baseline (Adjusted BAU) e-VMT was estimated based on the number of electric truck purchases in fiscal year 2019–20 as a percentage of total medium- and heavy-duty fleet vehicles from the County's Annual Clean Fuel Sustainability Report. e-VMT under implementation of Measure T8 was estimated using the total medium- and heavy-duty fleet vehicle VMT and electric truck fleet goals specific to the County fleet (60 percent by 2030, 80 percent by 2035, and 95 percent by 2045). GHG emissions for electrified medium- and heavy-duty fleet vehicles with implementation of Measure T8 were then calculated by multiplying total VMT by adjusted VMT-weighted emission factors from EMFAC2011 using the same method as discussed above for the Countywide fleet. These

[46] California Air Resources Board. 2021. EMFAC2021 Model. Version v1.0.1. Available: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9. Accessed October 2021.
[47] County of Los Angeles Internal Services Department. 2021. *Annual Clean Fuel Sustainability Report*.
[48] Alternative Fuels Data Center. 2020. Annual Average VMT per Vehicle. February 2020. Available: https://afdc.energy.gov/data/10309. Accessed November 2021.

emissions were subtracted from the Adjusted BAU forecast GHG emissions for the County's medium- and heavy-duty vehicle fleet to estimate GHG emissions reductions for Measure T8 for County fleet vehicles.

Assumptions

- Increased electric vehicle adoption displaces all other vehicle types (diesel, gasoline, natural gas) and VMT is redistributed proportional to the fuel type's share of total population and VMT.
- The County's medium- and heavy-duty fleet vehicle population remains constant through 2045.
- The County's medium- and heavy-duty fleet vehicle annual average VMT per vehicle value of 16,326 remains constant through 2045.
- CPA and SCE emission factors for electricity are the same as those reported in section B.1 above.
- CPA participation rates after implementation of Measure ES2.

Data Sources

- EMFAC2021 Model, v1.0.1
  Link: https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9
- County of Los Angeles Internal Services Department, Annual Clean Fuel Sustainability Report, 2021
- Alternative Fuels Data Center, Annual Average VMT per Vehicle
  Link: https://afdc.energy.gov/data/10309.
- SCE Emission Factors
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- CPA Emission factors
  Link: (account required for download): https://cris4.org/(S(rtuopf12t5k5ymsx3rurxtg4))/frmLILogin.aspx
- CPA Member Status Report, July 28, 2021

MEASURE T9: EXPAND USE OF ZERO-EMISSION TECHNOLOGIES FOR OFF-ROAD VEHICLES AND EQUIPMENT

Table B-14: Measure T9 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	8,373
2035	21,819
2045	44,964

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

Prohibit the use of gas- and diesel-powered small (≤25 horsepower) off-road equipment and increase the use of zero-emission and near-zero-emission construction, agriculture, and manufacturing equipment.

Performance Objectives

The goal of this measure is to increase the total amount of off-road fleet and equipment in unincorporated Los Angeles County that are ZEVs to 20 percent by 2030, 50 percent by 2035, and 95 percent by 2045; and to increase the fleetwide percentage of construction, agriculture, and manufacturing equipment in unincorporated Los Angeles County that are ZEVs to 50 percent by 2030, 75 percent by 2035, and 100 percent by 2045.

Modeling Approach

The Measure T9 calculations use Adjusted BAU off-road vehicle fuel consumption and GHG emissions as a baseline for estimating GHG emissions reductions. Measure T9 aims to electrify unincorporated Los Angeles County's off-road vehicles and equipment by an increasing percentage in each future year. To calculate GHG emissions reductions associated with Measure T9, fuel use from diesel, gasoline, and compressed natural gas under the Adjusted BAU forecast was multiplied by electrification rates by target year and then converted to electricity using specific EERs by fuel type and conversion factors from gallons to Btu and Btu to electricity use.[49,50] GHG emissions from electricity under Measure T9 were calculated using the same participation rates and emission factors implemented under Measure ES2, as discussed below. Diesel, gasoline, and natural gas GHG emissions were calculated using emission factors derived from CARB's OFFROAD2017 ORION model.[51] GHG emissions after implementation of Measure T9 were then subtracted from the Adjusted BAU GHG emissions to estimate the emissions reductions from Measure T9.

Assumptions

- Natural gas-fueled equipment is not displaced by electric equipment.
- CPA and SCE emission factors for electricity are the same as those reported in section B.1 below.
- CPA participation rates after implementation of Measure ES2.
- EERs applied to each non-electric fuel type to convert to electricity.

References

- CARB OFFROAD ORION Model
  Link: https://arb.ca.gov/emfac/
- Navius Research, Analysis of Energy Effectiveness Ratios for Light- and Heavy-Duty Vehicles
  Link: https://www.naviusresearch.com/wp-content/uploads/2018/11/BC-EER-Review-Final-Report-2018-11-06.pdf.
- Alternative Fuels Data Center, Fuel Properties.
  Link: https://afdc.energy.gov/fuels/properties. Accessed November 2021.
- SCE Emission Factors
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- CPA Emission factors
  Link: (account required for download): https://cris4.org/(S(rtuopf12t5k5ymsx3rurxtg4))/frmLILogin.aspx
- CPA Member Status Report, July 28, 2021

Building Energy and Water

Building Energy and Water Measure Order of Implementation

To avoid double counting GHG emissions reductions for measures that reduce emissions in building energy and water, these measures account for overlapping effects. For example, Measure ES2 (Procure Zero Carbon Electricity) is implemented first and includes electricity emission factors and CPA participation rates that are applied through the remaining building

[49] Navius Research. 2018. *Analysis of Energy Effectiveness Ratios for Light- and Heavy-Duty Vehicles*. November 6, 2018. Available: https://www.naviusresearch.com/wp-content/uploads/2018/11/BC-EER-Review-Final-Report-2018-11-06.pdf. Accessed November 2021.
[50] Alternative Fuels Data Center. 2021. Fuel Properties. January 2021. Available: https://afdc.energy.gov/fuels/properties. Accessed November 2021.
[51] California Air Resources Board. 2018. OFFROAD ORION. Available: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/msei-modeling-tools. Accessed January 2021.

energy and water measures. Further, each measure's baseline activity data (i.e., electricity and natural gas consumption) are affected by the ordering of the measures. For example, grid electricity savings from solar production under Measure ES3 (Increase Renewable Energy Production) are subtracted from the adjusted BAU electricity activity data for the relevant building sector and the resulting electricity usage is used as the new "baseline" activity data for the next measure, Measure E4 (Improve Energy Efficiency of Existing Buildings). After Measure E4 is implemented, the new "baseline" activity data are recalculated and used as the new "baseline" total electricity usage for Measure E1 (Decarbonize Existing Buildings). For calculation purposes, measures were assumed to be implemented in the following order:

1. Measure ES2: Procure Zero Carbon Electricity
2. Measure ES3: Increase Renewable Energy Production
3. Measure E4: Improve Energy Efficiency of Existing Buildings
4. Measure E1: Decarbonize Existing Buildings
5. Measure E2: Standardize All-Electric New Development
6. Measure E5: Increase Use of Recycled Water and Gray Water Systems

Note that Measure E2 (Decarbonize New Development) is independent of the other measures because it exclusively applies to new development and therefore does not use the same baseline activity data as the other measures.

Strategy 5: Decarbonize Buildings

MEASURE E1: DECARBONIZE EXISTING BUILDINGS

Table B-16: Measure E1 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	176,072
2035	280,988
2045	477,221

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

As the carbon intensity of grid-supplied electricity decreases, decarbonization must be combined with building decarbonization, shifting the energy load from fossil fuels to carbon-free energy sources while taking into consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face. This measure aims to decarbonize applicable existing buildings. A primary alternative to fossil natural gas is renewable electricity supplied by CPA. Biomethane is another preferred alternative to fossil natural gas; however, the existing opportunities for widespread use of biomethane are limited. The use of other zero-GHG-emission fuel sources for buildings should will also be considered.

Performance Objectives

The goal of Measure E1 is to decarbonize 25 percent of all existing residential buildings by 2030, 40 percent by 2035, and 80 percent by 2045; to decarbonize 15 percent of all existing nonresidential buildings by 2030, 25 percent by 2035, and 60 percent by 2045; and to require Zero Net Energy (ZNE) for 50 percent of all major renovations by 2030, 75 percent by 2035, and 100 percent by 2045. Measure E1 has several additional performance goals, including adopting building performance standards and reach code(s), requiring all major retrofits and renovations to be electric-ready, adopting a ZNE ordinance, electrify County facilities to the maximum extent feasible, retrofit affordable housing units for efficiency, decarbonization, and resilience, and to ensure low-income households do not experience rent increases as result of first cost.

Modeling Approach

The performance objectives were derived using SCE's Pathway to 2045 Whitepaper electrification targets, as stated in Table 1 of the whitepaper's appendices. Targets are identified for the space and water heating end uses for both residential and commercial buildings. Using data from the 2012 Commercial Buildings Energy Consumption Survey (CBECS) and the 2015 Residential Energy Consumption Survey (RECS), these end use decarbonization targets were adjusted to overall residential and nonresidential natural gas consumption for buildings in the "Mixed-dry/Hot-dry" climate region as defined by the U.S. Energy Information Administration (which includes Los Angeles County).[52]

The Measure E1 calculations use the activity data (electricity and natural gas) and GHG emissions for existing residential and nonresidential land uses after implementation of Measure ES2 (Procure Zero Carbon Electricity) as a baseline. The baseline year for existing development is assumed to be 2023 because this is the earliest date that the 2045 CAP could be adopted and go into effect. In other words, Measure E1 would apply to the built environment through the end of 2022. Electricity use was used as a proxy for building decarbonization (i.e., it was assumed that decarbonization means switching from fossil natural gas to zero-carbon electricity). Electricity emissions before implementation of Measure E1 were calculated using the same participation rates and emission factors implemented under Measure ES2. To calculate the reduction in natural gas use and increase in electricity use under Measure E1, natural gas use in applicable buildings was converted to electricity use by multiplying the number of therms consumed by the electrification percentage for each building type (residential and nonresidential) for each target year, and then converting the displaced natural gas to electricity using a standard conversion factor of 29.3 kWh per therm.[53] GHG emissions after implementation of Measure E1 were then calculated using the same participation rates and emission factors implemented under Measure E1 and subtracted from the post-ES2 emissions to estimate the GHG reductions produced by Measure E1.

Assumptions

- Performance goals are based on SCE's Pathway to 2045 Whitepaper electrification goals for residential and commercial space and water heating, adjusted to average end use profiles for natural gas energy

[52] For example, the SCE Pathway targets are 36 percent electric commercial space heating and 7 percent electric commercial water heating by 2035; in the Mixed-dry/Hot-dry climate region, space heating represents 35 percent of total commercial natural gas use and water heating represents 31 percent of total commercial natural gas use; the calculation for the total commercial building electrification target is 36 percent * 35 percent + 7 percent * 31 percent = 15 percent.

[53] UC Irvine Physics and Astronomy. 2021. Energy Units and Conversions. Available: https://www.physics.uci.edu/~silverma/units.html. Accessed November 2021.

consumption in residential and commercial buildings in the "Mixed-dry/Hot-dry" climate region; the 2045 performance goals were further adjusted to help unincorporated Los Angeles County achieve its 2045 emissions reduction target.

- CPA and SCE emission factors for electricity are the same as those reported in section B.1 above.
- CPA participation rates after implementation of Measure ES2.
- Electricity use was used as a proxy for building decarbonization (i.e., decarbonization means switching from fossil natural gas to zero-carbon electricity).
- There is no efficiency loss when converting natural gas to electricity.
- Existing development represents emissions and activity data in 2023.

Data Sources

- SCE Emission Factors
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- CPA Emission factors
  Link: (account required for download): https://cris4.org/(S(rtuopf12t5k5ymsx3rurxtg4))/frmLILogin.aspx
- CPA Member Status Report, July 28, 2021
- Southern California Edison, Pathway 2045 Appendices, Table 1
  Link: https://www.edison.com/home/our-perspective/pathway-2045.html
- U.S. Energy Information Administration, 2012 Commercial Buildings Energy Consumption Survey (CBECS), Table E7
  Link: https://www.eia.gov/consumption/commercial/data/2012/index.php?view=consumption#e1-e11
- U.S. Energy Information Administration, 2015 Residential Energy Consumption Survey (RECS), Table CE4.5
  Link: https://www.eia.gov/consumption/residential/data/2015/index.php?view=consumption#undefined
- UC Irvine Physics and Astronomy, Energy Units and Conversions
  Link: https://www.physics.uci.edu/~silverma/units.html
- Climate Registry
  Link: https://www.theclimateregistry.org/wp-content/uploads/2018/06/The-Climate-Registry-2018-Default-Emission-Factor-Document.pdf (the 2018 document was the latest available at the time the inventories were prepared)

MEASURE E2: DECARBONIZE NEW DEVELOPMENT

Table B-17: Measure E2 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	7,452
2035	12,588
2045	22,639

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

This measure aims to electrify all new buildings.

Performance Objectives

The goal of Measure E2 is to decarbonize all applicable new residential and nonresidential buildings by 2030 and that most new development will be ZNE by 2030. For modeling purposes, the goal is to decarbonize 90 percent of new residential buildings (single-family and multifamily) by 2030, 95 percent by 2035, and 100 percent by 2045; and to electrify 90 percent of new nonresidential buildings (except large industry and food service) by 2030, 95 percent by 2035, and 100 percent by 2045. Measure E2 also has the performance goals that 90 percent of new

residential buildings will be ZNE by 2030, 90 percent of new nonresidential buildings (except large industry) will be ZNE by 2030, and that all new development will be electric-ready.

Modeling Approach

The Measure E2 calculations use Adjusted BAU activity data (electricity and natural gas) and GHG emissions after implementation of Measure ES2 for new residential and nonresidential land uses as a baseline. New residential and nonresidential energy use was calculated by multiplying the new building square footage[54] by the EUI for each land use type (single-family residential, multifamily residential, commercial, and manufacturing/industrial). GHG emissions for new development were then calculated using the same participation rates and emission factors implemented under Measure ES2. Electricity use was used as a proxy for building decarbonization (i.e., it was assumed that decarbonization means switching from fossil natural gas to zero-carbon electricity). To calculate the reduction in natural gas use and increase in electricity use under Measure E2, natural gas use in applicable buildings was converted to electricity use by multiplying the number of therms consumed by the electrification percentage for each building type (residential and nonresidential) for each target year and then converting the displaced natural gas to electricity using a standard conversion factor of 29.3 kWh per therm.[55] GHG emissions after implementation of Measure E2 were then calculated using the same participation rates and emission factors implemented under Measure ES2 and subtracted from the post-ES2 emissions to estimate the GHG reductions produced by Measure E2. Electrification of new development starts in 2025 and emissions reductions in each of the target years are calculated as cumulative reductions; for example, total annual GHG emissions reductions in 2030 account for all new building electrification for the years 2025 through 2030.

Assumptions

- CPA and SCE emission factors for electricity are the same as those reported in Section B.1 above.
- CPA participation rates after implementation of Measure ES2.
- Electricity use was used as a proxy for building decarbonization (i.e., decarbonization means switching from fossil natural gas to zero-carbon electricity).
- There is no efficiency loss when converting natural gas to electricity.
- Decarbonization of new development begins in 2025.
- Annual GHG emissions reductions for each target year (2030, 2035, and 2045) reflect all buildings electrified in all previous years (e.g., all buildings electrified from 2025–2030 contribute to annual emissions reductions in 2030).

Data Sources

- SCE Emission Factors
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- CPA Emission factors
  Link: (account required for download): https://cris4.org/(S(rtuopf12t5k5ymsx3rurxtg4))/frmLILogin.aspx
- CPA Member Status Report, July 28, 2021
- UCLA analysis of County of Los Angeles Parcel Assessor's Data
  Provided by UCLA Institute of Environmental Studies
- UC Irvine Physics and Astronomy, Energy Units and Conversions
  Link: https://www.physics.uci.edu/~silverma/units.html

[54] UCLA Institute of Environmental Studies. 2018. Analysis of County of Los Angeles Parcel Assessor's Data.
[55] UC Irvine Physics and Astronomy. 2021. Energy Units and Conversions. Available: https://www.physics.uci.edu/~silverma/units.html. Accessed November 2021.

- Climate Registry
  Link: https://www.theclimateregistry.org/wp-content/uploads/2018/06/The-Climate-Registry-2018-Default-Emission-Factor-Document.pdf (the 2018 document was the latest available at the time the inventories were prepared)

Strategy 6: Improve Energy Efficiency of Existing Buildings

MEASURE E4: IMPROVE ENERGY EFFICIENCY OF EXISTING BUILDINGS

Table B-19: Measure E4 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	22,274
2035	41,255
2045	203,455

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

Retrofit existing building stock to reduce overall County energy use.

Performance Objectives

The goal of Measure E4 is to improve the energy efficiency of existing residential and nonresidential buildings by reducing the energy use intensity (EUI) of existing buildings in unincorporated Los Angeles County below 2015 levels as follows: 20 percent for residential, 15 percent for industrial, and 25 percent for commercial by 2030; 25 percent for residential. 25 percent for industrial, and 35 percent for commercial by 2035; and 50 percent for residential, 50 percent for industrial, and 50 percent for commercial by 2045.

Modeling Approach

The Measure E4 calculations use the activity data (electricity and natural gas) and GHG emissions for existing residential and nonresidential land uses after implementation of Measure ES2 (Procure Zero Carbon Electricity) and Measure ES3 (Increase Renewable Energy Production) as a baseline. The baseline year for existing development is assumed to be 2023 because that is the earliest date that the 2045 CAP could be adopted and go into effect. In other words, Measure E4 would apply to the built environment through the end of 2022. This new "baseline" energy use was then multiplied by an assumed eligibility rate (i.e., the portion of buildings eligible for retrofits [based on building vintage, incentives available, income level, etc.]) and then by the participation rate (i.e., the portion of eligible residential and nonessential buildings actually performing a retrofit) to determine the total building energy usage subject to energy retrofits under Measure E4. Electricity and natural gas savings resulting from implementation of Measure E4 were then calculated by multiplying these energy usage values (electricity and natural gas) by the percent improvement in EUI for each target year under Measure E4 implementation. Electricity and natural gas emissions before implementation of Measure E4 were calculated using the same participation rates and emission factors implemented under Measure ES2 and Measure ES3. GHG emissions after implementation of Measure E4 were then calculated using the same participation rates and emission factors implemented under Measure ES2 and Measure ES3 and subtracted from the post-ES3 emissions to estimate the GHG

reductions produced by Measure E4. GHG emissions for natural gas savings were calculated using the emission factors of 0.00531 $MTCO_2e$ per therm for residential and commercial buildings and 0.00532 $MTCO_2e$ per therm for industrial buildings.

Assumptions

- CPA and SCE emission factors for electricity are the same as those reported in section B.1 above.
- CPA participation rates after implementation of Measure ES2.
- Existing building stock represents the built environment through the year 2023.
- The energy efficiency eligibility rate is 25 percent for both residential and nonpresidential buildings in 2030 and 2035 and 50 percent for both residential and nonpresidential buildings in 2045.
- The participation rate for eligible buildings is 40 percent in 2030, 60 percent in 2035, and 90 percent in 2045. When applied to the percentage of buildings that are eligible for a retrofit, 10 percent of buildings are retrofit by 2030, 15 percent of buildings are retrofit by 2035, and 45 percent of buildings are retrofit by 2045.
- The reduction in EUI is based on 2015 average County EUI values.

Data Sources

- SCE Emission Factors
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- CPA Emission factors
  Link: (account required for download): https://cris4.org/(S(rtuopf12t5k5ymsx3rurxtg4))/frmLILogin.aspx
- CPA Member Status Report, July 28, 2021
- Climate Registry
  Link: https://www.theclimateregistry.org/wp-content/uploads/2018/06/The-Climate-Registry-2018-Default-Emission-Factor-Document.pdf (the 2018 document was the latest available at the time the inventories were prepared)

Strategy 7: Conserve Water

MEASURE E6: REDUCE INDOOR AND OUTDOOR WATER CONSUMPTION

Table B-20: Measure E6 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	10,575
2035	15,122
2045	11,764

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

Reducing indoor and outdoor water consumption is essential as the state experiences longer and more severe droughts. Not only will water conservation improve regional resiliency, but it will also reduce GHG emissions through the reduction of energy consumption associated with processing, treatment, and the conveyance of water and wastewater.

Performance Objectives

The goal of Measure E6 is to reduce water use to less than 110 gallons per capita per day (GPCD) by 2030, less than 100 GPCD by 2035, and less than 75 GPCD by 2045.

Modeling Approach

Water use and the associated energy use (electricity and natural gas) to distribute and treat water supplied to unincorporated Los Angeles County were estimated for both the Adjusted BAU forecast scenario and the Measure E6 implementation scenario. Metropolitan Water District of Southern California's (MWD's) historical water use was used as a proxy for unincorporated Los Angeles County.[56] Water use in gallons per capita per day (GPCD) under the Adjusted BAU forecast was projected for each future year using unincorporated Los Angeles County's population and MWD's 2019 per capita water use (121 GPCD), which was then converted to acre-feet per year (AF/yr). Water use associated with the implementation of Measure E9 was estimated using the target GPCD (listed above) and population, which was then converted to AF/yr.

The electricity and natural gas use resulting from each of the water use scenarios (Adjusted BAU and Measure E9 implementation) was estimated for both residential and nonresidential land uses. Energy intensity factors from The Pacific Institute's *The Future of California's Water-Energy-Climate* Nexus report were used to estimate the energy use associated with the treatment, distribution, end-use, and collection of water in the region, as well as the treatment of the resulting wastewater.[57] Data from the Los Angeles County Waterworks Districts 2020 Urban Water Management Plan were used to get the following regionally specific information, which was then applied to each water use scenario: the ratio of total water demand met by locally pumped groundwater (31 percent), the ratio of total water used that is collected as wastewater (59 percent), the ratio of collected wastewater that goes through secondary treatment (100 percent), and the water used by residential versus nonresidential land uses (76 percent and 24 percent, respectively).[58,59] Averages were used to estimate the amount of residential water that is heated versus nonresidential water that is heated.[60,61]

To estimate the GHG reductions associated with Measure E6, GHG emissions associated with following two scenarios were quantified and the difference between the two was taken: implementation of Measures ES2, E1, E2, and ES3 and implementation of Measures ES2, E1, E2, ES3, and E6. In each scenario, water use was assigned to existing or new development using forecasted residential and nonresidential land use percentages. To account for implementation of Measure E1, the appropriate percentage of natural gas use associated with water use in existing development was converted to electricity use. For example, 25 percent of residential natural gas use (therms) associated with water use in existing development was converted to kWh and added to existing residential development's electricity use associated with water. The electricity use resulting from implementation of Measure E1 (electricity use associated with water use in existing residential and nonresidential development) was then multiplied by emission factors which accounted for Measures ES2 and ES3; i.e., the percentage of electricity supplied by solar and the participation rate in each tier of CPA electricity. The natural gas use resulting from implementation of Measure E1 was multiplied by standard emission factors

[56] Metropolitan Water District of Southern California. 2021. *2020 Urban Water Management Plan*. June 2021. Available: https://www.mwdh2o.com/media/21641/2020-urban-water-management-plan-june-2021.pdf. Accessed November 2021.
[57] The Pacific Institute. 2021. *The Future of California's Water-Energy-Climate Nexus*. September 2021. Available: https://pacinst.org/wp-content/uploads/2021/09/Water-Energy-Report_Sept-2021.pdf. Accessed November 2021.
[58] Los Angeles County Waterworks Districts. 2021. *2020 Urban Water Management Plans*. October 2021. Available: https://dpw.lacounty.gov/wwd/web/Publications/WMP.aspx. Accessed November 2021.
[59] California Department of Water Resources. 2022. Water Use Efficiency Data Portal. Available: https://wuedata.water.ca.gov/default.asp. Accessed November 2021.
[60] Water Research Foundation. 2016. *Residential End Uses of Water,* Version 2, Executive Report. April 2016. Available: https://www.circleofblue.org/wp-content/uploads/2016/04/WRF_REU2016.pdf. Accessed November 2021.
[61] Yudelson, 2010. Available: http://greenbuildconsult.com/pdfs/GreenWater.pdf. Accessed November 2021.

associated with each land use type. To account for implementation of Measure E2, all natural gas use associated with water use in new development was converted to electricity and added to new development's electricity use associated with water. The combined electricity use resulting from implementation of Measure E2 was then multiplied by emission factors which accounted for Measures ES2 and ES3; i.e., the percentage of electricity supplied by solar and the participation rate in each tier of CPA electricity. Emissions associated with existing development were then summed with emissions associated with new development for each scenario.

Assumptions

- Unincorporated Los Angeles County's water use profile is equivalent to that of MWD.
- The County falls within the South Coast and South Lahontan water regions, thus energy intensity factors for each region were averaged.
- The County's water use profile can be represented by Los Angeles County Waterworks Districts data.
- No efficiency losses result from natural gas conversion to electricity (Measure E1).
- 33 percent of residential indoor water use is heated and 22 percent of nonresidential indoor water use is heated.
- CPA and SCE emission factors for electricity are the same as those reported in Section B.1 above.
- CPA participation rates after implementation of Measure ES2.

Sources

- SCAG Population Projections
  Link: http://gisdata.scag.ca.gov/Pages/SocioEconomicLibrary.aspx?keyword=Forecasting
- MWD 2020 Urban Water Management Plan
  Link: https://www.mwdh2o.com/media/21641/2020-urban-water-management-plan-june-2021.pdf
- Los Angeles County Waterworks Districts 2020 Urban Water Management Plan
  Link: https://dpw.lacounty.gov/wwd/web/Publications/WMP.aspx
- Water Use Efficiency Data (WUEdata) Portal
  Link: https://wuedata.water.ca.gov/uwmp_export_2020.asp
- Water-Energy-Climate Nexus Report
  Link: https://pacinst.org/wp-content/uploads/2021/09/Water-Energy-Report_Sept-2021.pdf
- Residential End Uses of Water Report
  Link: https://www.circleofblue.org/wp-content/uploads/2016/04/WRF_REU2016.pdf
- SCE Emission Factors
  Link: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf
- CPA Emission factors
  Link: (account required for download): https://cris4.org/(S(rtuopf12t5k5ymsx3rurxtg4))/frmLILogin.aspx

Waste

Strategy 8: Minimize Waste and Recover Energy and Materials from the Waste Stream

MEASURE W1: INSTITUTIONALIZE SUSTAINABLE WASTE SYSTEMS AND PRACTICES

Table B-21: Measure W1 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	154,514
2035	248,362

2045	342,934

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

Undertake actions that result in sustainable waste systems Countywide. Responsible and sustainable waste practices are learned behaviors, which the County can facilitate through outreach, education, and mandates. Increase diversion of recyclable materials and organics from landfills through ordinances, service improvements, education and outreach, and promotion of product stewardship and markets for material reuse. An increased diversion rate indirectly reduces the demand for virgin materials, which reduces the life-cycle carbon intensity of any resulting products. Through action taken at the County level, waste-conscious habits and thoughtful consumption can become the default.

Performance Objectives

The goal of Measure W1 is to increase the total unincorporated Los Angeles County waste diversion rate to 85 percent by 2030, 90 percent by 2035, and 95 percent by 2045.

Modeling Approach

Target waste disposal in units of tons per capita per year were estimated for each future year using the BAU annual waste generation rate per capita (3.0 tons per person per year in 2030 and 3.1 tons per person per year in 2035 and 2045), the BAU average diversion rates (75 percent for 2030, 2035, and 2045), and the target diversion rates (85 percent in 2030, 90 percent in 2035, and 95 percent in 2045). These target disposal rates were then converted to total reduction in landfilled waste in tons, compared to the BAU landfilled waste tonnages, using forecasted population. A ratio of BAU waste disposal and BAU emissions to targeted waste disposal was then used to estimate the emissions associated with waste disposal once Measure W1 has been implemented. To estimate reductions associated with new development versus existing development, a ratio of incremental population growth to total population in each of the target years was used.

Assumptions

- The BAU solid waste disposal rates are 3.0 tons per person per year in 2030 and 3.1 tons per person per year in 2035 and 2045.
- The BAU solid waste diversion rate is 75 percent in 2030, 2035, and 2045.
- Solid waste diversion rate and organics diversion rate are assumed to remain constant at 75 percent and 38 percent, respectively.
- For each ton of solid waste not placed in a landfill, 0.44 $MTCO_2e$ is saved (based on the Adjusted BAU forecast for the waste sector; see Appendix A).

Sources

- CARB FOD Model
  Link: https://ww2.arb.ca.gov/resources/documents/landfill-methane-emissions-tool
- CalRecycle SWIS Reports
  Link: https://www2.calrecycle.ca.gov/SolidWaste/Site/Search
- LADPW SWIMS Reports
  Link: https://dpw.lacounty.gov/epd/swims/OnlineServices/reports.aspx
- CalRecycle Landfill Gas Master
  Link: https://www2.calrecycle.ca.gov/PublicNotices/Documents/1642

- SCAG Population Projections
  Link: http://gisdata.scag.ca.gov/Pages/SocioEconomicLibrary.aspx?keyword=Forecasting

Agriculture, Forestry, and Other Land Use

Strategy 9: Conserve and Connect Wildlands and Working Lands

MEASURE A1: CONSERVE FORESTS, WOODLANDS, SHRUBLANDS, GRASSLANDS, DESERT, AND OTHER CARBON-SEQUESTERING WILDLANDS AND WORKING LANDS

Table B-22: Measure A1 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	8,953
2035	17,906
2045	26,858

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

Preserve, conserve, and restore agricultural lands, working lands, rangelands, forest lands, wetlands, and other wildlands in unincorporated Los Angeles County.

Performance Objectives

The goal of Measure A1 is to reduce the amount of natural land converted for urban uses 25 percent below current (2018) levels by 2030, 50 percent by 2035, and 75 percent by 2045; this is equivalent to conserving natural lands that would have otherwise been converted for urbanized uses by 53 hectares annually by 2030, 106 hectares annually by 2035, and 159 hectares annually by 2045.

Modeling Approach

The Adjusted BAU forecast assumes that 212 hectares of forest land are converted to a new land use each year, which releases carbon stored in the removed biomass. GHG emissions reductions from Measure A1 were calculated by decreasing the amount of forest land conversion in each future year and multiplying by an emission factor for land conversion. For each hectare of natural land converted to other uses, a one-time emission of 169 $MTCO_2e$ per hectare would occur (see Appendix A for discussion).[62] The number of hectares saved from conversion under Measure A1 for each future year was multiplied by the one-time emission rate of 169 $MTCO_2e$ to calculate GHG emissions reductions for this measure.

Assumptions

- 212 hectares of natural land is converted annually in the Adjusted BAU forecast.
- For each hectare of natural land saved from conversion, avoided emissions would be 169 $MTCO_2e$.

[62] NASS. 2021. CropScape. Available: https://nassgeodata.gmu.edu/CropScape/. Accessed January 2021.

References

- NASS, 2021. CropScape.
  Link: https://nassgeodata.gmu.edu/CropScape/

Strategy 10: Sequester Carbon and Implement Sustainable Agriculture

MEASURE A3: EXPAND UNINCORPORATED LOS ANGELES COUNTY'S TREE CANOPY AND GREEN SPACES

Table B-23: Measure A3 GHG Reductions

YEAR	GHG REDUCTIONS ($MTCO_2E$)
2030	4,602
2035	7,080
2045	10,310

Abbreviations: GHG = greenhouse gas;
$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Description

Create an Urban Forest Management Plan to plant trees, increase unincorporated Los Angeles County's tree canopy cover, add green space, and convert impervious surfaces.

Performance Objectives

The goal of Measure A3 is to plant 130,000 total new trees by 2030, plant 200,000 total new trees by 2035, and plant 270,000 total new trees by 2045.

Modeling Approach

The performance goals for Measure A3 were developed using the following steps:

1. Unincorporated Los Angeles County's current urban tree canopy cover is estimated to be 10.7 percent based on the Tree People 2016 LA Tree Canopy Report. Estimates by land use type are 13 percent residential, 9 percent commercial, 4 percent industrial, and 10 percent for public/semi-public, mixed use, specific plan, and other land use types.
2. The current urban area estimate is 158,889 acres from Table 6.1 of the General Plan Land Use Element for the categories above.
3. Applying the canopy cover of 10.7 percent to the total urban area acreage yields 16,943 acres of tree canopy.
4. The goal is to increase urban tree canopy cover 10 percent by 2030, 15 percent by 2035, and 20 percent by 2045. This yields an additional 1,694 new acres of tree canopy coverage by 2030, 2,542 acres by 2035, and 3,389 acres by 2045.
5. According to a 2015 study, one acre of tree canopy coverage has approximately 80.5 trees.
6. This yields 136,394 total new trees planted by 2030, 204,591 total new trees planted by 2035, and 272,788 total new trees planted by 2045 (rounded to the nearest 10,000).

Measure A3 GHG emissions reductions were calculated using assumptions from CALEEMod.[63] The calculations assume a carbon sequestration rate per tree planted (from CalEEMod) and an active growing period of 20 years for each tree, after which the tree no longer stores additional carbon. The calculation also assumes a total number of trees planted for each target year, based on the performance objectives above. The number of trees planted each year was then multiplied by the growing period and sequestration rate to estimate the overall GHG reductions from Measure A3 for each target year.

Assumptions

- Tree growing period of 20 years.
- The carbon sequestration rate remains constant for each year for each tree planted.
- The carbon sequestration rate is the average rate for all species classes included in CalEEMod.

References

- California Air Pollution Control Officers Association, CalEEMod v2020.4.0 User's Guide, Appendix A Calculation Details
  Link: http://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/appendix-a2020-4-0.pdf?sfvrsn=6
- Tree People, Los Angeles County Tree Canopy Assessment
  Link: https://www.treepeople.org/wp-content/uploads/2020/08/Tree-Canopy-LA-2016-Final-Report.pdf
- Lund, H. G., 2015, Canopy Cover, Trees per Acre, Crown Width, and Tree Spacing
  Link: https://www.researchgate.net/publication/288335361_Canopy_Cover_Trees_per_Acre_Crown_Width_and_Tree_Spacing

[63] California Air Pollution Control Officers Association. 2021. *CalEEMod v 2020.4.0 User's Guide*, Appendix A Calculation Details. May 2021. Available: http://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/appendix-a2020-4-0.pdf?sfvrsn=6. Accessed November 2021.

B.3 Attachment A: Fehr & Peers Modeling Analysis

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APPENDIX C

Prior and Current County of Los Angeles Actions on Climate Change

Purpose

This appendix describes past and current County of Los Angeles (County) actions to address climate change and reduce greenhouse gas (GHG) emissions. The appendix is organized in two sections as discussed below.

Los Angeles County Community Climate Action Plan 2020

This section describes the 2020 Los Angeles County Community Climate Action Plan (2020 CCAP), the County's first community climate action plan, adopted in 2015. It presents the 26 local actions for GHG emissions reduction and the progress that has been made by the County on each action.

OurCounty Sustainability Plan

This section describes the OurCounty Sustainability plan, adopted in 2019. It lists the key OurCounty actions that pertain to GHG emissions reductions and have linkages to the 2045 CAP strategies, measures, and actions.

C.1 Los Angeles County Community Climate Action Plan 2020

The County adopted the 2020 CCAP as a component of the Air Quality Element of the General Plan in 2015. The 2020 CCAP aligned with General Plan goals, policies, and programs and several other existing programs in Los Angeles County. It identified emissions related to community activities, established a 2020 GHG emissions reduction target consistent with Assembly Bill (AB) 32, and established 26 local actions for GHG emissions reduction. The 2020 CCAP was the first attempt to set Countywide GHG emissions reduction goals, providing a road map for implementing the County GHG emissions reduction measures. The 2020 CCAP addressed emissions from land use, transportation, building energy, water consumption, and waste generation.

The actions outlined in the 2020 CCAP, along with additional climate-related efforts, reflect the County's existing commitment to reducing GHG emissions. The 2020 CCAP actions were implemented through ordinance amendments to the County Code and implementation of various energy, land use, transportation, water conservation, and waste reduction programs. The *2045 Los Angeles County Climate Action Plan* (2045 CAP) builds on previous work and defines new reduction targets beyond the year 2020 for 2030, 2035, and 2045, and identifies a long-term aspirational target for of carbon neutrality by 2045. The County's accomplishments and ongoing initiatives (as of 2022) are listed below.

LUT-1: Bicycle Programs and Supporting Facilities (Ongoing)

Since approval of the Bicycle Master Plan in 2012, the County has applied for and received grants to implement the plan's proposed bikeway network. In 2018, the County was awarded a total of $10,164,054 in grant funding for bikeways, pedestrian improvements (sidewalks, curb ramps, high-visibility crosswalks, and wayfinding signage), and transit improvements (bus stop amenities) from the Affordable Housing and Sustainable Communities Program for projects in the unincorporated communities of Willowbrook, East Los Angeles, and Florence-Firestone. In 2019 and 2020, the County was awarded a total of $9,065,260 in grant funding from the Measure M Multiyear Sub-Regional Program for projects in the unincorporated communities of Lake Los Angeles, Val Verde, Bouquet Canyon, Canyon Country, White Fence Farms, and Topanga Canyon. Throughout the unincorporated areas of Los Angeles County (Unincorporated Los Angeles County), 64 miles of bikeways were created between 2012 and 2021, with 3.65 miles in progress. An additional 36 miles of bikeway are planned to be completed by 2025, with 18 miles scheduled to be completed thereafter. In total, 122 miles of bikeway have been constructed or planned as part of unincorporated Los Angeles County's bikeway network. The Bicycle Master Plan is being updated to revise the list of bikeways—removing infeasible locations and identifying new locations, developing design guidelines for Class IV bikeways, developing policies and guidelines for bikeway infrastructure that could be shared with micro-mobility devices, and improving first-/last-mile bikeway connections to transit stops. The update is anticipated to be completed in 2024.

LUT-2: Pedestrian Network (Ongoing)

During calendar years 2019, 2020, and 2021, the County Department of Public Works' (PW's) road construction program completed 85,100, 101,700, and 10,754 linear feet, respectively, of

new and reconstructed sidewalks. Additionally, 60,000 square feet of sidewalk was repaired in 2021. In 2019, the County also adopted Step by Step Los Angeles County, a sub-element to the General Plan Mobility Element that included Countywide pedestrian policies, programs, and procedures, as well as community pedestrian plans for the four unincorporated communities of Lake Los Angeles, Walnut Park, Westmont/West Athens, and West Whittier–Los Nietos.

LUT-3: Transit Expansion (Ongoing)

Through the 2020 CCAP, the County has committed to working with the Los Angeles County Metropolitan Transportation Authority (Metro) on a transit program that prioritizes public transit by creating bus priority lanes, improving transit facilities, reducing transit-passenger time, and providing bicycle parking near transit stations. Future efforts will include exploring programs to offer discounted transit passes, constructing infrastructure to increase bicyclist and pedestrian access to transit stations, and implementing “first mile–last mile” strategies.

The County has been supporting Metro as a stakeholder during its development of the Pilot Congestion Pricing Study, the goal of which is to improve traffic congestion along certain roadways. A major component of this effort is providing additional opportunities for and upgrading the public transit system as an alternative to personal vehicular travel.

LUT-6: Land Use Design and Density (Ongoing)

As of 2021, the County has adopted Transit Oriented District (TOD) plans for three unincorporated area communities: Willowbrook, West Carson, and West Athens–Westmont. The County is awaiting final approval for a fourth TOD in Florence-Firestone. In 2022, the County updated its Housing Element to reduce regulatory barriers and provide incentives to promote the equitable distribution of sustainable housing development through programs that include but are not limited to the Rezoning Program, Residential Parking Program, Rent Stabilization Ordinance, and Affordable Housing and Sustainable Communities Program. The Department of Regional Planning (DRP) is currently working on a study to inform the update to parking standards for multi-family residential development, with the goals of reducing barriers to investments in multi-family housing production, reducing the overall cost of housing, and helping to lower vehicle miles traveled. After the conclusion of the study, recommendations will be finalized and an ordinance will be prepared to amend the zoning code. Public hearings on the ordinance are anticipated in 2023.

In March 2016, the Board of Supervisors instructed DRP to amend Title 22, the Planning and Zoning Code, to ensure that oil and gas facilities may no longer operate by right in unincorporated Los Angeles County, and that the regulations reflect best practices and current mitigation methods and technologies, minimize environmental impacts, and protect sensitive uses and populations. In September 2021, the Board of Supervisors voted to phase out oil and gas drilling and ban all new drill sites in unincorporated Los Angeles County areas. The phase-out would close more than 1,600 active and idle oil and gas wells in unincorporated Los Angeles County. On January 24, 2023, the Board of Supervisors adopted the Oil Well Ordinance, which became effective after 30 days. The County is conducting an amortization study to determine the phase-out timeline for all existing oil wells and production facilities.

LUT-7: Transportation Signal Synchronization Program (Ongoing)

The Board of Supervisors instituted the Countywide Traffic Signal Synchronization Program (TSSP) in 1988. This ongoing program involves upgrading traffic signal infrastructure and timing to allow for signal synchronization, implementation of pedestrian and bicycle improvements, and improved transit operations through more consistent travel times. TSSP projects completed between 2011 and 2020 generated estimated annual savings of 6.45 million gallons of gasoline and 338,000 gallons of diesel fuel. In addition, these projects are preventing the release of more than 985 tons of pollutants into the atmosphere as a result of reduced travel times and less stopping at red lights. An additional 17 TSSP projects are about to begin construction.

LUT-8: Electric Vehicle Infrastructure

Under Executive Orders B-48-18 and N-79-20, the State of California has set ambitious targets for electric vehicle (EV) infrastructure and deployment. Statewide goals include achieving registration of five million ZEVs in the state by 2030 and 250,000 EV supply equipment (EVSE) by 2025 to support the growth of EVs. In support of these targets, California is funneling hundreds of millions of dollars toward expanding EV charging stations and other zero-emission vehicle infrastructure.

The County has deployed approximately 350 EV charging ports across its facilities to support the electrification of the County fleet and to increase EVSE access to employees and the public. County Internal Services Department (ISD) received a grant from the California Energy Commission to support a regional EV infrastructure planning effort as a follow-up to a report on EV chargeback for County facilities and an EV needs assessment.

The County's EV Infrastructure Ordinance was adopted on September 6, 2016. This ordinance amended the zoning and building codes to provide an expedited and streamlined permitting process, and to develop an application and procedural framework for EV charging infrastructure, as mandated under Assembly Bill (AB) 1236 (2015). In addition, as part of the 2020 CCAP Implementation Ordinance, DRP amended Title 22 to ensure compatibility with EV infrastructure. The 2020 CCAP Implementation Ordinance was adopted on June 6, 2018.

In 2021, the County installed 315 new PowerFlex-networked charging stations with advanced managed charging capability; launched a collaboration with the California Conservation Corps and Cerritos College to train members on EV charging infrastructure through a $300,000 grant for the Los Angeles Department of Water and Power; submitted 55 applications with Southern California Edison's Charge Ready II program for multiple departments; launched EVConnect, a mapping tool to identify EV charging opportunities; and launched a EV charging user dashboard via PowerBI. Also in 2021, the Board of Supervisors adopted a revised fleet policy that requires the purchase of zero emission vehicles when replacing all County vehicles, to the extent that such vehicles are available and meet operational needs.

LUT-9: Idling Reduction Goal

The Idling Reduction Ordinance amended the zoning code to require signs in on-site loading areas to encourage the reduction of vehicle idling. This ordinance was adopted on June 6, 2018.

LUT-11: Sustainable Pavements Program (Ongoing)

In 2008, PW began to implement a three-pronged sustainable pavement treatment approach to maintain roads by incorporating principles that (1) take care of roads that are in good condition; (2) use recycled materials in the selection of treatments; and (3) reutilize existing materials in place to rehabilitate or reconstruct roads. The environmental footprint and cost of repairing roads using this new approach is much lower than traditional hot mix approaches. Through this program, PW has achieved an 80 percent reduction in energy usage (136 million kilowatt-hours [kWh]) and a 84 percent reduction in GHG emissions (39,100 metric tons carbon dioxide equivalent) and has saved approximately $69.4 million.

In addition, as part of the CCAP Implementation Ordinance, adopted on June 6, 2018, DRP amended the zoning code to allow the use of "cool pavement." In November 2019, PW completed the construction of the cool-pavement pilot project and partnered with a local research educational institution that will collect data on the performance of the cool-pavement materials. PW will continue to monitor the performance of these materials and the temperature impacts on the surrounding community.

BE-1: Green Building Development

On November 26, 2019, the Board of Supervisors formally adopted the 2020 County Green Building Standards (CALGreen) Code for the new code cycle, which came into effect on January 1, 2020. This incorporates the changes from the 2019 CALGreen building code, as well as local County amendments.

PW has also adopted a Cool Roof Ordinance to amend Title 31 to mandate the installation of Tier 2–level cool roofing materials for all projects in which it has been proven to be cost effective. The ordinance was approved by the Board of Supervisors on October 16, 2018; was approved through the California Energy Commission's review process on March 12, 2019; and went into effect on May 7, 2019. In addition, as part of the 2020 CCAP Implementation Ordinance, DRP amended the zoning code to allow the use of "cool roof materials." In February 2022, the Board of Supervisors passed a motion to study the feasibility of establishing Zero Net Energy standards for major development projects and other large-scale development. In March 2022, the Board of Supervisors passed a motion to ensure the equitable decarbonization of buildings by conducting a stakeholder engagement process, studying energy resource and infrastructure needs, and seeking funding. The motion also directs PW, the Chief Sustainability Office (CSO), DRP, and other County departments to provide recommendations for an ordinance or building code changes that would phase out the use of natural gas equipment and appliances in all new residential and commercial construction and substantial renovations, where feasible, starting in 2023.

ISD is also responsible for decommissioning the Pitchess Cogeneration Station in Saugus and the Olive View Medical Center Cogeneration Station in Sylmar, both of which are significant stationary sources of emissions (via natural gas combustion).

BE-2: Energy Efficiency Programs (Ongoing)

ISD manages a portfolio of energy efficiency programs that support communities, local governments, commercial businesses, and residential and multi-family property owners. Through

annual funding provided by the California Public Utilities Commission (CPUC), ISD also administers the Southern California Regional Energy Network (SoCalREN), which supports energy efficiency programs. ISD has secured approximately $120 million in aggregate funding from the CPUC on an annual basis since 2012, and in May 2018 was approved for $173.5 million in additional funding over the next eight years, based on the progress of the program. By the end of 2017, the program served 1,857 single-family homes and 7,330 multi-family units and supported whole-building retrofits at public agencies in the region, resulting in more than 42.5 million kWh of electricity savings, and 80,417 therms of natural gas savings.

In 2021, SoCalREN was able to achieve more than 16 million kWh of electricity savings and more than 280,000 therms of natural gas savings. Based on the success of the County's management of SoCalREN, the CPUC approved a 14 percent funding increase over the next two years to a total two-year budget of $49 million. ISD further successfully worked with the California Department of Food and Agriculture under a Healthy Stores and Refrigeration grant to deploy energy-efficient refrigerators at more than 80 small markets to increase the availability of fresh produce and vegetables in disadvantaged communities, and is well positioned for additional grant funding from this program when a new funding is released.

BE-3: Solar Installations

DRP amended the zoning code to support and facilitate responsible development of small-scale systems and utility-scale facilities in a manner that helps California meet its goals for renewable energy generation and GHG emissions reduction, while minimizing environmental and community impacts. The Renewable Energy Ordinance was adopted by the Board of Supervisors on December 13, 2016, and went into effect January 12, 2017. ISD has installed more than 4.5 megawatts (MW) of solar photovoltaic panels at County facilities and has plans to install an additional 20 MW over the next 5–10 years.

BE-4: Alternative Renewable Energy Programs (Ongoing)

In 2017, the Board of Supervisors approved the creation of a joint powers authority to implement a community choice energy program for Los Angeles County. That program, known as the Clean Power Alliance (CPA), began operating in 2018 and now serves 32 jurisdictions across Los Angeles and Ventura counties, representing 3 million residents.

The CPA offers three tiers of electric service: Lean Energy at 36 percent renewable, Clean Energy at 50 percent renewable, and 100 percent Renewable. Residents and enrolled businesses in unincorporated Los Angeles County are receiving 50 percent renewable energy, plus an additional 20 percent of GHG-free power from hydroelectric sources.

Since October 2022, customers in unincorporated Los Angeles County are receiving 100% renewable energy – wind, solar, geothermal – from CPA, compared to the 50% clean energy previously received. And most of the renewable energy is produced in California.

BE-6: Encourage Energy Efficiency Retrofits of Wastewater Equipment

The County will continue to implement energy efficiency for new or rehabilitated sewer facilities where operationally feasible.

BE-7: Landfill Biogas (Ongoing)

Landfills in the unincorporated areas reported a total installed (rated) capacity of 96 MW for 2019 and 2020. These landfill gas-to-energy installations include Ameresco Chiquita Energy, Puente Hills Energy Recovery, Calabasas Gas-to-Energy, and Sunshine Gas Producers Renewable Energy Project.

WAW-1: Per Capita Water Use Reduction Goal (Ongoing)

The County continues to hold free Smart Gardening Program public workshops on topics such as composting, water-wise gardening, and organic gardening. In 2018, PW held 95 workshops and participated in 25 community events. More than 2,000 residents attended the workshops, and 600 backyard compost bins and 490 worm compost bins were sold to residents. In 2019, the County conducted 117 Countywide Smart Gardening workshops attended by 2,951 residents. The workshops taught backyard/worm composting, and 730 backyard compost bins and 659 worm bins were sold to residents at a discount. In 2020, the County conducted 14 Smart Gardening workshops with 399 attendees. The County suspended the in-person workshops in March due to the COVID-19 pandemic and switched to webinars. The County conducted 67 Smart Gardening webinars with 2,460 attendees. Composting was the primary theme of the workshops and webinars, where 361 backyard compost bins and 293 worm bins were sold to residents at a discount. In 2021, the County held 134 smart gardening webinars with more than 6,000 attendees and sold 374 backyard compost bins and 479 worm compost bins to residents.

The County allocated $300,000 for the Waterworks Districts' Water Customer Rebate program in Fiscal Year (FY) 2016–2017. In FY 2018–2019, the Cash for Grass Rebate entailed 40 application pre-approvals, totaling $49,000 paid. The high-efficiency appliance/device rebates provided $3,900 in rebates. The County allocated $300,000 for in FY 2020–2021. The Cash for Grass Rebate program through FY 2020–2021 had 26 application pre-approvals totaling $58,000.

WAW-2: Recycled Water Use, Water Supply Improvement Programs, and Stormwater Runoff (Ongoing)

The passage of Measure W in November 2018 created the County's Safe Clean Water Program. The Safe Clean Water Program's goals include improving and protecting water quality; capturing rain and stormwater to increase safe drinking water supplies and preparing for future droughts; and protecting public health and marine life by reducing pollution, trash, toxins, and plastics entering Los Angeles County waterways, bays, and beaches.

The program generates about $285 million annually through a special parcel tax of 2.5 cents per square foot for impermeable surface area (about $83 per year for the average County household). This includes paved and developed areas where rainfall cannot be absorbed into the ground and instead runs off as stormwater into the flood control district system.

PW is implementing stormwater improvement projects with six projects completed or nearing construction completion in 2022 (per the OurCounty 2022 Annual Report published in December 2022). These stormwater improvement projects will assist in recharging local aquifers, preventing pollution from entering water bodies, and using stormwater runoff for local irrigation.

SW-1: Waste Diversion Goal (Ongoing)

The Conversion Technology Program established numerical milestones to measure implementation progress in the unincorporated Los Angeles County. The program aims to increase the current in-County capacity from 65 tons per day (tpd) to 3,000 tpd by 2035. The County is developing multiple waste diversion projects and is on track to achieve the next milestone of 500 tpd of in-County waste conversion capacity by 2025.

PW prepared draft revisions to an existing ordinance to increase the construction and demolition debris recycling requirement from 50 to 70 percent for projects in the unincorporated areas. Stakeholder outreach meetings were held in November 2020 and June 2021. The ordinance update is expected to be completed in 2023. In November 2010, the Board adopted an ordinance that prohibits the distribution of single-use plastic carryout bags at certain stores in unincorporated Los Angeles County and requires the stores to charge 10 cents for each paper or alternative bag provided to a customer.

The County's "Plastic Straws and Stirrers Upon Request" ordinance prohibits all food service businesses in unincorporated Los Angeles County from providing single-use plastic straws or stirrers to customers unless requested by the customer. In October 2019, the Board of Supervisors passed a motion directing CSO to contract with the UCLA Luskin Center for Innovation to study the issues of plastic waste, processing and recyclability of plastic materials, and potential disposal and recycling alternatives in unincorporated Los Angeles County. PW also developed the Bring Your Own (BYO) campaigns to encourage the use of reusable items, such as plates, cups, utensils, and bags, and increase awareness of the environmental impacts of single-use items. In April 2022, the Board of Supervisors passed a follow-up ordinance that phases out single-use plastics for food service ware in unincorporated Los Angeles County in favor of reusable, recyclable, or compostable options.

In 2018, PW launched the Food Donation Recovery and Outreach Program, or “Food DROP,” to facilitate the recovery of edible food to feed those in need instead of being disposed. As of 2022, there were four landfill gas-to-energy facilities in unincorporated Los Angeles County, with a total installed (rated) renewable energy generation capacity of 96 MW.

LC-1: Develop Urban Forests (Ongoing)

The County adopted the Tree Planting Ordinance in 2016, amending Title 21 (Subdivisions) and Title 22 (Planning and Zoning) of the County Code to establish new tree planting requirements for projects to provide environmental benefits. That ordinance was repealed and can now be found in Title 31 (Green Building Standards) of the County Code.

The Tree Committee of the County’s Healthy Design Workgroup coordinates interdepartmental efforts to preserve, maintain, and expand the unincorporated Los Angeles County’s urban forest in low income, tree-poor neighborhoods. In 2018, County departments collaborated with community-based organizations to complete a youth-led tree planting and education campaign, resulting in more than 1,600 trees planted in low-tree-canopy, disadvantaged areas of the San Gabriel Valley; the project resulted in approximately 100 youth trained on life skills, job skills, and tree benefits, planting, and care. In addition, more than 1,500 households received education about the benefits of trees.

In 2019, County departments led a second tree planting and community education project, this time in unincorporated West Athens. By completion, the West Athens tree planting and education project will have resulted in 650 trees planted. Additionally, during 2018–2019, PW planted more than 4,000 new parkway trees.

The County secured $1.5 million in funding from the state in 2021 to develop an urban forest management plan and is in the process of creating the plan.

LC-2: Create New Vegetated Open Space (Ongoing)

DRP amended the zoning code to allow selected accessory uses within utility easements, such as parks, open space, and limited agricultural uses, with development standards and streamlined review procedures. This was adopted as part of the CCAP Implementation Ordinances on June 6, 2018.

In 2022, DPR completed the Regional and Rural Edition of the Countywide Parks Needs Assessment, which focuses on regional recreation needs and the park needs of rural communities, and identifies areas, including open space and natural areas, that should be prioritized for conservation in the future.

LC-3: Promote the Sale of Locally Grown Foods and/or Products

DRP amended the zoning code to implement the state law AB 551, the Urban Agriculture Incentive Zones Act. This ordinance provides procedures to incentivize growing local foods on private property and was adopted by the Board of Supervisors in April 2016.

LC-4: Protect Conservation Areas

DRP amended the zoning code to update the County's Significant Ecological Areas Ordinance. The update guides development to areas that would create the least impact on environmental resources on private properties. It also contains requirements for conservation where resources are affected. This ordinance was adopted by the Board of Supervisors in December 2019. In 2018, DRP amended the zoning code to allow selected accessory uses within utility easements, such as parks, open space, and limited agricultural uses, with development standards and streamlined review procedures.

C.2 OurCounty Sustainability Plan

OurCounty outlines a long-term vision for implementing sustainable actions that improve equity, the environment, and the economy across Los Angeles County. With the adoption of OurCounty in August 2019, more than 60 priority actions are being implemented by various County departments. County departments regularly engage with partners and stakeholders to prioritize implementation and add new actions in a process that ensures accountability and progress. Although all sustainability goals, strategies and actions in OurCounty are considered important, they are all in varying stages of the planning and implementation process. The OurCounty 2022 Annual Report published in Fall 2022 provides an update on priority actions implemented in the previous year and helps inform prioritization of actions for 2023, including a call for action on low-cost, high-impact strategies for local climate action supported by community organizations.

This section lists the strategies and actions from OurCounty that align most closely with the 2045 CAP strategies, as identified in Chapter 3. Many of these are also priority actions currently being implemented and monitored through the CSO's Annual Report, focused on equitable and sustainable land use and development, thriving ecosystems and biodiversity, and a transition to zero-emission energy and transportation systems.

Strategy 2B: Require sustainable and healthy building design and construction.

- **Action 32:** Pilot high performance building standards for new County buildings beyond the current LEED Gold standard, such as Passive House, Zero Net Energy, Net Zero Water, Net Zero Waste, the Living Building Challenge and the WELL Building Standard.
- **Action 33:** Use climate projections instead of historic data for weather and precipitation modeling to inform planning, infrastructure, and community development processes.

Strategy 2D: Ensure a climate-appropriate, healthy urban tree canopy that is equitably distributed.

- **Action 43:** Create and implement a community-informed Urban Forest Management Plan that incorporates equitable urban forest practices, identifies County funding sources, and prioritizes:
  - Tree- and park-poor communities;
  - Climate and watershed-appropriate and drought/pest-resistant vegetation;
  - Appropriate watering, maintenance, and disposal practices;
  - Shading; and
  - Biodiversity.
- **Action 44:** Implement locally tailored, youth-based tree and vegetation planting and maintenance projects in collaboration with community-based organizations to reduce the impacts of heat island in low canopy areas.
- **Action 45:** Strengthen tree protections of native tree species, such as through development of an ordinance, based on findings from the Urban Forest Management Plan (UFMP).

Strategy 3A: Increase housing density and limit urban sprawl.

- **Action 46:** Develop land use tools that will facilitate increased production of various housing types such as duplex and triplex buildings, where appropriate.
- **Action 47:** Support the preservation of agricultural and working lands, including rangelands, by limiting the conversion of these lands to residential or other uses through tools such as the creation of agricultural easements, particularly within high climate-hazard areas and Significant Ecological Areas (SEAs).
- **Action 48:** Evaluate the feasibility of establishing a County brownfields program.

Strategy 3B: Implement transit-oriented development.

- **Action 49:** Expand the number and extent of transit-oriented communities while ensuring that vital public amenities such as parks and active transportation infrastructure are included.
- **Action 50:** Create an inventory of all publicly-owned land and facilities (belonging to the County and other jurisdictions) near existing and future public transit and identify opportunities for transit-oriented development.
- **Action 51:** Create guidance language for joint development opportunities on County-owned land, drawing upon Metro's Joint Development Program, Policies, and Process and actively seek opportunities for joint development that improves transit access.

Strategy 3C: Promote walkable, mixed-use neighborhoods.

- **Action 52:** Promote walkability through various tools, including zoning that enables a mix of uses, and pedestrian enhancements.
- **Action 53:** Develop equitable design guidelines that promote high quality living environments for all.

Strategy 5A: Increase ecosystem function, habitat quality, and connectivity, and prevent the loss of native biodiversity in the region.

- **Action 66:** Create a Countywide Biodiversity Index to generate a quantitative evaluation/assessment tool for measuring species richness, distribution, and threats to native biodiversity, and use the index to set targets to preserve biodiversity and inform the development of biodiversity strategies.
- **Action 67:** Develop a wildlife connectivity ordinance.
- **Action 68:** Establish comprehensive and coordinated management guidelines for local waterways, which balance priorities such as water management, flood risk mitigation, habitat, biodiversity, and community preference.
- **Action 69:** Make urban ecology a key consideration in municipal initiatives, including but not limited to open space plans, green infrastructure projects and development plans.
- **Action 70:** Increase coordination amongst and expand training of County and affiliated personnel with regards to promoting native and climate-resilient species selection, biodiversity, habitat quality, and connectivity.
- **Action 71:** Increase the number of native plants, trees, and pollinator/bird friendly landscapes on public properties for education and habitat connectivity.

Strategy 5B: Preserve and enhance open space, waterways, and priority ecological areas.

- **Action 72:** Develop a Countywide parks and open space master plan to acquire, preserve, restore, and protect available open space areas, and improve public access to open space, especially for residents in high park need areas.

- **Action 73:** Develop and implement a strategy to preserve and protect priority ecological sites, supporting sites, and priority species (including but not limited to significant ecological areas, habitat connections, terrestrial streams, wetlands, and aquatic habitats).

Strategy 7A: Transition to a zero-carbon energy system that reduces air and climate pollution and that minimizes the dangers of a changing climate to our communities and economy.

- **Action 84**: Collaborate with the City of Los Angeles and other cities to develop a sunset strategy for all oil and gas operations that prioritizes disproportionately affected communities.
- **Action 85**: Collaborate with the City of Los Angeles, Santa Monica, and other members of the Building Decarbonization Coalition to develop building energy and emissions performance standards that put the County on a path towards building decarbonization.
- **Action 86:** Develop a publicly-accessible community energy map that identifies opportunities for deploying distributed energy resources and microgrids in order to improve energy resiliency in disadvantaged communities.
- **Action 87**: Investigate low- or no-cost options to provide community shared solar facilities on County property.
- **Action 88**: Maximize the installation of solar and energy storage systems on County property whenever cost-effective.
- **Action 89**: Support development of an equitable investment plan that identifies needed improvements to electricity and natural gas transmission, distribution, and storage systems and supports local renewable energy resources.
- **Action 90:** Develop and implement a strategy to eliminate fossil fuels in County operated co-generation facilities.

Strategy 7B: Create a zero-emission transportation system.

- **Action 91:** Streamline permitting and construction of zero-emission vehicle infrastructure.
- **Action 92:** Install electric vehicle (EV) chargers at County facilities and properties for public, employee, and fleet use, prioritizing locations in disadvantaged communities.
- **Action 93:** Revise and regularly update the County's fleet policy to require zero-emission vehicles or better whenever available and operationally feasible.
- **Action 94:** Convert Sheriff's Department (LASD) fleet to zero emission by partnering with vehicle manufacturers to develop a zero emission pursuit vehicle and transport bus.
- **Action 95:** Partner with Los Angeles Fire Department (LAFD) and equipment manufacturers to pilot a zero emission fire engine.

Strategy 8A: Reduce vehicle miles traveled (VMT) by prioritizing alternatives to single-occupancy vehicles.

- **Action 96:** Partner with local jurisdictions and transit agencies such as the City of Los Angeles and Metro to develop and implement a "Transit First" policy and mobility advocacy campaign that is consistent with and supportive of the County's Vision Zero Plan.

- **Action 97:** Support Metro's efforts to study congestion pricing and amplify considerations of equity.
- **Action 98:** Install bus-only lanes and signal prioritization along major thoroughfares, and work with transit agencies and neighboring jurisdictions to plan and install full bus rapid transit infrastructure along priority corridors, as appropriate.
- **Action 99:** Develop and implement a comprehensive parking reform strategy, which should include, but not be limited to: elimination of minimum parking requirements for all new residential units, establishment of parking maximums within half a mile of high quality transit stops, creation and expansion of parking benefit districts, and incentives for developers to provide less than maximum allowable parking.
- **Action 100:** Offer free transit passes for students, youth, seniors, disabled, and low-income populations.
- **Action 101:** Develop and implement a transportation demand management (TDM) ordinance that requires developers to incorporate measures such as subsidized transit passes and car share.
- **Action 102:** Develop a transportation technology strategy to proactively address how evolving tech-enabled mobility options can support public transit and advance OurCounty goals.
- **Action 103:** Evaluate and implement demand-based priced parking at County facilities and on County streets where appropriate.
- **Action 104:** Pilot an alternative work site program for County employees.

Strategy 9A: Reduce waste generation.

- **Action 107:** In collaboration with the City of Los Angeles, develop and implement an equitable strategy to phase out single use plastics, including in County contracts and facilities.
- **Action 108:** Adopt and advocate for producer and manufacturer responsibility requirements.
- **Action 109:** Identify and implement, where appropriate, best practice waste pricing programs to reduce waste generation, including but not limited to differential prices for waste based on amount generated in the residential sector and reforms to tipping rate structures.
- **Action 110:** Conduct regular Waste Characterization Studies for sectors and sub-sectors and public space, including County facilities, to gather data on actual waste generation, composition, and recycling rates.
- **Action 111:** Pursue zero waste certification requirements at County facilities and develop incentives for businesses to achieve zero waste certification (e.g., TR UE Zero Waste).
- **Action 112:** Expand use of sustainable pavement methods and materials on County roadways.

Strategy 9B: Implement strong water conservation measures.

- **Action 113:** Develop a County-specific implementation plan for state water conservation targets that balances water supply goals with other critical OurCounty goals such as supporting conservation and expanding the urban forest.
- **Action 114:** Develop a Net Zero Water Ordinance for new development.
- **Action 115:** Adopt building code changes that improve water efficiency and reduce indoor and outdoor water use above current CALGreen standards.
- **Action 116:** Establish pilot programs for smart metering or sub-metering indoor and outdoor water use at County facilities.

Strategy 9C: Reduce building energy consumption.

- **Action 117:** Adopt an energy and water efficiency ordinance for existing buildings, requiring all privately owned buildings over 20,000 square feet to benchmark and report their energy and water use, and demonstrate their pathway to energy and water efficiency.
- **Action 118:** Expand and enhance the energy efficiency programs offered by the Southern California Regional Energy Network (SoCalREN).
- **Action 119:** Ensure that all County facilities over 25,000 square feet report their energy and water use to ENERGY STAR® Portfolio Manager®, perform retro-commissioning at those facilities with the greatest energy use and/or energy use intensity, and attain an ENERGY STAR® rating when cost-effective.

Strategy 9D: Capture organic waste and develop regional capacity for beneficial reuse.

- **Action 120:** Establish guidelines for large quantity food waste or green waste generators to perform on-site composting, mulching, or anaerobic digestion, and develop a marketing plan for the product.
- **Action 121:** Promote and communicate source separation, organic waste collection requirements, food waste reduction and donation, local organic waste recycling programs, and conduct targeted, sector-based educational campaigns.

Strategy 9E: Divert reusable and recyclable materials from landfills.

- **Action 122:** Expand and support existing countywide programs that incentivize the development of local upcycling and recycling markets and quality recycled materials.
- **Action 123:** Increase the diversion requirements in the County's Construction & Demolition debris ordinance, encourage the use of recycled-content materials in construction projects, and incentivize use of recycled materials in public art projects funded or commissioned by the County.
- **Action 124:** Establish rigorous recycling programs and requirements in County Departments.
- **Action 125:** Develop an equitable waste conversion facility siting and byproduct plan.

APPENDIX D

Planning Area Profiles

Every community in Los Angeles County has a role to play in reducing environmental impacts due to greenhouse gas (GHG) emissions and in reaching unincorporated Los Angeles County's (Unincorporated Los Angeles County's) GHG emissions reduction goals. Unincorporated communities are diverse in their demographics, geography, land use, and built form, and therefore the potential to reduce GHG emissions can vary significantly by community.

These profiles provide an overview of each of the 11 planning areas as outlined in the County of Los Angeles (County) General Plan. These planning profiles provide some information about the unincorporated areas from a climate action perspective and identify "Key Climate Actions" for each community. The profiles highlight select data points such as stationary energy emissions, population, exposure to pollution, health, and transportation patterns in each planning area. The planning profiles presented herein represent GHG emissions as they were quantified in 2020, using on-road transportation emission factors from the California Air Resources Board's (CARB's) EMFAC2017 model. The emissions inventory for the unincorporated Los Angeles County has since been revised using updated models including the more recent EMFAC2021 model, with the result showing that on-road transportation represents a lower percentage of overall unincorporated Los Angeles County emissions than estimated using the EMFAC2017 model. However, the revised emissions estimates do not affect the general conclusions regarding the key climate actions for each planning area, as the relative breakdown of emissions by sector remains roughly the same, with transportation and building energy constituting the majority of emissions in each planning area.

Transportation-related emissions from passenger vehicles and trucks account for more than half of all GHG emissions in unincorporated areas. Based on commute-to-work data, most planning areas seem to have a similar mode split. The Metro Planning Area has the lowest rates of driving

and the highest rates of transit use. However, without additional information about travel behavior, it is not possible to make meaningful interpretations about the distance traveled and transportation-related emissions in each community. Due to limited data availability, the Planning Area Profiles only note the commute mode split for each community.

Stationary energy, in particular building energy use, is responsible for about one-third of GHG emissions in unincorporated areas. A comparative analysis of stationary energy by planning area, population, sector, and fuel type is shown in Figures D-1, D-2, and D-3. Each area's unique characteristics inform "Key Climate Action" priority recommendations to maximize the GHG reductions for each planning area. Opportunities for emissions reductions exist in all communities. Some key observations are:

- The Metro Planning Area has the highest total emissions but has the lowest emissions per capita. Similarly, the East San Gabriel Valley has the second highest total emissions and the second lowest emissions per capita. These are also the two most populous planning areas.
- The Santa Monica Mountains and the San Fernando Valley have high emissions per capita, but very low overall emissions.
- Of the eight planning areas with a population over 20,000, the Santa Clarita Valley has the highest per capita emissions. The Gateway Planning Area has the highest emissions per capita of the four planning areas with a population over 100,000.
- The West San Gabriel Valley, the Antelope Valley, and the East San Gabriel Valley have high percentages of emissions from the residential sector.
- The Westside Planning Area has a high percentage of emissions from the commercial sector.
- The Gateway Planning Area has high percentage of emissions from the industrial sector. Industrial emissions not only contribute to climate change but may also contain more local air quality pollutants than emissions from other sectors.
- The Metro Planning Area and the West San Gabriel Valley have the highest consumption of natural gas.

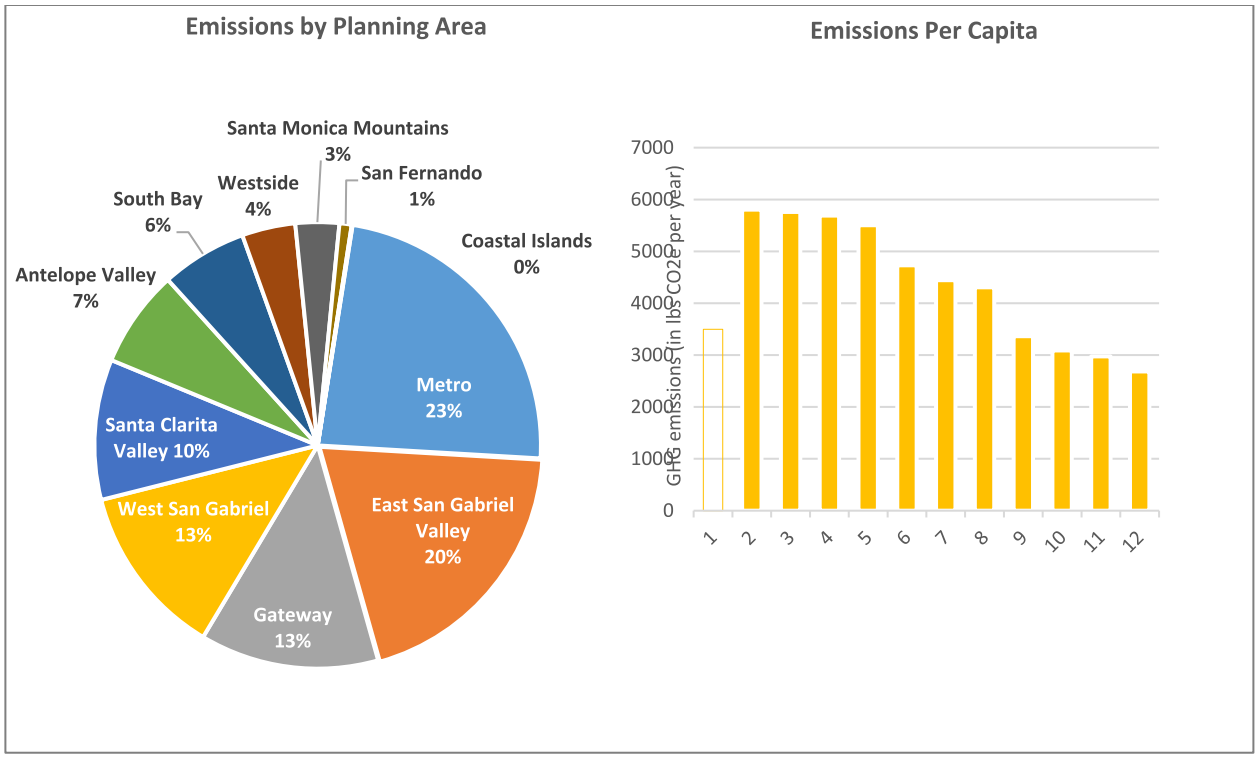


Figure D1: Stationary Energy Emissions Comparative Analysis

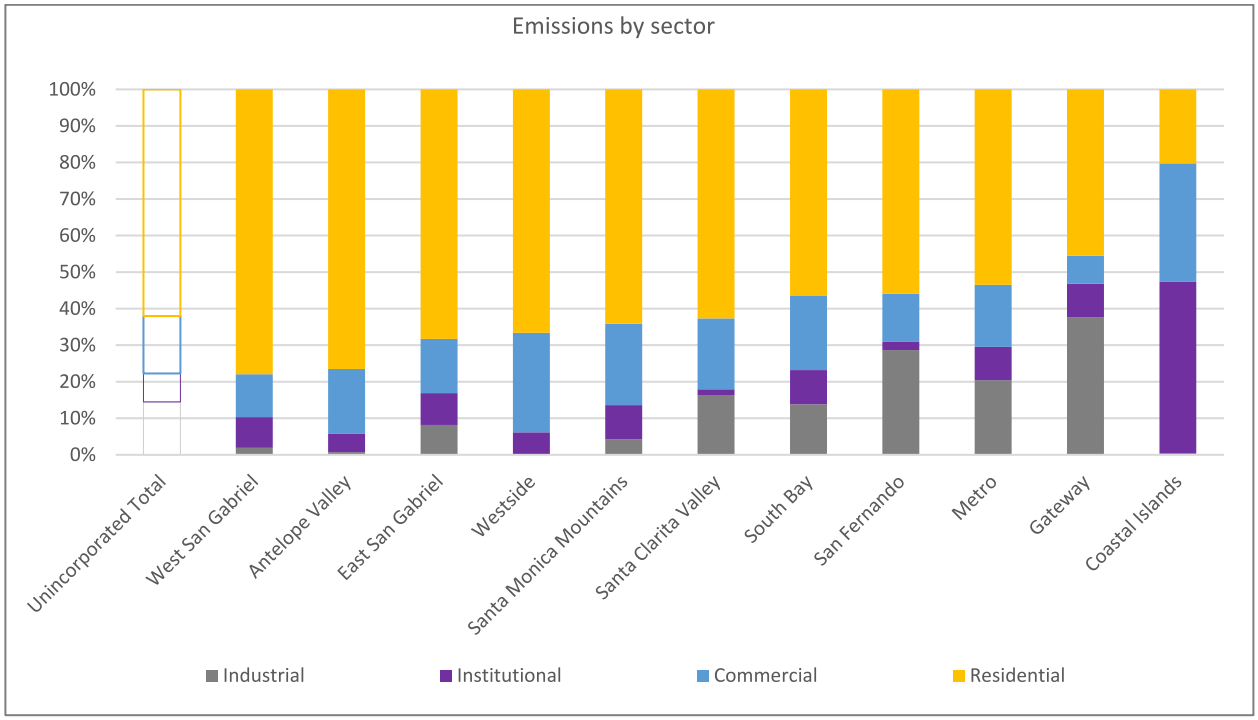


Figure D2: Stationary Energy GHG Emissions by Sector

NOTE: The figures presented above represent GHG emissions as they were quantified in 2020. The emissions inventory for the unincorporated Los Angeles County has since been revised. However, the relative breakdown of emissions by sector remains roughly the same.

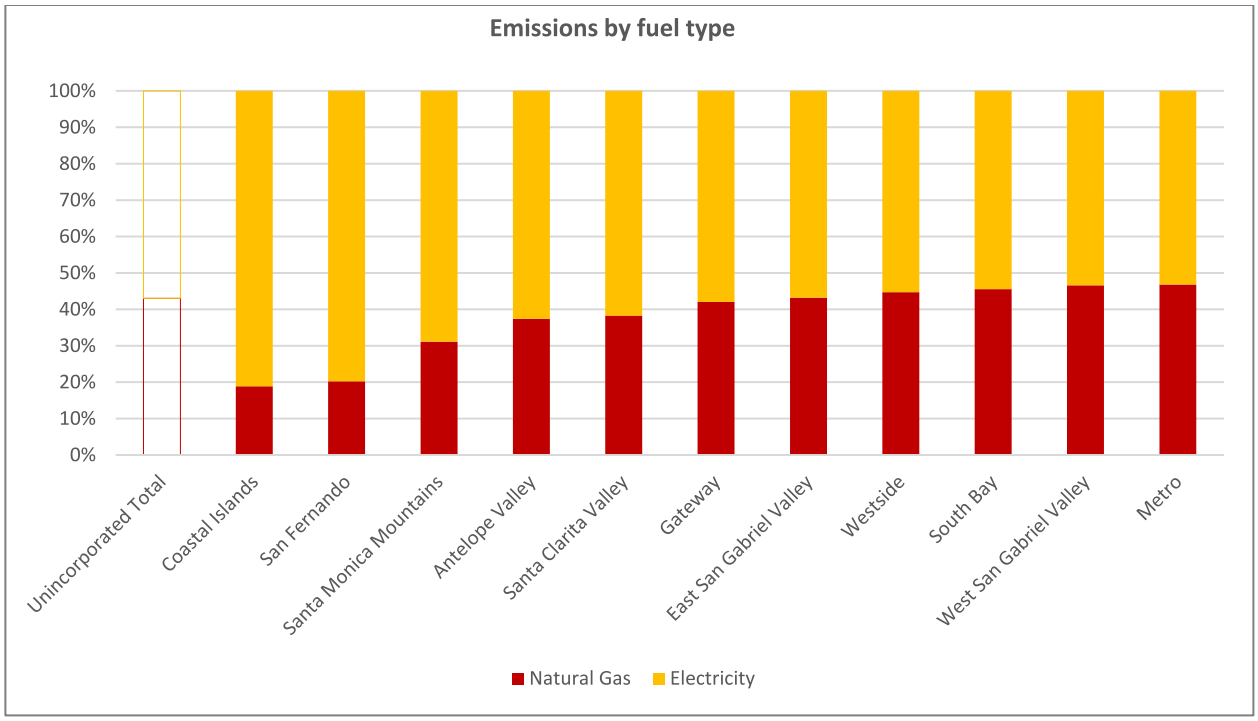


Figure D3: Stationary Energy GHG Emissions by Sector

NOTE: The figures presented above represent GHG emissions as they were quantified in 2020. The emissions inventory for the unincorporated Los Angeles County has since been revised. However, the relative breakdown of emissions by sector remains roughly the same.

Terms Used in Planning Area Profiles

$PM_{2.5}$ Percentile: Particulate matter (PM) is a combination of solid and liquid droplets found in the air. PM can include dust, dirt, soot, or smoke. Some PM is large enough to be seen but other types are microscopic (fine PM with a diameter of less than 2.5 microns). Fine PM can travel deeply into the human respiratory tract and can cause health effects such as throat irritation, coughing, or asthma. The $PM_{2.5}$ percentile indicates the concentration of fine PM in each planning area as compared to all census tracts in the state of California, as measured by CalEnviroScreen 3.0 (https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30, retrieved in October 2019).

Pollution Burden Percentile: Pollution Burden indicators are issues of widespread concern in California that the California Environmental Protection Agency's boards, departments, and offices can take action to remedy, divided into two categories: *Exposures* are pollutants that may come into direct contact with people, while *environmental effects* are adverse environmental conditions caused by pollutants. The Pollution Burden Percentile indicates the pollution burden score in each planning area compared to all census tracts in the state of California as measured by CalEnviroScreen 3.0 (https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30, retrieved in October 2019).

Asthma Percentile: Age-adjusted rate of asthma-related emergency department visits. Percentile is relative to all census tracts in the state of California. (https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30, retrieved in October 2019)

Estimated Population in Disadvantaged Communities: Unincorporated population in census tracts where 75 percent or more of the population is identified as disadvantaged as measured by CalEnviroScreen 3.0 (https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30, retrieved in October 2019).

Estimated Population in High Quality Transit Areas (HQTAs): HQTAs are walkable areas within one-half mile of a well-serviced transit stop or a transit corridor, with 15-minute or better service frequency during peak commute hours. This indicator measures the population within unincorporated areas living within HQTAs. (SCAG RTP SCS, BuroHappold analysis)

Estimated Population in Transit Oriented District (TODs): Unincorporated population living within areas designated as TODs by the Los Angeles County Department of Regional Planning. (Los Angeles County DRP, BuroHappold analysis)

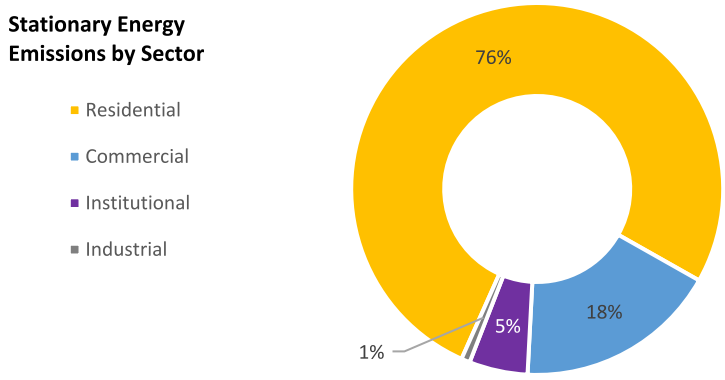
Drive Alone/Carpool/Transit: Percentage of travelers using a particular type of transportation for trips to work. (American Community Survey 2013–2017)

Stationary Energy Emissions: Emissions from stationary sources in unincorporated areas by sector.

ANTELOPE VALLEY PLANNING AREA

The Antelope Valley Planning Area contains the majority of active agricultural land in Los Angeles County. The area faces a number of environmental challenges, including extreme heat, limited water supply, threats of wildfires, and floods. However, the Antelope Valley also contains some of the unincorporated Los Angeles County's richest sources of biodiversity as identified through the County's SEA Program. The area has a high rate of commuting by driving alone, but also has the highest bicycle mode split in unincorporated Los Angeles County (2 percent of trips to work are made by bicycle).

SECTOR/SUB-SECTOR	ALL UNINCORPORATED AREAS	ANTELOPE VALLEY
Total Population	1,037,227	76,101
Estimated Population in HQTAs	330,000	4,000
Estimated Population in TODs	69,000	0
Drive Alone/Carpool/Transit	77% / 10% / 5%	80% / 11% / 1%
$PM_{2.5}$ Percentile	63.6	14.5
Pollution Burden Percentile	62.3	25.2
Asthma Percentile	51.4	51.1
Estimated Population in Disadvantaged Communities	383,000	8,000



Key Climate Actions

- Actions supporting transportation electrification
- Actions to encourage biking and active transportation
- Actions to preserve agricultural and natural areas
- Actions decarbonizing agricultural practices
- Actions targeting zero carbon energy in wildfire-prone areas

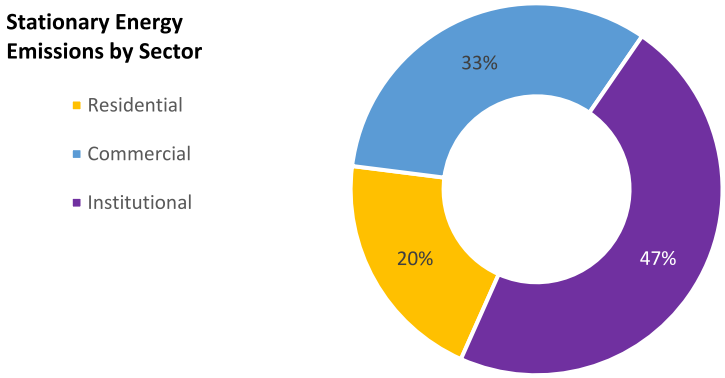
NOTE: This figure and all figures presented below represent GHG emissions as they were quantified in 2020. The emissions inventory for the unincorporated Los Angeles County has since been revised. However, the revised emissions estimates do not affect the general conclusions regarding the key climate actions for each planning area, as the relative breakdown of emissions by sector remains roughly the same.

COASTAL ISLANDS PLANNING AREA

The Coastal Islands are characterized by rugged landscape and a cliffed shoreline. Much of Santa Catalina Island is protected natural space, but there is also a landfill on the island. The area has the lowest population, lowest GHG emissions, and lowest natural gas use of any planning area. Institutional uses are responsible almost half of the areas GHG emissions.

NOTE: Data are unavailable on health, pollution, and transportation patterns for the Coastal Islands Planning Area, but data are provided for population and energy use.

SECTOR/SUB-SECTOR	ALL UNINCORPORATED AREAS	COASTAL ISLANDS
Total Population	1,037,227	374
Estimated Population in HQTAs	330,000	0
Estimated Population in TODs	69,000	0



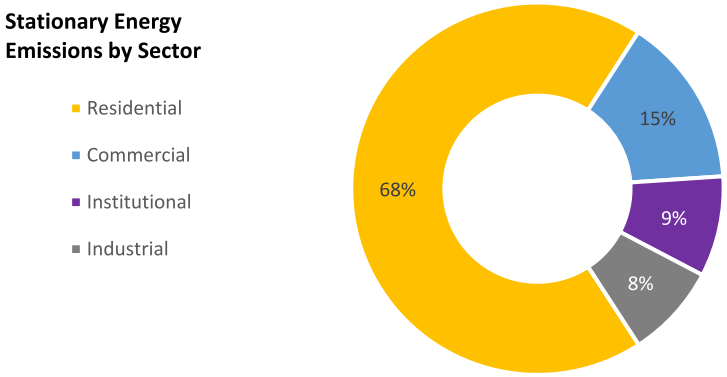
Key Climate Actions

- Actions to preserve agricultural and natural areas
- Actions relating to landfills and waste management
- Actions focused on reducing institutional emissions
- Consideration of opportunities to preserve and nourish the islands' kelp forests for their ability to sequester carbon

EAST SAN GABRIEL VALLEY PLANNING AREA

The East San Gabriel Valley Planning Area is characterized by valleys and rolling, dry hills. The northern portion of the planning area connects to Angeles National Forest and the San Gabriel Mountains. Wildfires and landslides pose safety hazards in the foothill communities. The East San Gabriel Valley Planning Area has the highest residential GHG emissions in unincorporated Los Angeles County. The area also has unincorporated Los Angeles County's highest rate of commuting by driving alone.

SECTOR/SUB-SECTOR	ALL UNINCORPORATED AREAS	EAST SAN GABRIEL VALLEY
Total Population	1,037,227	240,274
Estimated Population in HQTAs	330,000	38,000
Estimated Population in TODs	69,000	0
Drive Alone/Carpool/Transit	77% / 10% / 5%	80% / 9% / 3%
$PM_{2.5}$ Percentile	63.6	71.7
Pollution Burden Percentile	62.3	67.9
Asthma Percentile	51.4	44.1
Estimated Population in Disadvantaged Communities	383,000	48,000



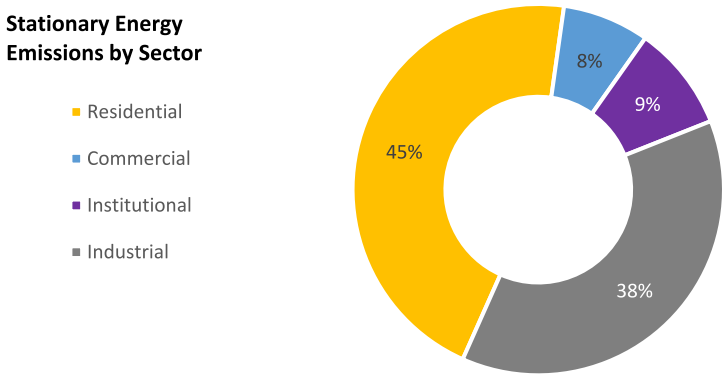
Key Climate Actions

- Actions focused on improving transit services
- Actions encouraging density and active transit near high quality transit
- Actions supporting transportation electrification
- Actions to reduce residential and commercial stationary energy emissions
- Actions focusing on disadvantaged/vulnerable communities
- Actions to preserve agricultural and natural areas
- Actions targeting zero carbon energy in wildfire-prone areas

GATEWAY PLANNING AREA

The Gateway Planning Area has a large amount of built-out industrial land. The concentration of industrial uses and freight traffic impact air and water pollution in this area. The Gateway Planning Area also suffers from a lack of parks and recreational opportunities. The area has a high rate of commuting by driving alone, a high rate of natural gas emissions per capita, and the highest industrial emissions in unincorporated Los Angeles County. The Puente Hills landfill and material recovery facility is located in the planning area.

SECTOR/SUB-SECTOR	ALL UNINCORPORATED AREAS	GATEWAY
Total Population	1,037,227	105,641
Estimated Population in HQTAs	330,000	10,000
Estimated Population in TODs	69,000	600
Drive Alone/Carpool/Transit	77% / 10% / 5%	80% / 10% / 3%
$PM_{2.5}$ Percentile	63.6	79.2
Pollution Burden Percentile	62.3	69.1
Asthma Percentile	51.4	62.6
Estimated Population in Disadvantaged Communities	383,000	57,000



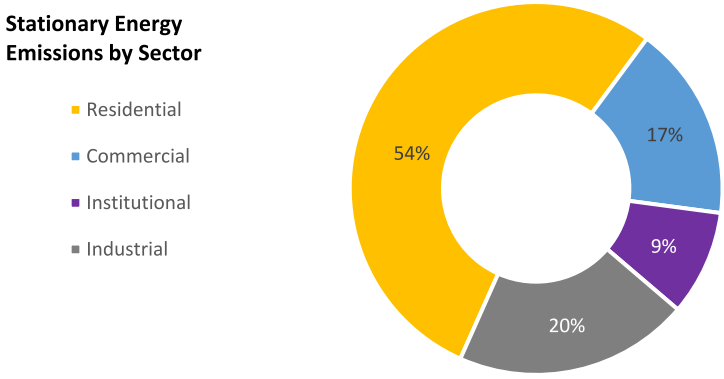
Key Climate Actions

- Actions to reduce industrial stationary energy emissions
- Actions to limit oil and natural gas production
- Actions to reduce emissions from heavy-duty trucks
- Actions supporting transportation electrification
- Actions focusing on disadvantaged communities
- Actions to reduce vehicle miles traveled and traffic congestion
- Actions diverting waste from landfills
- Actions focused on building decarbonization

METRO PLANNING AREA

The majority of the Metro Planning Area is urbanized and there are no large areas of natural open space outside of parks and recreational areas. The presence of industrial districts in residential areas creates land use conflicts and health impacts. The planning area also suffers from traffic congestion and inadequate pedestrian and bicycle infrastructure. The Metro Planning Area has unincorporated Los Angeles County's lowest rate of driving alone, highest rate of commuting by transit, and highest rate of commuting by walking.

SECTOR/SUB-SECTOR	ALL UNINCORPORATED AREAS	METRO
Total Population	1,037,227	316,629
Estimated Population in HQTAs	330,000	208,000
Estimated Population in TODs	69,000	57,000
Drive Alone/Carpool/Transit	77% / 10% / 5%	72% / 12% / 9%
$PM_{2.5}$ Percentile	63.6	83.6
Pollution Burden Percentile	62.3	80.4
Asthma Percentile	51.4	76.4
Estimated Population in Disadvantaged Communities	383,000	211,000



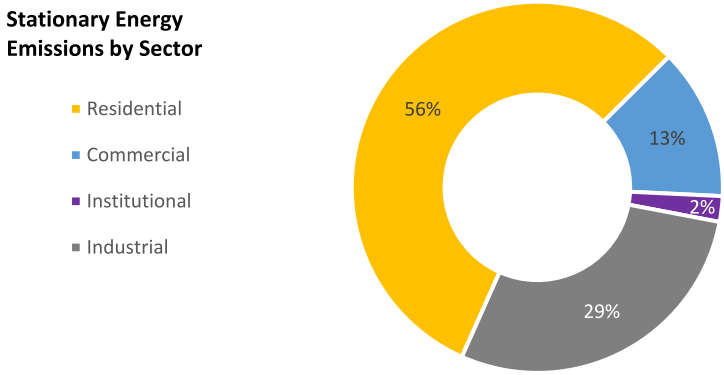
Key Climate Actions

- Actions focused on improving transit services
- Actions encouraging density near high-quality transit
- Actions to reduce vehicle miles traveled and traffic congestion
- Actions to encourage biking and active transportation
- Actions to limit oil and natural gas production
- Actions to reduce emissions from heavy-duty trucks
- Actions focusing on disadvantaged communities
- Actions to reduce all sources of stationary energy emissions
- Actions focused on building decarbonization

SAN FERNANDO VALLEY PLANNING AREA

The San Fernando Valley Planning Area is ringed with distinct hillsides and mountain ranges. Only a small portion of the planning area is unincorporated. These communities are primarily low-density, suburban communities. The area faces significant wildfire hazards.

SECTOR/SUB-SECTOR	ALL UNINCORPORATED AREAS	SAN FERNANDO VALLEY
Total Population	1,037,227	5,559
Estimated Population in HQTAs	330,000	0
Estimated Population in TODs	69,000	0
Drive Alone/Carpool/Transit	77% / 10% / 5%	79% / 9% / 2%
$PM_{2.5}$ Percentile	63.6	49.9
Pollution Burden Percentile	62.3	38.1
Asthma Percentile	51.4	27.3
Estimated Population in Disadvantaged Communities	383,000	88



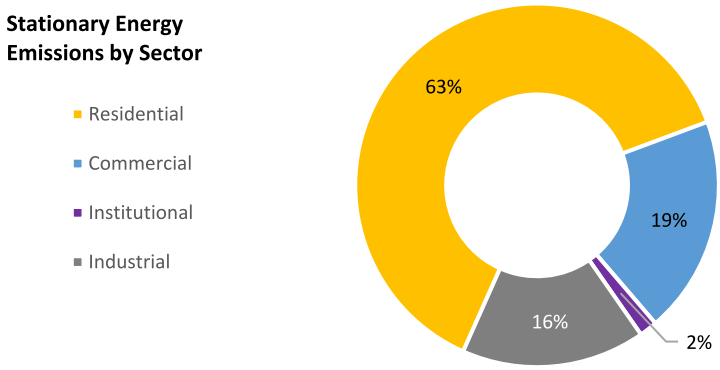
Key Climate Actions

- Actions to encourage biking and active transportation
- Actions supporting transportation electrification
- Actions targeting zero carbon energy in wildfire-prone areas
- Actions to preserve agricultural and natural areas
- Actions to expand urban forest areas and increase existing tree canopy

SANTA CLARITA VALLEY PLANNING AREA

The Santa Clarita Valley Planning Area is framed by mountain ranges and Angeles National Forest. The planning area is one of the fastest growing areas in Los Angeles County. Because of this rapid growth, the planning area faces multiple challenges related to infrastructure planning, preservation of open space, and reduction of vehicle miles traveled. The area has a high rate of commuting by driving alone, and the highest per capita natural gas emissions in unincorporated Los Angeles County.

SECTOR/SUB-SECTOR	ALL UNINCORPORATED AREAS	SANTA CLARITA VALLEY
Total Population	1,037,227	64,838
Estimated Population in HQTAs	330,000	0
Estimated Population in TODs	69,000	0
Drive Alone/Carpool/Transit	77% / 10% / 5%	79% / 9% / 2%
$PM_{2.5}$ Percentile	63.6	33.2
Pollution Burden Percentile	62.3	38.9
Asthma Percentile	51.4	19.0
Estimated Population in Disadvantaged Communities	383,000	0



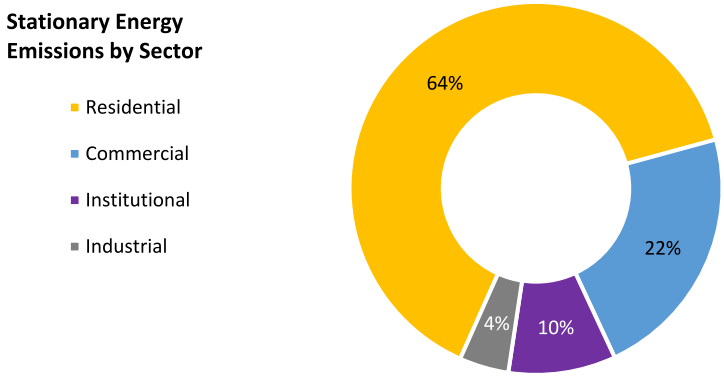
Key Climate Actions

- Actions supporting transportation electrification
- Actions to limit oil and natural gas production
- Actions to reduce commercial emissions
- Actions to preserve agricultural and natural areas
- Actions focused on building decarbonization
- Actions targeting zero carbon energy in wildfire-prone areas
- Actions to expand urban forest areas and increase existing tree canopy

SANTA MONICA MOUNTAINS PLANNING AREA

The Santa Monica Mountains Planning Area is characterized by mountains, dry valleys, and beaches. The planning area's natural beauty comes with numerous environmental issues and natural hazards, including severe wildfire risks and landslides. The Calabasas Landfill is in the planning area.

SECTOR/SUB-SECTOR	ALL UNINCORPORATED AREAS	SANTA MONICA MOUNTAINS
Total Population	1,037,227	19,781
Estimated Population in HQTAs	330,000	0
Estimated Population in TODs	69,000	0
Drive Alone/Carpool/Transit	77% / 10% / 5%	78% / 5% / 1%
$PM_{2.5}$ Percentile	63.6	46.7
Pollution Burden Percentile	62.3	42.8
Asthma Percentile	51.4	2.8
Estimated Population in Disadvantaged Communities	383,000	0



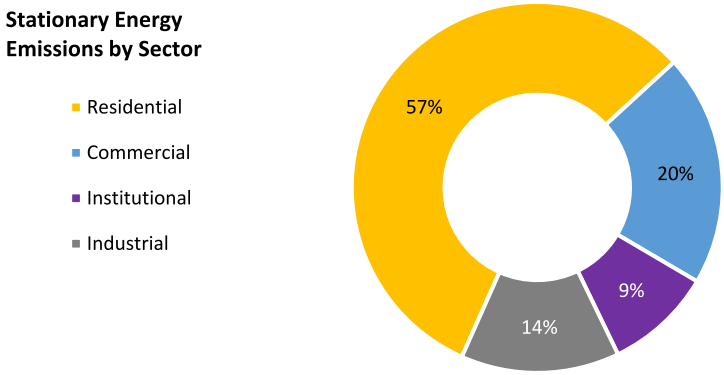
Key Climate Actions

- Actions to preserve natural areas
- Actions targeting distributed energy resources (DER) in wildfire-prone areas
- Actions relating to landfills and waste management

SOUTH BAY PLANNING AREA

The South Bay Planning Area is covered with hills, open spaces, and rocky shorelines along the Pacific Coast. Issues facing the planning area include traffic congestion, limited public transportation options, and air quality concerns. The region's proximity to LAX and the ports creates planning and air quality challenges. Petroleum refining is also a significant source of air pollution in the region.

SECTOR/SUB-SECTOR	ALL UNINCORPORATED AREAS	SOUTH BAY
Total Population	1,037,227	73,085
Estimated Population in HQTAs	330,000	32,000
Estimated Population in TODs	69,000	10,000
Drive Alone/Carpool/Transit	77% / 10% / 5%	77% / 10% / 4%
$PM_{2.5}$ Percentile	63.6	78.1
Pollution Burden Percentile	62.3	83.1
Asthma Percentile	51.4	67.3
Estimated Population in Disadvantaged Communities	383,000	39,000



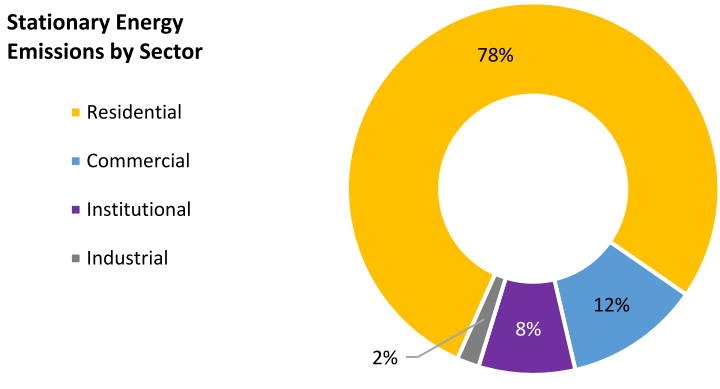
Key Climate Actions

- Actions to limit oil and natural gas production
- Actions focusing on improving transit services
- Actions encouraging density near high-quality transit
- Actions to reduce emissions from heavy-duty trucks
- Actions relating to landfills and waste management
- Actions focused on building decarbonization

WEST SAN GABRIEL VALLEY PLANNING AREA

The West San Gabriel Valley Planning Area includes the foothills of the San Gabriel Mountains and Angeles National Forest. The San Gabriel River flows north-south along the planning area's eastern border. The planning area is almost entirely developed with historically suburban developments. Many of the communities are designated Very High Fire Hazard Severity Zones, which reflects the threat of wildfires and subsequent mudslides within those areas. The area has the third highest per capita natural gas emissions in unincorporated Los Angeles County.

SECTOR/SUB-SECTOR	ALL UNINCORPORATED AREAS	WEST SAN GABRIEL VALLEY
Total Population	1,037,227	105,252
Estimated Population in HQTAs	330,000	13,000
Estimated Population in TODs	69,000	2,000
Drive Alone/Carpool/Transit	77% / 10% / 5%	79% / 10% / 3%
$PM_{2.5}$ Percentile	63.6	62.0
Pollution Burden Percentile	62.3	61.5
Asthma Percentile	51.4	32.6
Estimated Population in Disadvantaged Communities	383,000	16,000



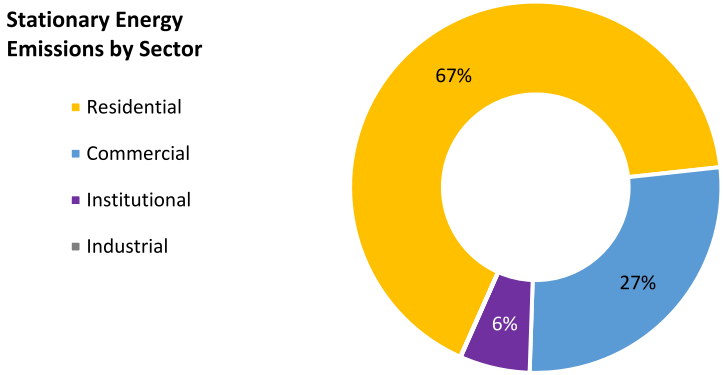
Key Climate Actions

- Actions supporting transportation electrification and improved transit service
- Actions to encourage transit for youth and seniors
- Actions to reduce residential emissions
- Actions focused on building decarbonization
- Actions targeting zero carbon energy in wildfire-prone areas

WESTSIDE PLANNING AREA

The Westside Planning Area is comprised of beaches, Marina del Rey, Baldwin Hills, and Kenneth Hahn State Park. Significant environmental resources exist in the planning area, most notably the Ballona Wetlands, which are threatened by potential sea level rise caused by climate change. Most of Ladera Heights/View Park–Windsor Hills is in a Very High Fire Hazard Severity Zone. The Westside Planning Area also includes a large urban oil field in Baldwin Hills. The area has low access to transit, but the second highest bicycle mode split in unincorporated Los Angeles County (2 percent). The area has the second highest per capita natural gas emissions in unincorporated Los Angeles County.

SECTOR/SUB-SECTOR	ALL UNINCORPORATED AREAS	WESTSIDE
Total Population	1,037,227	29,693
Estimated Population in HQTAs	330,000	26,000
Estimated Population in TODs	69,000	0
Drive Alone/Carpool/Transit	77% / 10% / 5%	76% / 7% / 3%
$PM_{2.5}$ Percentile	63.6	75.5
Pollution Burden Percentile	62.3	71.8
Asthma Percentile	51.4	41.2
Estimated Population in Disadvantaged Communities	383,000	3,000



Key Climate Actions

- Actions focusing on improving transit services
- Actions encouraging density near high-quality transit
- Actions to encourage biking and active transportation
- Actions to reduce commercial emissions
- Actions to limit oil and natural gas production
- Actions to reduce emissions from heavy-duty trucks
- Actions focused on building decarbonization

APPENDIX E

Implementation Details

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Table E-1 provides implementation details for the measures and actions discussed in Chapter 3. The "Performance Objectives" included in the table embody the specific objectives of the *2045 Los Angeles County Climate Action Plan* (2045 CAP) for each measure. These performance objectives represent guideposts for the successful implementation of each measure and the 2045 CAP as a whole. However, they are not specific mandates. As the 2045 CAP is implemented and adapted over time, many of these performance objectives may change. Greenhouse gas emissions reductions for 18 of the identified measures were quantified at the measure level based on these performance objectives, and monitoring will also occur at the measure level. Tracking metrics are intended to identify potential data that may be used to analyze GHG emission reductions and may be revised administratively. The table also identifies funding for all quantified measures. Additional future funding sources will need to be identified for non-quantified measures.

Table E-1: Greenhouse Gas Strategy, Measure, and Action Implementation Details

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
Strategy 1: Decarbonize the Energy Supply								
ES1 [Q]	**Develop a Sunset Strategy for All Oil and Gas Operations:** Develop a sunset strategy for all oil and gas operations that prioritizes disproportionately affected communities and develop a strategy for carbon removal.			Reduce oil and gas operations: * • 40% by 2030 • 60% by 2035 • 80% by 2045 Examine all active, idle, and abandoned oil wells for fugitive emissions of GHGs. Conduct carbon removal feasibility study. ** The performance objectives provided here serve as a general metric and may be refined upon completion of the Oil Well Amortization Study.*				
ES1.1	Collaborate with other local jurisdictions and utilities to develop a sunset strategy for all oil and gas operations that prioritizes disproportionately affected communities.	CSO, DRP	PW, ISD, cities, California Geologic Energy Management Division; DPH		• Number of well sites decommissioned and remediated • Emissions reductions achieved through well decommissioning	Short term (2024–2030)	$–$$	County General Fund
ES1.2	Develop a policy that requires the examination of idle and abandoned oil wells for fugitive emissions of GHGs to develop and implement a closure plan. Coordinate with federal and state agencies collecting fugitive emissions data.	CSO	DRP, PW, ISD, cities, California Geologic Energy Management Division; DPH		• Number of oil wells examined • Amount of GHGs emitted (estimated or measured)	Short term (2024–2030)	$–$$	County General Fund
ES1.3	Develop a carbon removal strategy that considers direct air capture and carbon capture and sequestration (CCS).	CSO	PW, DRP, ISD, CARB CCS Program		• Number of CCS systems constructed • GHG emissions removed annually	Medium term (2030–2035)	$–$$$$	Federal CIFIA Program, Infrastructure Investment and Jobs Act of 2021, SB 905, SB 1137, AB 1757, and SB 27
ES2 [Q] **(Core)**	**Procure Zero-Carbon Electricity:** Supplying unincorporated Los Angeles County's power demand with zero-carbon electricity is critical to achieving significant GHG emissions reductions. The Clean Power Alliance (CPA) is a nonprofit and community choice energy provider that currently serves 32 communities across Southern California.			Participate in CPA's Green Power option, SCE's Green Rate option, or other available 100% zero carbon electricity service: • 100% municipal participation by 2025. • 96% community participation by 2030 (approximately 4% opt-out rate).				

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
ES2.1	Transition all County facilities within unincorporated areas to CPA's 100% Green Power option, SCE's 100% Green Rate option, or other available 100% renewable electricity service. [M]	CSO, ISD	CPA, SCE, LA100		• CPA 100% Green Power enrollment for County accounts • SCE's 100% Green Rate enrollment for County accounts • Enrollment in other available 100% renewable electricity service • Electricity supplied by CPA	Short term (2024–2030)	$	Funded; Federal Inflation Reduction Act CARB Greenhouse Gas Reduction Fund, CARB California Climate Investments program, CPUC California Solar Initiative, CPUC Self-Generation Incentive Program, Low-Income Solar and Wind Investment Tax Credit, DOE Renewable Energy and Efficiency Energy grants
ES2.2	Complete enrollment of the community in CPA's 100% Green Power or SCE's Green Rate option.	CSO	CPA, SCE, LA100		• CPA 100% Green Power participation and/or opt-out rate • Electricity supplied by CPA (MWh) • SCE 100% Green Rate participation and/or opt-out rate • Electricity supplied by SCE (MWh)	Short term (2024–2030)	$$	CPA Powershare Program, Federal Inflation Reduction Act CARB Greenhouse Gas Reduction Fund, CARB California Climate Investments program, CPUC California Solar Initiative, CPUC Self-Generation Incentive Program, Low-Income Solar and Wind Investment Tax Credit, DOE Renewable Energy and Efficiency Energy grants
ES3 [Q]	**Increase Renewable Energy Production:** Expand local solar power generation on existing and new development and for County projects.			Install rooftop solar PV on all existing single-family residential homes and multifamily residential buildings: • 20% by 2030 • 25% by 2035 • 35% by 2045 Install rooftop solar PV on all existing commercial buildings: • 15% by 2030 • 22% by 2035 • 32% by 2045 Install rooftop solar PV on all new multifamily residential buildings: • 80% by 2030 • 85% by 2035 • 95% by 2045 Install rooftop solar PV on all new commercial buildings: • 40% by 2030 • 50% by 2035 • 70% by 2045 Install 20,000 kW of solar PV at County facilities by 2030. Install rooftop solar PV at all affordable housing developments.				

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
ES3.1	Require rooftop solar PV for all new development.	PW	DRP, CSO		• Number of rooftop solar PV installations for all new development • Total kW solar capacity installed in community	Short term; implement ordinance immediately (2024)	$	Federal Solar Investment Tax Credit, CPUC Self-Generation Incentive Program, California Solar Energy System Property Tax Exclusion, CPUC Single-Family Affordable Solar Homes (SASH) Program, SCE Programs, Renewable Energy Production Tax Credit, Clean Electricity Investment Tax Credit, Low-Income Solar and Wind Investment Tax Credit, Greenhouse Gas Reduction Fund, Clean Energy Load Guarantees
ES3.2	Install rooftop solar PV at existing buildings.	PW	DRP, CSO		• Number of rooftop solar PV installations for existing multifamily residential buildings and existing commercial buildings • Total kW solar capacity installed in community	Short term (2024–2030)	$–$$$	Federal Solar Investment Tax Credit, CPUC Self-Generation Incentive Program, California Solar Energy System Property Tax Exclusion, CPUC Single-Family Affordable Solar Homes (SASH) Program, SCE Programs, Renewable Energy Production Tax Credit, Clean Electricity Investment Tax Credit, Low-Income Solar and Wind Investment Tax Credit, Greenhouse Gas Reduction Fund, Clean Energy Load Guarantees
ES3.3	Identify and install solar PV systems at existing viable County facilities and properties. [M]	ISD	PW, CSO, SCE, CPA		• Total MW solar capacity installed at County facilities	Short term (2024–2030)	$$$	Federal Solar Investment Tax Credit, CPUC Self-Generation Incentive Program, California Solar Energy System Property Tax Exclusion, SCE Programs, Renewable Energy Production Tax Credit, Clean Electricity Investment Tax Credit, Low-Income Solar and Wind Investment Tax Credit, Greenhouse Gas Reduction Fund, Clean Energy Load Guarantees
ES3.4	Explore the feasibility to install community-shared solar facilities on County properties where opportunities exist. [M]	ISD	PW, CSO, SCE, CPA		• Total community-shared MW solar capacity installed	Medium term (2030–2035)	$$$	Federal Solar Investment Tax Credit, CPUC Self-Generation Incentive Program, California Solar Energy System Property Tax Exclusion, SCE Programs, Renewable Energy Production Tax Credit, Clean Electricity Investment Tax Credit, Low-Income Solar and Wind Investment Tax Credit, Greenhouse Gas Reduction Fund, Clean Energy Load Guarantees

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
ES3.5	Require and incentivize renewable energy for affordable housing developments for both new development and existing buildings.	DRP, CSO, LACDA	PW, SCE, CPA		• Number of rooftop solar PV installations • Total MW solar capacity installed	Short term; implement ordinance immediately (2024)	$	Federal Solar Investment Tax Credit, CPUC Self-Generation Incentive Program, California Solar Energy System Property Tax Exclusion, CPUC Single-Family Affordable Solar Homes (SASH) Program, SCE Programs, Renewable Energy Production Tax Credit, Clean Electricity Investment Tax Credit, Low-Income Solar and Wind Investment Tax Credit, Greenhouse Gas Reduction Fund, Clean Energy Load Guarantees
ES3.6	Streamline and prioritize permitting for solar and battery storage projects.	DRP	CSO, PW		• Number of solar PV installations • Total MW solar capacity installed • Number of battery storage installations • Total MW battery capacity installed	Short term (2024–2030)	$	Federal Solar Investment Tax Credit, CPUC Self-Generation Incentive Program, California Solar Energy System Property Tax Exclusion, CPUC Single-Family Affordable Solar Homes (SASH) Program, SCE Programs, Renewable Energy Production Tax Credit, Clean Electricity Investment Tax Credit, Low-Income Solar and Wind Investment Tax Credit, Greenhouse Gas Reduction Fund, Clean Energy Load Guarantees
ES4	**Increase Energy Resilience:** Expand energy storage and microgrids throughout the community and for County operations.			• Achieve community electricity storage capacity equal to the community-wide 24-hour average usage by 2035/2045. • Achieve community electricity generation capacity equal to the communitywide 24-hour average usage by 2035/2045. • Establish a community resilience hub program to equip community-serving County facilities (e.g., libraries, rec centers, senior centers). • Provide solar and battery systems sufficient to support emergency cooling and other emergency functions. Partner with the local community for implementation. • Locate at least one hub in each County district, with a focus on vulnerable populations. • Install microgrids based on a feasibility study. • Obtain a grant and establish a program to support an energy efficiency and assurance program for facilities that are large energy users and support critical community functions.			

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
ES4.1	Develop a program to deploy community resilience hubs at scale.	ISD, DRP	PW, CSO		• Amount of generation/storage capacity per hub • Number of community resilience hubs • Number of people who can be supported at each hub during emergencies (daytime and nighttime)	Short to medium term (2024–2035)	$–$$	Leverage bulk purchasing for portfolio-scale implementation
ES4.2	Invest in energy storage and microgrids at critical County facilities through CPA's Power Ready Program. [M]	ISD	PW, CSO		• kW of energy storage capacity installed at County facilities • Number and capacity of microgrids established	Short to medium term (2024–2035)	$$$	Power purchase agreement
ES4.3	Develop a publicly accessible community energy map that identifies opportunities for deploying distributed energy resources and microgrids to improve energy resiliency.	CSO	ISD, PW, SCE, CPA			Short term (2024–2030)	$$	SCE, CEC, CPUC
ES4.4	Conduct feasibility studies to identify priority areas for solar and storage, combined with building- and community-scale microgrids and alternative technologies such as fuel cells and grid paralleling, to support demand management, peak shaving, and load shifting to increase grid resilience. Study implementation, costs, barriers, and obstacles and identify partnerships. Adopt regulations that establish this use and standards for its development. Limiting peak energy demand can eliminate or reduce the use of high-carbon peaker plants.	ISD	CSO, PW, DRP, SCE, CPA		• Number of microgrids installed	Short to medium term (2024–2035)	$	Leverage bulk purchasing for portfolio-scale implementation; power purchase agreements
ES4.5	Develop a Countywide program to promote energy efficiency and resilience measures in facilities providing critical community services.	ISD	CSO, PW, DRP, SCE, CPA, SoCalRen		• Number of efficiency projects implemented • Number of energy resilience projects implemented	Short to medium term (2024–2035)	$$	State or federal grant (CEC, DOE)
ES5	**Establish GHG Requirements for New Development:** Develop and implement requirements for new projects choosing to streamline their GHG impacts analysis under CEQA to ensure that such new development is consistent with the 2045 CAP milestone targets for 2030, 2035, and 2045. These requirements include applicant completion of a 2045 CAP CEQA streamlining checklist for non-CEQA-exempt new development requiring discretionary approvals to demonstrate consistency with the 2045 CAP and thereby streamline environmental review of their GHG impacts using the 2045 CAP's PEIR pursuant to CEQA Guidelines Section 15183.5(b). To demonstrate compliance with the 2045 CAP CEQA streamlining requirements, all projects that do not screen out of the 2045 CAP consistency review process must implement either (1) all feasible applicable checklist measures or (2) for infeasible checklist measures, alternative project emission reduction measures. The project review checklist will be used for projects consistent with the 2045 CAP, to demonstrate CAP consistency that allows for streamlined project-specific CEQA GHG analysis. In addition, the County will assess the feasibility of developing a GHG offsets/credit program to create a pathway toward achieving the aspirational 2045 goal of carbon neutrality.			• All new development that does not require a General Plan amendment and opts to use CEQA streamlining for GHG impacts shall be consistent with the 2045 CAP. • Develop reach codes, ordinances, and conditions of approval as needed.				

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
ES5.1	Identify new requirements for new development, including reach codes, ordinances, and conditions of approval to reduce GHG emissions from energy use, transportation, waste, water, and other sources. Include affordable housing considerations in these requirements, and develop supporting measures (financial support, technical assistance, or other incentives) to defray potential additional first costs in order to maintain housing affordability.	DRP, CSO	PW, ISD		• Number and type of projects performing consistency review	Short term (2024–2030)	$-$$	County General Fund
ES5.2	Implement the 2045 CAP CEQA streamlining checklist for new development to demonstrate consistency with the 2045 CAP's strategies, measures, and actions for purposes of streamlining environmental review of GHG impacts using the 2045 CAP's PEIR pursuant to CEQA Guidelines Section 15183.5(b).	DRP	PW		• Number and type of projects performing consistency review	Short term (2024–2030)	$	County General Fund
ES5.3	Establish an Offsite GHG Reduction Program for new development to use as a GHG reduction or mitigation pathway for 2045 CAP compliance and to fund programs for reducing GHG emissions in the built environment.	DRP	PW		• Dollars invested into Offsite GHG Reduction Program • Number of off-site projects implemented • Quantity of GHG emission reductions achieved	Short term (2024–2030)	$	Project developers
Strategy 2: Increase Densities and Diversity of Land Uses Near Transit								
T1 [Q]	**Increase Density Near High-Quality Transit Areas:** Increase housing opportunities that are affordable and near transit, to reduce VMT.			• Implement and complete Housing Element Update rezoning programs to achieve the minimum densities. • Achieve a minimum of 20 dwelling units (DU) per acre (maximum of 30–150 DU per acre) for HQTAs. • Locate a majority of residential and employment centers in unincorporated Los Angeles County within 1 mile of an HQTA. • Achieve a 27% increase in DUs within HQTAs.				
T1.1	Incentivize residential and community-serving uses to be developed in high quality transit areas (HQTAs), while ensuring inclusion of vital public amenities, such as parks and active transportation infrastructure.	DRP	SCAG, Metro		• Number and percent of increase in DUs in HQTAs	Housing Element time frame (2021–2029)	$	County General Fund, Greenhouse Gas Reduction Fund, Neighborhood Access and Equity Grants
T1.2	Develop land use tools that will increase the production of a diversity of housing types, such as missing middle housing.	DRP	Cities, Metro, and other transit agencies, SCAG		• Number and percent increase in DUs within HQTA • Total acres of commercial or industrial zones in HQTAs that can support jobs	Short term (2024–2030)	$$	County General Fund, Greenhouse Gas Reduction Fund, Neighborhood Access and Equity Grants
T2 [Q]	**Develop Land Use Plans Addressing Jobs-Housing Balance and Increase Mixed Use:** Increasing density and the mix of land uses can help reduce single-occupancy trips, the number of trips, and trip lengths.			• By 2030, achieve a job density of 300 jobs per acre. • For communities with an imbalance of jobs/housing (±20%), develop community plans to identify and quantify strategies for bringing that imbalance below 20%.				

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
T2.1	Develop community plans that will increase the percentage of residents who could live and work within the same community, and that could decrease VMT.	DRP	PW		• Comparison between existing and future statistics for employment and housing density and totals within each area • Number and % increase in DUs in HQTAs • Total acres of commercial or industrial zones in HQTAs that can support jobs	Housing Element time frame (2021–029)	$$	County General Fund, Greenhouse Gas Reduction Fund, Neighborhood Access and Equity Grants
Strategy 3: Reduce Single-Occupancy Vehicle Trips								
T3 [Q]	**Expand Bicycle and Pedestrian Network to Serve Residential, Employment, and Recreational Trips:** Travel options that serve a variety of land uses and trip purposes can help shift some trips away from single-occupancy vehicles.			• Increase bikeway miles 300% by 2035. • Implement the County's Bicycle Master Plan. • Complete updates to the County's Pedestrian Action Plan, Bicycle Master Plan, and Active Transportation Plans every five years.				
T3.1	Create a more connected and safer bikeway network by expanding bikeway facilities and implementing protected and separated lanes.	PW	DRP, Metro, transit providers		• Miles of bikeways by route type	Long term (2035–2045)	$$$$	Road reconstruction funds, Greenhouse Gas Reduction Fund, Neighborhood Access and Equity Grants
T3.2	Implement and regularly update the County's Pedestrian Action Plan, Bicycle Master Plan, and Active Transportation Plans.	DPH, PW	DRP, Metro, transit providers			Long term (2035–2045)	$$$$	County General Fund, Bikeway funds, Supervisor TIP funds, Greenhouse Gas Reduction Fund, Neighborhood Access and Equity Grants
T3.3	Collaborate with Metro and other transit providers to enhance pedestrian and bicycle environments through energy efficient lighting and shading to promote active transportation. Build shade structures at major transit stops, such as those identified in Metro's Active Transportation Strategic Plan, prioritizing communities with high heat vulnerability. Develop and implement a Shaded Corridors Program.	DRP, PW	Metro, transit providers, Parks, DPH, DRP		• Number and location of shade and lighting projects planned and completed	Medium term (2030–2035)	$$$	Partial funding secured; additional funds required, Greenhouse Gas Reduction Fund, Neighborhood Access and Equity Grants
T4 [Q]	**Broaden Options for Transit, Active Transportation, and Alternative Modes of Transportation:** Transit service, micro mobility services (such as bike-share, scooter-share, and drone deliveries), and access to these transportation options can help reduce VMT.			• By 2030, double transit service hours from 560,000 to 1.12 million. • By 2030, install bus-only lanes and signal prioritization on all major transit thoroughfares. • By 2030, ensure that 75% of unincorporated Los Angeles County residents live within one-half mile of shuttle or mobility service.				
T4.1	Expand and improve the frequency of service of unincorporated Los Angeles County shuttles and explore new mobility services, such as micro transit, autonomous delivery vehicles, micro mobility, and on-demand autonomous shuttles.	PW	ISD; transit providers including Metro, Foothill Transit, Long Beach Transit, and Montebello Bus Lines LA		• Size of area served • Number of employees and residents served • Service frequency and headways	Medium term (2030–2035)	$$$$	New funds required, Greenhouse Gas Reduction Fund, Neighborhood Access and Equity Grants

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
T4.2	Collaborate with Metro and other transit providers to install bus-only lanes and/or signal prioritization along major thoroughfares, and work with transit agencies and neighboring jurisdictions to plan and install full bus rapid transit infrastructure along priority corridors, as appropriate.	PW	Metro, transit agencies, other cities		• Increase in service frequencies • Decrease in headways • Increase in residents/employees served • Number and percentage of bus-only lanes installed on transit routes • Travel time reliability	Long term (2035–2045)	$$$$$	New funds required, Greenhouse Gas Reduction Fund, Neighborhood Access and Equity Grants
T4.3	Collaborate with Metro and other transit providers to develop a transportation technology strategy to proactively address how evolving tech-enabled mobility options can support public transit.	PW	Metro, transit agencies, CSO, DPH			Medium term (2030–2035)	$$	New funds required, Greenhouse Gas Reduction Fund, Neighborhood Access and Equity Grants
T4.4	Collaborate with Metro and other transit providers to set aside maintenance funds to ensure that public transit facilities, including stations and stops, are safe and clean to enhance the transit experience and increase ridership.	PW	Metro, transit agencies, CSO, DRP, LASD		• Maintenance or increase in level of maintenance funds	Short term (2024–2030)	$$	New funds needed, Greenhouse Gas Reduction Fund, Neighborhood Access and Equity Grants
T4.5	Collaborate with Metro and other transit providers to develop and implement a transportation demand management (TDM) ordinance that requires future development projects to incorporate measures such as subsidized transit passes and car share.	PW	Metro, transit agencies, CSO, DRP		• Mode share, commute trips, and parking occupancy at the tenant and building level • Number of employers participating in TDM program	Short to medium term (2024–2035)	$	County General Fund, Greenhouse Gas Reduction Fund, Neighborhood Access and Equity Grants
T4.6	Offer free and/or discounted transit passes for students, youth, seniors, people with disabilities, and low-income populations.	PW	Metro, transit agencies, CSO, DRP		• Number of free transit passes issued • Number of discounted transit passes issued	Short term (2024–2030)	$$	Proposition A Local Return Transit fund, Greenhouse Gas Reduction Fund, Neighborhood Access and Equity Grants
T4.7	Expand and improve the County's Telecommuting Policy, using data gathered through the alternative work program.	ISD, DHR	CSO, DRP, PW, SCAG		• Number of employers participating in telecommuting policies • Number of employees actively telecommuting	Short term (2024–2030)	$	County General Fund, Greenhouse Gas Reduction Fund, Neighborhood Access and Equity Grants
T4.8	Establish temporary and permanent car-free areas.	DRP	PW, cities		• Number and location of car-free areas in unincorporated Los Angeles County for each target year	Long term (2035–2045)	$	County General Fund, Greenhouse Gas Reduction Fund, Neighborhood Access and Equity Grants
T4.9	Develop a VMT bank or exchange program.	PW	DRP, CSO		• Implementation of exchange program for use in project development	Short to medium term (2024–2035)	$$$	County General Fund, Greenhouse Gas Reduction Fund, Neighborhood Access and Equity Grants
T4.10	Collaborate with Metro and other transit providers to ensure that all new forms of public transportation (e.g., new bus lines, new light rail service) are low- or zero-emission.	CSO	Metro, transit agencies, DRP, PW		• Number of ZEV buses • Number of ZEV shuttles • Total ZEV percentage of bus and shuttle fleet	Short to medium term (2024–2035)	$$$	Caltrans grant, CARB Bus Replacement Grant, CARB Hybrid and Zero Emission Truck and Bus Voucher Incentive Project, Federal Zero-Emission Transit Bus Tax Exemption, CARB California Clean Mobility Options Voucher Pilot Program, SCE Charge Ready Transit Bus Pilot and Charge Ready Transport, CARB Low Carbon Transportation Investments and Air Quality Improvement Program, New EV Tax Credit, Commercial EV Tax Credit

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
T5	**Limit and Remove Parking Minimums:** Parking strategies such as parking maximums, unbundling parking, or market-price parking can help reduce VMT.			• Reduce parking stipulations to reduce parking supply and encourage transit use. • Unbundle parking costs to reflect cost of parking. • Implement parking pricing to encourage "park-once" behavior.				
T5.1	Implement a comprehensive parking reform strategy, which should include, but not be limited to: elimination of minimum parking requirements for all new residential units, establishment of parking maximums within one-half mile of high-quality transit stops, creation and expansion of parking benefit districts, development of planning strategies for transitioning land dedicated to parking to alternative transit and public uses, and incentives for developers to provide less than maximum allowable parking.	DRP	PW		• Percent change in parking supply • Number of new and expanded parking benefit districts • Mode shift surveys in areas/ buildings with reduced/ unbundled/priced parking	Short term (2024–2030)	$$–$$$	LEAP Grant
Strategy 4: Institutionalize Low-Carbon Transportation								
T6 Q (Core)	**Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales:** Increase unincorporated Los Angeles County's ZEV market share and vehicle penetration to the maximum extent feasible to replace internal combustion engine vehicles. Set targets for reducing total gasoline and diesel vehicle fuel sales.			Increase the fleetwide percentage of light-duty vehicles in unincorporated Los Angeles County that are ZEVs to: • 30% by 2030 • 50% by 2035 • 90% by 2045 Increase the sales of new light-duty vehicles in unincorporated Los Angeles County that are ZEVs to: • 68% by 2030 • 100% by 2035 Install the following total number of new public and private shared EVCSs: • 37,000 by 2030 • 74,000 by 2035 • 140,000 by 2045 Install the following total number of new EVCSs at County facilities and properties: • 5,000 by 2030 • 10,000 by 2035 • 25,000 by 2045				
T6.1	Develop a Zero Emission Vehicle Master Plan. Collaborate with other regional agencies and jurisdictions to share infrastructure.	CSO	DRP, PW, ISD		• Number of ZEVs registered and number of non-ZEVs registered • Total sales of gasoline and diesel fuel in unincorporated Los Angeles County • Total number of gas stations decommissioned • Specific tracking metrics for ZEV infrastructure and ZEV adoption to be identified in the plan	Short term (2024–2025)	$	TBD

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
T6.2	Install EVCSs at existing buildings and right-of-way infrastructure throughout unincorporated Los Angeles County.	CSO, ISD	PW		• Number, location, and availability of EVCSs	Short to long term (2024–2045)	$$$	CEC CALeVIP and EVSE Rebates, CEC Clean Transportation Program, CPUC statewide transportation electrification infrastructure rebate program, Federal EV Charging Tax Credit, SCAQMD and MSRC Residential EV Charging Incentive Pilot Program, CARB Clean Fuel Reward and CALeVIP, CalCAP EV Charging Station Financing Program for small businesses, Federal Inflation Reduction Act EV tax credits and other financial incentives, CARB Greenhouse Gas Reduction Fund
T6.3	Require all new development to install EVCSs through a condition of approval/ordinance. Residential development must install EVCSs; nonresidential development must install EVCSs at a percentage of total parking spaces.	DRP	PW		• Number, location, and availability of EVCSs	Short term (2024–2030)	$	SCE Charge Ready Program, EVSE rebates, CEC Clean Transportation Program, CPUC statewide transportation electrification infrastructure rebate program, Federal EV Charging Tax Credit, SCAQMD and MSRC Residential EV Charging Incentive Pilot Program, CARB Clean Fuel Reward and CALeVIP, CalCAP EV Charging Station Financing Program for small businesses, Federal Inflation Reduction Act EV tax credits and other financial incentives, CARB Greenhouse Gas Reduction Fund
T6.4	Install EVCSs at County facilities and properties for public, employee, and fleet use, prioritizing locations in frontline, BIPOC, and disadvantaged communities. Complete an assessment of EV charging locations, identifying gaps in publicly accessible stations for frontline, BIPOC, and disadvantaged communities. Provide EV purchase incentive information in multiple languages to frontline communities.	ISD	Fire, LASD, PW, Parks, Beaches and Harbors		• Number, location, and availability of EVCSs	Short to long term (2024–2045)	$$$	CEC CALeVIP EVSE rebate, SCAQMD Alternative Fuel Vehicle and Fueling Infrastructure Grants, CEC Clean Transportation Program, CPUC statewide transportation electrification infrastructure rebate program, Federal EV Charging Tax Credit, CARB Clean Fuel Reward and CALeVIP, Federal Inflation Reduction Act EV tax credits and other financial incentives, CARB Greenhouse Gas Reduction Fund
T6.5	Continue to pilot vehicle-grid integration applications at workplaces to maximize the benefits that daytime charging for plug-in electric vehicles (PEVs) can have on the grid, including demand response to reduce peak loads and energy storage during periods of renewable overproduction.	ISD, PW	SCE, CSO, DRP, ISD			Short term (2024–2030)	$	SCE Charge Ready Program, CARB Greenhouse Gas Reduction Fund

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
T6.6	Expand electric options for active transportation, such as electric scooters and e-bikes. Provide access to neighborhood electric vehicles, such as golf carts, shared EVs, and others. Develop policies and/or ordinances to expand these options.	CSO	DRP, PW, ISD		• Number of e-scooters/e-bikes available • Number of neighborhood EVs available • Number of residents served • Number of rides • Average ride distance	Medium term (2030–2035)	$	CARB Clean Mobility Options Voucher Pilot Program, CARB Low Carbon Transportation Investments and Air Quality Improvement Program, CPUC statewide transportation electrification infrastructure rebate program, SCAQMD and MSRC Residential EV Charging Incentive Pilot Program, CARB Clean Fuel Reward and CALeVIP, CalCAP EV Charging Station Financing Program for small businesses, Federal Inflation Reduction Act EV tax credits and other financial incentives, CARB Greenhouse Gas Reduction Fund
T6.7	Increase the use of green hydrogen vehicles. Use biomethane and biogas created from organic waste as a "bridge fuel" to achieve 100% green hydrogen and electric vehicles. Consider the use of other zero-emission fuel sources.	ISD	PW		• NG and hydrogen truck registration data (or fuel consumption data) • Quantity of biomethane and biogas sold and consumed in unincorporated Los Angeles County • Percent of the community truck fleet that uses green biomethane and hydrogen	Medium term (2030–2035)	$$$	CARB Bus Replacement Grant, CARB Hybrid and Zero Emission Truck and Bus Voucher Incentive Project, Federal Zero-Emission Transit Bus Tax Exemption, CARB California Clean Mobility Options Voucher Pilot Program, SCAQMD Heavy-Duty Zero Emission Vehicle Replacement Grant, SCAQMD Goods Movement Emission Reduction Program, CARB Low Carbon Transportation Investments and Air Quality Improvement Program, CPUC statewide transportation electrification infrastructure rebate program
T7 [Q]	**Electrify County Fleet Vehicles:** Electrify the County bus, shuttle, and light-duty vehicle fleets.			Electrify the County bus and shuttle vehicle fleets by 2035. Increase the fleetwide percentage of light-duty vehicles in the County–owned fleet that are ZEVs to: • 35% by 2030 • 60% by 2035 • 100% by 2045 Support the state's goal that all new light-duty vehicle fleet purchases, with certain exceptions, will be ZEVs.				

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
T7.1	Electrify the County bus and shuttle vehicle fleets and partner with transit agencies for group purchasing and siting of shared charging and/or fueling infrastructure. [M]	PW, LASD	ISD		• Number of ZEV buses • Number of ZEV light-duty vehicles • Total ZEV percentage of bus and light-duty vehicle fleet	Short to medium term (2024–2035)	$$$$	Caltrans grant, CARB Bus Replacement Grant, CARB Hybrid and Zero Emission Truck and Bus Voucher Incentive Project, Federal Zero-Emission Transit Bus Tax Exemption, CARB California Clean Mobility Options Voucher Pilot Program, SCE Charge Ready Transit Bus Pilot and Charge Ready Transport, CARB Low Carbon Transportation Investments and Air Quality Improvement Program, New EV Tax Credit, Commercial EV Tax Credit
T7.2	Electrify light-duty County fleet vehicles. [M]	ISD, LASD, Fire, PW, Parks	CSO		• ZEV percentage of light-duty County-owned fleet	Short to medium term (2024–2035)	$$$	CARB Clean Vehicle Rebate Project public fleet vehicle rebates, CARB Clean Cars for All program, Caltrans grants, CARB Low Carbon Transportation Investments and Air Quality Improvement Program, New EV Tax Credit, Commercial EV Tax Credit
T8 [Q] (Core)	**Accelerate Freight Decarbonization:** Incentivize and implement freight decarbonization technologies, specifically focusing on charging infrastructure.			Increase the fleetwide percentage of medium- and heavy-duty vehicles in unincorporated Los Angeles County that are ZEVs to: • 40% by 2030 • 60% by 2035 • 90% by 2045 Increase the fleetwide percentage of medium- and heavy-duty vehicles in the County-owned fleet that are ZEVs to: • 50% by 2030 • 70% by 2035 • 95% by 2045 Ensure that 100 percent of the drayage truck fleet is ZEV by 2035. Ensure that 100 percent of sales of medium- and heavy-duty trucks are ZEV by 2045. Require that all new warehouse loading docks have EVCSs by 2030. Require that all existing warehouse loading docks have EVCSs by 2030.				

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
T8.1	Implement freight decarbonization technologies along highway corridors passing through unincorporated Los Angeles County communities through programs such as zero-emission delivery zones.	DRP, CSO	SCAQMD, CARB, SCAG, Metro, councils of governments, cities		• Medium- and heavy-duty truck EVCSs • Miles between EVCSs • Sales and registrations of ZEV trucks • Percent of drayage truck fleet that is ZEV	Medium to long term (2030–2045)	$$$$	SCAQMD Heavy-Duty Zero Emission Vehicle Replacement Grant, SCAQMD Goods Movement Emission Reduction Program, CEC CALeVIP EVSE Rebates, SCE Charge Ready Program EVSE rebates, CARB Advanced Technology Freight Demonstration Projects, CARB Low Carbon Transportation Investments and Air Quality Improvement Program, CEC Clean Transportation Program, Federal New EV Tax Credit, Federal Commercial EV Tax Credit, Federal Inflation Reduction Act EV tax credits and other financial incentives
T8.2	Create an ordinance requiring new goods movement facilities to install alternative fueling infrastructure.	DRP, CSO	PW, ISD		• Number and location of EVCS facilities • Total number of medium- and heavy-duty ZEVs registered and operating in unincorporated Los Angeles County	Short term (2024–2030)	$	County General Fund, SCAQMD Heavy-Duty Zero Emission Vehicle Replacement Grant, Goods Movement Emission Reduction Program, CEC CALeVIP EVSE Rebates, SCE Charge Ready Program EVSE rebates for implementation/compliance, CEC Clean Transportation Program, CPUC statewide transportation electrification infrastructure rebate program, Federal EV Charging Tax Credit, Federal Inflation Reduction Act EV tax credits and other financial incentives
T8.3	Adopt Building Performance Standards for existing goods movement facilities and reach code requirements for major retrofits and renovations that require alternative fueling infrastructure for medium- and heavy-duty vehicles. Require goods movement facilities to install alternative fueling infrastructure for medium- and heavy-duty vehicles at the point of sale.	DRP, CSO	PW, ISD		• Number and location of EVCS facilities • Total number of medium- and heavy-duty ZEVs registered and operating in unincorporated Los Angeles County	Short term (2024–2030)	$$	County General Fund, SCAQMD Heavy-Duty Zero Emission Vehicle Replacement Grant, Goods Movement Emission Reduction Program, CEC CALeVIP EVSE Rebates, SCE Charge Ready Program EVSE rebates for implementation/compliance, CEC Clean Transportation Program, CPUC statewide transportation electrification infrastructure rebate program, Federal EV Charging Tax Credit, Federal Inflation Reduction Act EV tax credits and other financial incentives
T8.4	Streamline permitting of ZEV charging and fueling infrastructure for medium- and heavy-duty vehicles.	DRP	CSO, PW		• Number of permits completed	Short to medium term (2024–2035)	$	County General Fund, CEC Clean Transportation Program, CPUC statewide transportation electrification infrastructure rebate program, Federal EV Charging Tax Credit, Federal Inflation Reduction Act EV tax credits and other financial incentives

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
T8.5	Electrify the County medium- and heavy-duty vehicle fleet.	ISD, LASD, Fire, PW, Parks	CSO		• Number and percent of medium- and heavy-duty vehicles in the County-owned fleet that are ZEVs	Short to long term (2024–2045)	$$$	CARB Clean Vehicle Rebate Project public fleet vehicle rebates, County General Fund, SCAQMD Heavy-Duty Zero Emission Vehicle Replacement Grant, Goods Movement Emission Reduction Program, CEC CALeVIP EVSE Rebates, CARB Low Carbon Transportation Investments and Air Quality Improvement Program, CEC Clean Transportation Program, CPUC statewide transportation electrification infrastructure rebate program, Federal New EV Tax Credit, Federal Commercial EV Tax Credit, Federal EV Charging Tax Credit, Federal Inflation Reduction Act EV tax credits and other financial incentives
T9 [Q]	**Expand Use of Zero-Emission Technologies for Off-Road Vehicles and Equipment:** Phase out the use of gas- and diesel-powered small (≤25 horsepower) off-road equipment and increase the use of zero-emission and near-zero-emission construction, agriculture, and manufacturing equipment.			Increase the fleetwide percentage of off-road fleet and equipment in unincorporated Los Angeles County that are ZEVs to: • 20% by 2030 • 50% by 2035 • 95% by 2045 Increase the fleetwide percentage of construction, agriculture, and manufacturing equipment in unincorporated Los Angeles County that are ZEVs to: • 50% by 2030 • 75% by 2035 • 100% by 2045				
T9.1	Partner with the South Coast Air Quality Management District and Antelope Valley Air Quality Management District to increase the use of zero-emission and near-zero-emission construction, agriculture, and manufacturing equipment.	PW	DRP, CSO, ISD, SCAQMD, CARB		• Off-road vehicle and equipment fleet count, type, and fuel type	Short term (2024–2030)	$	CARB Clean Off-Road Equipment Voucher Incentive Project, SCAQMD Surplus Off-Road Opt-In for NOx (SOON) Program, Carl Moyer Program, CARB Low Carbon Transportation Investments and Air Quality Improvement Program
T9.2	Identify types of ZEV equipment and green hydrogen equipment that are commercially available (e.g., forklifts, loaders, welders, saws, pumps, fixed cranes, air compressors, sweepers, aerial lifts, pressure washers) and require the use of these types of equipment on all new projects through an ordinance or conditions of approval.	PW, DRP	CSO, ISD, SCAQMD, CARB		• Development and adoption of ordinance • Off-road vehicle and equipment fleet count, type, and fuel type	Short term (2024–2030)	$	CARB Clean Off-Road Equipment Voucher Incentive Project, SCAQMD Surplus Off-Road Opt-In for NOx (SOON) Program, Carl Moyer Program, CARB Low Carbon Transportation Investments and Air Quality Improvement Program

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
T9.3	Require, to the maximum extent feasible, the use of zero-emission and near-zero-emission construction, agriculture, and manufacturing equipment for County projects. [M]	PW	DRP, CSO, ISD, SCAQMD		• Development and adoption of ordinance • Off-road vehicle and equipment fleet count, type, and fuel type	Short term (2024–2030)	$$	CARB Clean Off-Road Equipment Voucher Incentive Project, SCAQMD Surplus Off-Road Opt-In for NOx (SOON) Program, Carl Moyer Program, CARB Low Carbon Transportation Investments and Air Quality Improvement Program
Strategy 5: Decarbonize Buildings								
E1 [Q] (Core)	**Decarbonize Existing Buildings:** As the carbon intensity of grid-supplied electricity decreases, decarbonization of the electrical grid must be combined with building decarbonization, shifting the energy load from fossil fuels to carbon-free energy sources while taking into consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face. This measure aims to decarbonize applicable existing buildings. A primary alternative to fossil natural gas is renewable electricity supplied by CPA. Biomethane is another alternative to fossil natural gas; however, existing opportunities for widespread use of biomethane are currently limited. The use of other zero-GHG-emission fuel sources for buildings will also be considered.			Decarbonize the existing residential building stock: • 25% by 2030 • 40% by 2035 • 80% by 2045 Decarbonize the existing nonresidential building stock: • 15% by 2030 • 25% by 2035 • 60% by 2045 Require Zero Net Energy (ZNE) for all major renovations: • 50% by 2030 • 75% by 2035 • 100% by 2045 Require major renovations to be electric-ready. Adopt building performance standards and reach code(s). Adopt ZNE ordinance. Conduct buildings portfolio analysis and cost feasibility study.				
E1.1	Adopt Building Performance Standards for existing buildings and reach code requirements for major retrofits and renovations that require zero-GHG emission appliances.	CSO, PW	DRP		• Energy consumption (gas use vs. electricity use vs. biomethane use) • Number of existing buildings transitioned to all-electric	Short to medium term (2024–2035)	$	Funded; CPUC Technology and Equipment for Clean Heating (TECH) and Building Initiative for Low Emissions Development (BUILD) programs, Home Electrification and Energy Efficiency Rebates, Efficient Building Code Adoption Grants, Federal Inflation Reduction Act

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
E1.2	Increase alternatives to fossil natural gas uses, such as for cooking, in existing buildings. Establish carbon and GHG intensity limits for existing nonresidential and residential buildings over a certain size.	CSO, DRP	PW, SoCalGas		• Carbon intensity limits/reporting • Biomethane consumption	Short to medium term (2024–2035)	$	CPUC TECH program, CPUC BUILD program, CARB Greenhouse Gas Reduction Fund, CARB California Climate Investments program, California Alternative Energy and Advanced Transportation Financing Authority, California Lending for Energy and Environmental Needs Center, Affordable Housing and Sustainable Communities Program, CPUC Energy Saving Assistance Program, CPA and CALeVIP rebates, Home Electrification and Energy Efficiency Rebates, Efficient Building Code Adoption Grants, Federal Inflation Reduction Act
E1.3	Adopt a ZNE ordinance for building renovations, based on certain criteria (such as commercial facilities with 10,000 square feet of additions). Adopt ZNE Building Performance Standards for certain buildings not undergoing major renovations or retrofits.	CSO, DRP	PW, CSO, SCE, CPA		• Number of ZNE buildings constructed	Short term (2024–2030)	$	County General Fund; CPUC TECH program, CPUC BUILD program, CARB Greenhouse Gas Reduction Fund, CARB California Climate Investments program, California Alternative Energy and Advanced Transportation Financing Authority, California Lending for Energy and Environmental Needs Center, Affordable Housing and Sustainable Communities Program, CPUC Energy Saving Assistance Program, CPA and CALeVIP rebates, Home Electrification and Energy Efficiency Rebates, Efficient Building Code Adoption Grants, Federal Inflation Reduction Act
E1.4	Create a plan for phased electrification of County facilities. Phase out gas-powered infrastructure and appliances as they need replacement. [M]	ISD	PW, CSO, SCE, CPA		• Number of buildings electrified • Energy consumption (gas use vs. electricity use)	Short to long term (2024–2045)	$$–$$$$	CPUC TECH program, CPUC BUILD program, CARB Greenhouse Gas Reduction Fund, CARB California Climate Investments program, California Alternative Energy and Advanced Transportation Financing Authority, California Lending for Energy and Environmental Needs Center, Affordable Housing and Sustainable Communities Program, CPUC Energy Saving Assistance Program, CPA and CALeVIP rebates, Home Electrification and Energy Efficiency Rebates, Efficient Building Code Adoption Grants, Federal Inflation Reduction Act
E1.5	Create a comprehensive fund aggregation program to support energy efficiency, decarbonization, and resilience in new and existing affordable housing.	CSO, DRP	DRP, SCE, CPA, RePowerLA Coalition, NRDC		• Number of units retrofitted • Number of units with renter protections as a result of incentives	Short to medium term (2024–2035)	$$$	Federal Inflation Reduction Act

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
E1.6	Create and resource an energy retrofit accelerator to provide a one-stop shop for guidance, technical support, training, and access to aggregated funds to support building owners and contractors. Target support to low-income communities and affordable housing.	CSO, DRP	DRP, SCE, CPA, SoCalGas, RePowerLA Coalition, NRDC		• Number of owners served • Number of retrofits implemented • Number of contractors trained	Short to medium term (2024–2035)	$$	Federal Inflation Reduction Act

E2 [Q]	**Decarbonize New Development:** This measure aims to decarbonize all applicable new buildings, while taking into consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face.			• Require all applicable new buildings to be zero-GHG emission. Provide affordable housing set-aside to offset first cost.
				  ○ Residential: 90% zero-GHG emission by 2030, 95% by 2035, and 100% by 2045
				  ○ Nonresidential: 90% zero-GHG emission by 2030 (except large industry and possibly food service) 95% by 2035, and 100% by 2045
				• Require most new residential and nonresidential buildings to be ZNE beginning in 2030. Include affordable housing set-aside.
				  ○ Residential: 90% ZNE by 2030
				  ○ Nonresidential: 90% ZNE by 2030 (except large industry)
				
				Require all new development to be electric-ready.				

E2.1	Adopt an ordinance requiring all applicable new buildings to be zero-GHG emission. Include affordable housing considerations in these requirements, and develop supporting measures (financial support, technical assistance, or other incentives) to defray potential additional first costs in order to maintain housing affordability. Require all new development to be electric-ready.	PW, DRP	CSO, WDACS		• Number of zero GHG emission buildings built • Total electricity and natural gas consumption	Short term (2024–2030)	$	County General Fund, Home Electrification and Energy Efficiency Rebates, Efficient Building Adoption Grants
E2.2	Adopt a ZNE ordinance for all new residential buildings built after 2025 and all new nonresidential buildings built after 2030. Include renter protections for affordable housing. Provide affordable housing set-aside to offset first cost.	PW, DRP	CSO		• Number of residential and nonresidential buildings constructed to be ZNE	Short term (2024–2030)	$	County General Fund, Home Electrification and Energy Efficiency Rebates, Efficient Building Code Adoption Grants, Commercial Energy Efficiency Tax Deduction
E2.3	Adopt CALGreen Code Tier 1 green building standards and identify which Tier 2 standards could be adopted as code amendments.	PW	CSO, DRP		• Number of voluntary CALGreen Tier 2 standards adopted as code amendments	Short term (2024–2030); ongoing with CALGreen updates)	$	New funds needed

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
E3	**Other Decarbonization Actions:** Reduce the life-cycle carbon intensity of building materials and phase out the use of high-GWP refrigerants.			Increase the proportion of biomethane in the utility natural gas mix to: • 20% by 2030 • 30% by 2035 • 80% by 2045 Use low-carbon, carbon-neutral, or negative-carbon concrete for all new construction; identify carbon intensity limit of concrete. Replace high-GWP refrigerants with low-GWP refrigerants: • 15% by 2030 • 25% by 2035 • 50% by 2045				
E3.1	Work with utilities to incorporate increasing levels of biomethane into the natural gas mix.	CSO, DRP	PW, SoCalGas, LACSD, CalRecycle		• Proportion of biomethane in utility natural gas mix	Short to medium term (2024–2035); develop ordinance to be in effect by 2030	$$$ (TBD based on cost of biomethane)	TBD
E3.2	Adopt a concrete code for new construction that limits embodied carbon emissions; specify code requirements of carbon intensity limit for concrete.	PW	CSO, DRP		• Quantity of low-carbon concrete used in new construction	Short to medium term (2025–2035)	$	TBD
E3.3	Adopt reach code requirements that include performance standards to limit the amount of embodied carbon associated with construction.	CSO	DRP, PW		• Quantity of low-carbon materials used in new construction	Short term (2024–2030)	$	TBD
E3.4	Develop a refrigerant management program that establishes a phase-out timeline for high-GWP refrigerants in existing buildings, incentivizes industrial equipment replacement, and specifies requirements for new development to use low-GWP refrigerants.	ISD	DRP, U.S. EPA, CARB		• Quantity of low-GWP refrigerants charged/used	Short term (2024–2030)	$	TBD
Strategy 6: Improve Efficiency of Existing Building Energy Use								
E4 [Q]	**Improve Energy Efficiency of Existing Buildings:** Retrofit existing building stock to reduce overall unincorporated Los Angeles County energy use.			Reduce building energy use intensity below 2015 levels as follows: • 20% for residential, 15% for industrial, and 25% for commercial by 2030 • 25% for residential and industrial and 35% for commercial by 2035 • 50% for residential, industrial, and commercial by 2045 Adopt building performance standards and reach code(s).	•			

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
E4.1	Adopt Building Performance Standards for energy efficiency in existing buildings. Expand and enhance the energy efficiency programs offered by the Southern California Regional Energy Network (SoCalREN). Include affordable housing considerations in these requirements and develop additional renter protections and supporting measures (financial support, technical assistance, or other incentives) to limit the amount of first costs being passed on to low-income renters. (See Actions E1.5 and E1.6.)	ISD, CSO	SoCalREN, SCE, SoCalGas, CPA		• Overall energy savings • Number of homes or businesses participating	Short to medium term (2024–2035)	$$$	New funds needed; GoGreen Business Energy Financing program, SoCalREN, SCE On-Bill Financing, Home Electrification and Energy Efficiency Rebates, Efficient Building Code Adoption Grants, Commercial Energy Efficiency Tax Deduction, Residential Energy Efficiency Tax Credit, Affordable Housing Resilience and Efficiency Investments
E4.2	Adopt an energy efficiency ordinance for existing buildings, requiring all buildings over 20,000 square feet to benchmark and report their energy use and demonstrate their pathway to efficiency.	CSO	PW, DRP, SCE, SoCalGas, CPA		• Energy use, electricity and gas (Btu) • Building size (square footage)	Short term (2024–2030)	$	County General Fund, Home Electrification and Energy Efficiency Rebates, Efficient Building Code Adoption Grants, Commercial Energy Efficiency Tax Deduction, Residential Energy Efficiency Tax Credit, Affordable Housing Resilience and Efficiency Investments
E4.3	Convert existing County–owned heat-trapping surfaces to cool or green surfaces. [M]	ISD	CSO, PW		• Number and area of cool and green roofs installed	Medium term (2030–2035)	$$–$$$	Project-based funding
Strategy 7: Conserve Water								
E5	**Increase Use of Recycled Water and Graywater Systems:** Increasing the use of alternative water sources (e.g., recycled water, graywater, indirect potable reuse) reduces the demand for water sources with higher energy and carbon intensities (e.g., imported water, groundwater).			Increase use of alternative water sources from recycled water, graywater, or potable reuse: • 25% by 2030 • 50% by 2035 • 90% by 2045 Increase use of recycled water or graywater for agricultural uses: • 30% by 2030 • 50% by 2035 • 80% by 2045 Increase use of recycled water or graywater for industrial uses: • 30% by 2030 • 50% by 2035 • 80% by 2045 Implement a successful direct potable reuse project by 2025.				
E5.1	Require dual waste piping to be installed in new residential developments to allow for future graywater irrigation systems.	PW	DPH		• Number of graywater systems installed	Long term (2035–2045)	$	California Department of Water Resources grants; partial funds secured; additional funds needed
E5.2	Require the use of recycled water and graywater for agricultural purposes where recycled water is available. Identify soil and water conservation best practices for agricultural uses. Work with Los Angeles County Sanitation Districts (LACSD) and other water suppliers to assess the feasibility of new recycled water facilities for unserved communities.	PW	DRP, DPH, LACSD, MWD		• Recycled/graywater supply for agricultural purposes	Short to long term (2024–2045)	$$–$$$	New funds needed

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
E5.3	Require the use of recycled water and graywater for industrial purposes where recycled water is available. Identify water conservation best practices for industrial uses. Work with LACSD and other water suppliers to assess the feasibility of new recycled water facilities for unserved communities.	PW	DRP, DPH, LACSD, MWD		• Recycled/graywater supply for industrial purposes	Short to long term (2024–2045)	$$–$$$	TBD
E5.4	Require the use of recycled water and graywater for landscaping irrigation purposes where recycled water is available.	PW	DRP, DPH, LACSD, MWD		• Recycled/graywater supply for landscape irrigation	Short to long term (2024–2045)	$$–$$$	TBD
E5.5	Partner with the County water districts and retail suppliers to explore the potential for widespread utilization of direct potable reuse through pilot projects.	PW, CSO	County water districts, MWD		• Direct potable reuse output volume	Short term (2024–2030)	$	TBD
E6 [Q]	**Reduce Indoor and Outdoor Water Consumption:** Reducing indoor and outdoor water consumption is essential as the state experiences longer and more severe droughts. Not only will water conservation improve regional resiliency, but it will also reduce GHG emissions through the reduction of energy consumption associated with the processing, treatment, and conveyance of water and wastewater.			Reduce total water use to less than: • 110 GPCD by 2030 • 100 GPCD by 2035 • 85 GPCD by 2045 Reduce outdoor landscaping water use by 10% by 2030, 20% by 2035, and 50% by 2045. Reduce municipal water consumption by 10% by 2030, 20% by 2035, and 50% by 2045.				
E6.1	Develop a water conservation ordinance for new development (public and private). Utilize Leadership in Energy and Environmental Design (LEED) or Sustainable SITES Initiative (SITES) standards. A future ordinance may include a net-zero water requirement for new greenfield development.	CSO	DRP, PW		• Total water use • Water use per capita • Square footage of each type of development (residential, commercial, municipal) built water-neutral • Building size (square footage)	Short term (2024-2030)	$	New funds needed
E6.2	Adopt a water efficiency ordinance for existing buildings, requiring all buildings over 20,000 square feet to benchmark and report their water use and demonstrate their pathway to efficiency.	PW, CSO	DRP		• Total water use • Water use per capita • Building size (square footage)	Short to medium term (2024–2035)	$	County General Fund
E6.3	Incentivize residents to replace water-intensive landscaping, such as decorative turf, with water-conserving landscaping and/or California native plants through a new ordinance along with education and incentive programs.	PW	CSO, DRP, water districts		• Water use for landscaping	Short term (2024–2030)	$	County General Fund
E6.4	Implement strategies to improve water efficiency and increase water conservation at County facilities. [M]	PW, ISD, Parks	CSO, DRP		• Total water use • Water use for landscaping • Indoor water use	Short term (2024–2030)	$$	Project-based funding
E6.5	Integrate water-related programs into the County's affordable housing preservation program to protect the housing affordability of units and to keep the units fit for their purpose in a changing climate.	PW, DRP	CSO		• Total water use • Water use for landscaping • Indoor water use	Short to medium term (2024–2035)	$	Water agency funding and grant programs

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
Strategy 8: Minimize Waste and Recover Energy and Materials from the Waste Stream								
W1 [Q] **(Core)**	**Institutionalize Sustainable Waste Systems and Practices:** Undertake actions that result in sustainable waste systems. Responsible and sustainable waste practices are learned behaviors that the County can facilitate through outreach, education, and mandates. Increase diversion of recyclable materials and organics from landfills through ordinances, service improvements, education and outreach, and promotion of product stewardship and markets for material reuse. An increased diversion rate indirectly reduces the demand for virgin materials, which reduces the life-cycle carbon intensity of any resulting products. Through action taken at the County level, waste-conscious habits and thoughtful consumption can become the default.			Increase the total unincorporated Los Angeles County waste diversion rate to: • 85% by 2030 • 90% by 2035 • 95% by 2045 Reduce the disposal of single-use plastics in landfills. Increase the Construction and Demolition Debris Ordinance to 70% diversion. Increase percentage of construction and demolition debris reused in new projects (private, public).				
W1.1	Identify best practice waste pricing programs to reduce waste generation to the maximum extent feasible, including but not limited to differential prices for waste based on amount generated in the residential sector and reforms to tipping rate structures.	CSO, PW	LACSD, DPH		• Per capita landfill disposal • County unincorporated area diversion rate	Short term (2024–2030)	$$	Funded; CalRecycle grants, CEC grants, USDA Water & Waste Disposal Loan & Grant Program
W1.2	Implement, enforce, and expand to the maximum extent feasible the single-use plastics and expanded polystyrene ordinance.	CSO, PW	DPH		• Estimated source reduction of single-use plastics and polystyrene • County unincorporated area waste generation and diversion rates	Short to long term (2024–2045) Short to long term (2024–2045)	$–$$	Funded; CalRecycle grants, CEC grants, USDA Water & Waste Disposal Loan & Grant Program
W1.3	Increase the diversion requirements in the County's Construction and Demolition Debris Ordinance and allow the use of recycled construction materials in new projects.	PW	CSO, DRP, LACSD, CalRecycle		• C&D tonnage recycled/diverted from landfill • C&D tonnage reused	Short term (2024–2030)	$	Funded; CalRecycle grants, CEC grants, USDA Water & Waste Disposal Loan & Grant Program
W2	**Increase Organic Waste Diversion:** Provide services for diverting yard waste, food scraps, and compostable paper from landfills to beneficial uses, including compost, food rescue, and energy production.			Maximize organic waste diversion to support unincorporated Los Angeles County's overall waste diversion rate goals identified in Measure W1.				
W2.1	Require organic waste generators to properly manage organic waste as per the Organic Waste Disposal Reduction Ordinance. Improve upon and expand existing practices and programs to minimize organic waste disposal in landfills.	PW, Agricultural Commissioner/ Weights and Measures	CSO, LACSD, CalRecycle		• Per capita organic waste disposal or total organic waste disposed • Total Countywide diversion rate	Short to long term (2024–2045) Short to long term (2024–2045)	$–$$	Funded
W2.2	Develop organic waste collection, management, and diversion programs for constituents in unincorporated communities and all County operations; establish a contamination monitoring plan for organic waste programs.	PW	Waste collectors, CalRecycle		• Organic waste (tons or pounds per capita) disposal tonnage	Short term (2024–2030)	$$$	New funds needed; Grants from CalRecycle, CEC, CDFA, USDA
W2.3	Collaborate with the Los Angeles County Sanitation Districts and other waste and wastewater service providers to utilize unused anaerobic digestion capacity of existing wastewater treatment plants and solid waste facilities to generate vehicle fuel and other beneficial uses (electricity and/or biomethane) from newly diverted organic waste. Develop a strategy for using bioenergy created from recycled organic waste.	PW	CSO, LACSD, CalRecycle		• Total energy generation or renewable vehicle fuel created from organic waste	Short to medium term (2024–2035)	$$$$	New funds needed; Grants from CalRecycle, CEC, CDFA, USDA

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
W2.4	Provide regional leadership for organic waste processing capacity planning and infrastructure development.	PW	LACSD, CalRecycle		• Capacity of organic waste processing facilities • Amount of organic waste processed	Medium to long term (2030–2045)	$$$$	Funded
W2.5	Enhance and expand the County's existing Food DROP food donation and redistribution program to divert edible food from landfills and make it available to food insecure communities.	PW	DPH, local businesses, restaurants, grocery stores, and nonprofits		• Total tons of edible food donated to food recovery organizations	Short to medium term (2024–2035)	$$	USDA Supplemental Nutrition Assistance Program-Education; grants from CalRecycle, CEC, CDFA, and USDA
Strategy 9: Conserve and Connect Wildlands and Working Lands								
A1 [Q]	**Conserve Forests, Woodlands, Shrublands, Grasslands, Desert, and other Carbon-Sequestering Wildlands and Working Lands:** Preserve, conserve, and restore agricultural lands, working lands, rangelands, forest lands, wetlands, and other wildlands in unincorporated Los Angeles County.			Reduce the amount of natural land converted for urbanized uses: • 25% by 2030 (53 hectares conserved annually) • 50% by 2035 (106 hectares conserved annually) • 75% by 2045 (159 hectares conserved annually) Conserve and restore new acres of wildland: • 2,000 acres by 2030 • 4,000 acres by 2035 • 6,000 acres by 2045 Manage new acres of wildland for wildfire risk reduction and carbon stock savings: • 10,000 acres by 2030 • 20,000 acres by 2035 • 50,000 acres by 2045				
A1.1	Develop an open space conservation and land acquisition strategy that prioritizes wildlife connectivity to conserve native habitats for carbon sequestration.	DRP	CSO, Parks, DOC, Fire		• Total acres of natural habitats conserved • Easements established; percentage of easements within climate-hazard areas or SEAs	Short to long term (2024–2045)	$$–$$$	County General Fund
A1.2	Employ ecosystem-appropriate vegetation management of wildlands based on the best available science to reduce unintended human ignitions and wildfire risk and prevent carbon loss in forest lands. Leverage tools such as the Unified Land Management Plan and the Countywide Community Wildfire Prevention Plan.	Agricultural Commissioner/ Weights and Measures, Fire	DRP, CSO, Parks, DOC		• Acres of wildlands managed for wildfire risk reduction and carbon stock savings	Short to long term (2024–2045)	$$–$$$	Grants through CAL FIRE
Strategy 10: Sequester Carbon and Implement Sustainable Agriculture								
A2	**Support Regenerative Agriculture:** Promote agricultural practices that sequester carbon and restore soil quality, biodiversity, ecosystems health, and water quality.			• Reduce the quantity of synthetic fertilizers used/applied. • Increase the number of acres of cover crops using regenerative agricultural techniques.				
A2.1	Create fallow and field resting incentives to reduce bare-fallow land by adding cover crops and promoting crop rotation for active agricultural sites to improve soil quality and limit risks of nutrient erosion, pollutant runoff, and yield reduction. Create a	Agricultural Commissioner/ Weights and Measures	CSO, ISD		• Acres of bare-fallow land	Medium term (2030–2035)	$–$$$$	TBD

ID	STRATEGY/MEASURE/ACTION	LEAD	PARTNERS	PERFORMANCE OBJECTIVES	TRACKING METRICS	TIME FRAME	COST	FUNDING
	carbon farming plan with the primary objectives of carbon removal and regenerative agriculture.				• Acres of land using regenerative agricultural techniques			
A2.2	Provide compost and/or organic or nonsynthetic fertilizer to farmers free of charge or at a discounted rate.	Agricultural Commissioner/ Weights and Measures	CSO, LACSD		• Tonnage of compost and/or non-synthetic fertilizer provided to those producing crops • Quantity of synthetic fertilizers used/applied • Number of acres of cover crops using regenerative agricultural techniques	Short term (2024–2030)	$$$	TBD
A3 [Q]	**Expand Unincorporated Los Angeles County's Tree Canopy and Green Spaces:** Create an Urban Forest Management Plan to plant trees, increase unincorporated Los Angeles County's tree canopy cover, add green space, and convert impervious surfaces. Focus tree planting on frontline communities with insufficient tree cover and green spaces.			Plant new trees as follows:* • 130,000 trees by 2030 • 200,000 trees by 2035 • 270,000 trees by 2045 Develop an Urban Forest Management Plan. ** The performance objectives provided here serve as a general metric and may be refined upon completion of the Urban Forest Management Plan.*				
A3.1	Create and implement an equitable Urban Forest Management Plan that prioritizes: (1) tree- and parks-poor communities; (2) climate- and watershed-appropriate and drought/pest-resistant vegetation; (3) appropriate watering, maintenance, and disposal practices; (4) provision of shade; and (5) biodiversity.	CSO	DRP, PW, Parks, Agricultural Commissioner/Weights and Measures, DPH, Beaches and Harbors, LASD, Fire, CAL FIRE, ISD		• Tree count • Tree canopy cover • Green space area • Area of impervious surface converted • Neighborhood selection criteria	Short to long term (2024–2045)	$$	New funds needed; CAL FIRE Urban and Community Forestry Grant
A3.2	Expand tree planting on County property and in the public right-of-way within unincorporated Los Angeles County. Encourage tree planting on private property.	CSO	DRP, PW, Parks, DPH, Beaches and Harbors, LASD, Fire, CAL FIRE, ISD		• Number of trees planted • Acres of tree canopy cover	Short to long term (2024–2045)	$$	New funds needed; CAL FIRE Urban and Community Forestry Grant
A3.3	Develop an ordinance requiring that all removed native trees be replaced by an equal or greater number of new trees.	CSO	DRP, PW, Parks		• Number of trees planted/replaced	Short term (2024–2030)	$	TBD

Abbreviations: AB = Assembly Bill; Beaches and Harbors = Los Angeles County Department of Beaches & Harbors; Btu = British thermal units; BUILD = Building Initiative for Low Emissions Development; CAL FIRE = California Department of Forestry and Fire Protection; CalCAP = California Capital Access Program; CALeVIP = California Electric Vehicle Infrastructure Project; CALGreen = California Green Building Standards; CalRecycle = California Department of Resources Recycling and Recovery; Caltrans = California Department of Transportation; CARB = California Air Resources Board; CCS = capture and carbon and sequestration; CDFA = California Department of Food and Agriculture; CEC = California Energy Commission; CIFIA = Carbon Dioxide Transportation Infrastructure Finance and Innovation; County = County of Los Angeles government; CPA = Clean Power Alliance; CPUC = California Public Utilities Commission; CSO = Chief Sustainability Office; DOC = California Department of Conservation; DOE = U.S. Department of Energy; DPH = Department of Public Health; DRP = Department of Regional Planning; DU = dwelling unit; EV = electric vehicle; EVCS = electric vehicle charging station; EVSE = electric vehicle supply equipment; Fire = Los Angeles County Fire Department; Food DROP = Food Donation & Recovery Outreach Program; GHG = greenhouse gas; GPCD = gallons per capita per day; GWP = global warming potential; HQTA = high quality transit area; ISD = Internal Services Department; kBtu = thousand British thermal units; kW = kilowatts; LA100 = The Los Angeles 100% Renewable Energy Study; LACDA = Los Angeles County Development Authority; LACSD = Los Angeles County Sanitation Districts; LASD = Los Angeles County Sheriff's Department; LEAP = Local Early Action Planning; LEED = Leadership in Energy and Environmental Design; Metro = Los Angeles County Metropolitan Transportation Authority; MSRC = Mobile Source Air Pollution Reduction Review Committee; MW = megawatts; MWD = Metropolitan Water District of Southern California; MWh = megawatt-hours; NG = natural gas; NO_x = oxides of nitrogen; NRDC = Natural Resources Defense Council; Parks = Los Angeles County Department of Parks and Recreation; PV = photovoltaic; PW = Department of Public Works; SASH = Single-Family Affordable Solar Homes; SB = Senate Bill; SCAG = Southern California Association of Governments; SCAQMD = South Coast Air Quality Management District; SCE = Southern California Edison; SEA = Significant Ecological Area; SoCalGas = Southern California Gas Company; SoCalRen = Southern California Regional Energy Network; SOON = Surplus Off-Road Opt-In for NOx; TBD = to be determined; TDM = transportation demand management; TECH = Technology and Equipment for Clean Heating; TIP = Transportation Improvement Program; U.S. EPA = U.S. Environmental Protection Agency; USDA = U.S. Department of Agriculture; VMT = vehicle miles traveled; WDACS = County Workforce Development, Aging and Community Services; ZEV = zero-emission vehicle

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APPENDIX F

2045 Climate Action Plan CEQA Streamlining Checklist

Purpose

The 2045 Climate Action Plan CEQA Streamlining Checklist (referred to herein as the "2045 CAP CEQA Streamlining Checklist") can be used to provide a voluntary streamlined review process for analyzing the impacts of GHG emissions resulting from proposed discretionary projects that are subject to CEQA.

The 2045 CAP CEQA Streamlining Checklist may be updated administratively to incorporate new GHG emissions reduction techniques or to comply with later amendments to the 2045 CAP or local, state, or federal law.

Appendix F Organization

This appendix is organized into the following four sections:

Section F.1: Background

This section describes the rationale for the checklist and explains how it provides the mechanism for projects that wish to streamline environmental review of their GHG impacts using the 2045 CAP's PEIR pursuant to CEQA Guidelines Section 15183.5(b).

Section F.2: Checklist Instructions

This section includes the submittal requirements for applicants, the applicability of the 2045 CAP CEQA Streamlining Checklist, and instructions for completing the 2045 CAP CEQA Streamlining Checklist.

Section F.3: 2045 CAP CEQA Streamlining Checklist

This section includes the 2045 CAP CEQA Streamlining Checklist itself along with a table for reporting and documenting alternative project emissions reduction measures and additional GHG reductions.

Section F.4: Offsite GHG Reduction Program Framework

This section includes a framework for the County's forthcoming Offsite GHG Reduction Program. This program will be available for project applicants to use as an alternative GHG reduction measure to the CEQA streamlining requirements, by allowing applicants to fund or implement local projects that reduce GHG emissions within unincorporated Los Angeles County.

F.1 Background

2045 CAP CEQA Streamlining Checklist

The growth projections outlined in the General Plan's Land Use and Housing Elements were used in the 2045 CAP to estimate unincorporated Los Angeles County's future emissions. Therefore, projects can use the 2045 CAP CEQA Streamlining Checklist if they are consistent with the Land Use Element. This consistency allows a project to streamline its analysis of GHG impacts by using the existing programmatic environmental review contained in the certified Final PEIR for the 2045 CAP. In doing so, pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to climate change resulting from the project's GHG emissions may be determined not to be cumulatively considerable. This approach is consistent with the recommendations of the California Air Resources Board (CARB) in the *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) that "CEQA-qualified CAPs" can allow eligible projects to streamline their determination of significance for GHG emissions.[1] It is also consistent with the Association of Environmental Professionals Climate Change Committee's best practices for tiering from qualified GHG reduction plans that demonstrate substantial progress toward meeting the next milestone statewide planning reduction target (i.e., a 40 percent reduction below 1990 levels by 2030 as set forth by SB 32).[2]

This 2045 CAP CEQA Streamlining Checklist provides a mechanism for projects to specifically identify "those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project" per Section 15183.5(b)(2) of the CEQA Guidelines.

GHG emissions associated with the construction of projects, including demolition and decommissioning activities, are generally orders of magnitude lower than operational GHG emissions. This is primarily because construction emissions are typically short in duration compared to the project's overall lifetime. Typically, construction GHG emissions are amortized over 30 years and added to a project's 30-year lifetime emissions total; after this amortization, construction GHG emissions usually represent a small fraction of a project's total annual

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1 California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in January 2023.

2 Association of Environmental Professionals. 2016. *Final White Paper Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California.* October 18, 2016. Available: https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf.

emissions. It is generally difficult to enforce low-emission construction equipment because of the limited availability of zero-emission and near-zero-emission construction equipment, along with contracting requirements. In addition, the 2045 CAP quantifies GHG emissions from off-road construction activity at the unincorporated Los Angeles County level; these emissions are accounted for in the 2045 CAP's ability to achieve the 2030, 2035, and 2045 targets.

The 2045 CAP CEQA Streamlining Checklist also requires the use of electric and zero-emission construction equipment during project construction to the maximum extent feasible, to align with Measure T9. Therefore, construction emissions can be assessed qualitatively as part of related CEQA GHG emissions analysis. However, some projects may have long construction periods or entail substantial excavation and grading that could result in construction-related GHG emissions that may be considered significant. Thus, the County retains the discretion on a project-by-project basis to consider whether a project's construction-related GHG emissions could be cumulatively considerable and require a more detailed quantitative CEQA analysis and mitigation of GHG emissions.

Projects that elect not to use the 2045 CAP CEQA Streamlining Checklist for CEQA streamlining must prepare a comprehensive project-specific analysis of GHG emissions. The analysis must quantify existing and projected GHG emissions and it is strongly encouraged that the project incorporate all CEQA streamlining requirements in this 2045 CAP CEQA Streamlining Checklist, although this is not required. The 2045 CAP CEQA Streamlining Checklist may be updated to incorporate new GHG emissions reduction techniques or to comply with later amendments to the 2045 CAP or to local, state, or federal law.

2045 CAP Appendix B, *Emissions Forecasting and Reduction Methods*, provides the quantitative basis for CEQA streamlining requirements. This document demonstrates how, based on substantial evidence,[3] implementing these CEQA streamlining requirements on a project-by-project basis will collectively achieve the 2045 CAP's target emissions level for projects by 2030 and 2035, as required by CEQA Guidelines Section 15183.5(b)(1)(D).

Alignment with the 2022 Scoping Plan

Appendix D of CARB's 2022 Scoping Plan provides guidance for local governments and lead agencies for how local climate action planning can support the State of California's climate goals.[4] CARB reiterates that a CAP that has been adopted through the CEQA review process and meets the criteria specified in CEQA Guidelines Section 15183.5(b) for a "plan for the reduction of greenhouse gas emissions"—such as the 2045 CAP—is a "CEQA-qualified CAP" that can allow eligible projects to streamline their determination of significance for GHG emissions.

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[3] CEQA Guidelines Section 15384 defines *substantial evidence* as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. Whether a fair argument can be made that the project may have a significant effect on the environment is to be determined by examining the whole record before the lead agency. Argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly erroneous or inaccurate, or evidence of social or economic impacts which do not contribute to or are not caused by physical impacts on the environment does not constitute substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts."

[4] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in January 2023.

Streamlining CEQA GHG analysis for future projects by demonstrating consistency with a CAP involves evaluating whether a project demonstrates consistency with "all applicable GHG reduction measures identified in the CAP." CARB notes that such consistency can be determined by using CAP compliance checklists, which can be "included as part of the proposed project's CEQA analysis documenting the project's consistency with the CEQA-qualified CAP."

The 2045 CAP CEQA Streamlining Checklist is therefore consistent with CARB's guidance in the 2022 Scoping Plan as a valid way for discretionary projects to streamline their analysis of GHG impacts.

Recommended Project Attributes for Residential and Mixed-Use Projects

Appendix D of the 2022 Scoping Plan includes a list of "key project attributes" for residential and mixed-use projects. CARB states that if a project incorporates these attributes, the project would "accommodate growth in a manner consistent with State GHG reduction and equity prioritization goals" and would be "***clearly*** consistent with the State's climate goals." Further, such projects would be "consistent with the Scoping Plan or other plans, policies, or regulations adopted for the purposes of reducing GHGs" and that therefore, "the GHG emissions associated with such projects may result in a less-than-significant GHG impact under CEQA."

Alternative Project Emissions Reduction Measures and Offsite GHG Reduction Programs

As discussed below under *Step 4: Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions*, project applicants may employ alternative GHG emissions reduction measures to serve as replacements for any CEQA streamlining requirement not feasible to implement at the project-level. Such replacement measures must meet specific criteria and be supported by substantial evidence that the measure would achieve the same or greater level of GHG emissions reductions as the CEQA streamlining requirement that it replaces.

CARB supports the idea of "off-site GHG mitigation" in Appendix D of the 2022 Scoping Plan for projects that have maxed out their on-site GHG reduction actions: "If implementation of all feasible on-site GHG reduction measures is insufficient to reduce a project's impact to a less-than-significant level, the State recommends that the lead agency next explore options to fund or implement ***local***, off-site direct GHG reduction strategies."[5]

As discussed further below, Action ES5.4 of the 2045 CAP would establish an Offsite GHG Reduction Program for new development to use as a GHG reduction or mitigation pathway for 2045 CAP compliance and to fund programs for reducing GHG emissions in the built environment.

CARB cautions that such off-site measures must directly "offset" a project's GHG emissions and must not be unrelated off-site measures that would occur independently of the proposed project. Lead agencies and project applicants must provide substantial evidence that a specific off-site mitigation measure is not otherwise required by law or regulation and would not have

[5] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in January 2023.

occurred "***but for*** the requirement to mitigate a project's GHG impacts." CARB goes on to state the following:

> There has been concern that GHG emission reductions from off-site GHG mitigation measures… may double count GHG emission reductions from California's Cap-and-Trade program. However, off-site mitigation measures, such as EV [electric vehicle] charging or building efficiency retrofits, are viable options for mitigation under CEQA and would not be double counted, provided they are not otherwise required by law or regulation and would not have happened but for the mitigation requirements of the project. If the mitigation would have been implemented or required through another statute, regulation, existing local program, or requirement other than the project it is mitigating, then the project being mitigated may not also claim credit for the reductions.

F.2 Checklist Instructions

2045 CAP CEQA Streamlining Checklist Submittal Requirements

The 2045 CAP CEQA Streamlining Checklist shall accompany the project application for all projects and plans proposed within unincorporated Los Angeles County's land use authority that are subject to CEQA. The 2045 CAP CEQA Streamlining Checklist is designed to assist in identifying the GHG emissions reduction actions and other applicable sustainability-focused requirements specific to a proposed project. However, it may be necessary to supplement the completed 2045 CAP CEQA Streamlining Checklist with supporting materials, calculations, or certifications to demonstrate compliance with all the applicable CEQA streamlining requirements in the 2045 CAP CEQA Streamlining Checklist. The 2045 CAP CEQA Streamlining Checklist shall be included in the respective project conditions of approval.

2045 CAP CEQA Streamlining Checklist Applicability

The 2045 CAP CEQA Streamlining Checklist allows for streamlined project-specific CEQA GHG analysis. The 2045 CAP CEQA Streamlining Checklist is only required if a project applicant wants to use CEQA streamlining for GHG impacts; it is not required if a project-level environmental analysis of GHG impacts is conducted. As such, the 2045 CAP CEQA Streamlining Checklist is voluntary. The 2045 CAP CEQA Streamlining Checklist cannot be used for projects requiring a General Plan amendment associated with land use density increases. Ministerial projects and projects that otherwise are exempt from CEQA are deemed to be consistent with the 2045 CAP, and no further review is necessary, with the exception of the residential infill categorical exemption (CEQA Guidelines Section 15195), for which projects are required to demonstrate consistency with the 2045 CAP through the 2045 CAP CEQA Streamlining Checklist if the applicant elects to use CEQA streamlining for GHG impacts. All projects using the 2045 CAP CEQA Streamlining Checklist for CEQA streamlining must demonstrate consistency with the General Plan growth projections. **If a project is not consistent with the General Plan growth projections, then the 2045 CAP CEQA Streamlining Checklist may not be used for CEQA streamlining.**

2045 CAP CEQA Streamlining Checklist Instructions

Project applicants shall complete the following **four steps** to demonstrate compliance with the 2045 CAP for a proposed project.

Step 1. Demonstrate consistency with the General Plan growth projections (**Table F-1**).

Step 2. Determine whether the project screens out of certain CEQA streamlining requirements (Table F-1).

Step 3. Complete the 2045 CAP CEQA Streamlining Checklist (Table F-1).

Step 4. Identify alternative project emissions reduction measures and additional GHG reductions (**Table F-2**), as needed.

All projects must complete ***Step 1:*** *Demonstrate Consistency with the General Plan Growth Projections* and ***Step 2:*** *Determine Whether the Project Screens Out of Certain CEQA Streamlining Requirements*. Projects that do not meet the screening criteria must complete ***Step 3:*** *Complete the 2045 CAP CEQA Streamlining Requirements*. Projects that cannot meet all CEQA streamlining requirements shown in Table F-1 must also complete ***Step 4:*** *Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions* (Table F-2) to describe alternative GHG emissions reduction measures that serve as replacements to any CEQA streamlining requirements not met by the project.

The following process, illustrated in **Figure F-1**, explains how to demonstrate consistency of a project with the 2045 CAP's GHG emissions reduction measures and actions, and thereby streamline the project's GHG impacts analysis by tiering from the certified Final PEIR for the 2045 CAP.

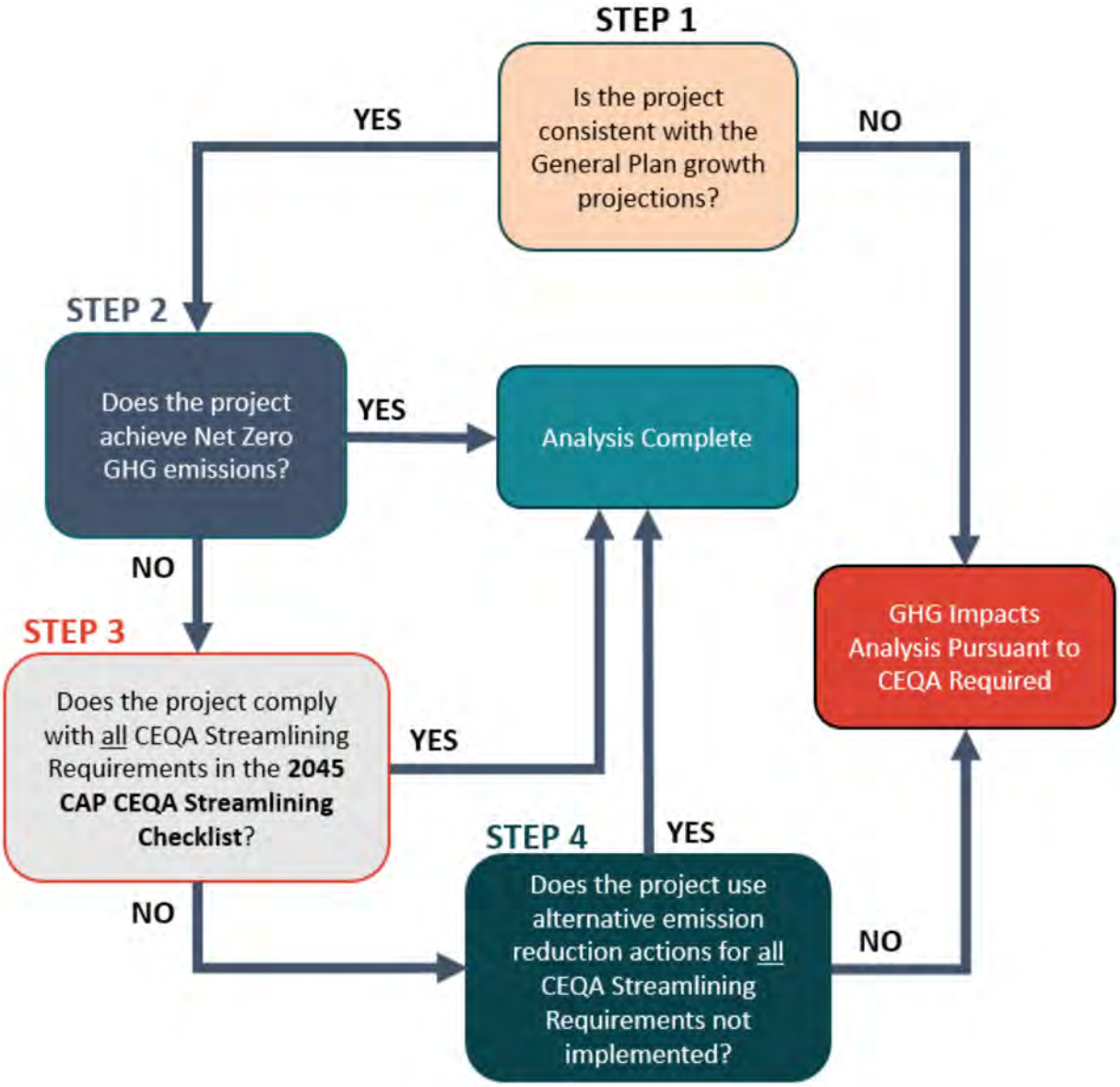

Figure F-1: Determining Consistency with the 2045 CAP for CEQA Streamlining

Step 1: Demonstrate Consistency with the General Plan Growth Projections

All projects must demonstrate consistency with the General Plan growth projections. **If a project is not consistent with the General Plan growth projections, then the 2045 CAP CEQA Streamlining Checklist may not be used for CEQA streamlining.** Complete the *General Plan Consistency* section of **Table F-1,** *General Plan and CEQA Streamlining Requirement Checklist*, below.

The options for determining General Plan consistency (included in Table F-1) are as follows:

- Is the proposed project consistent with the General Plan growth projections? If yes, move to **Step 2** below. If no, the proposed project may not streamline its GHG impacts analysis by using the 2045 CAP's EIR, and instead must prepare a comprehensive project-specific analysis of GHG emissions and impacts pursuant to CEQA. Such projects are also encouraged to incorporate all the CEQA streamlining requirements in the 2045 CAP CEQA Streamlining Checklist.

Step 2: Determine Whether the Project Screens Out of Certain CEQA Streamlining Requirements

Certain projects may screen out of compliance with certain CEQA streamlining requirements contained in Table F-1 if such projects meet specific criteria. These criteria are designed to ensure high efficiency and low GHG emissions and describe projects that would generally comply with the 2045 CAP.

2045 CAP CEQA Streamlining Checklist Screening Criterion: Projects may skip the *Demonstrate Compliance with the CEQA Streamlining Requirements* section of Table F-1 below if they meet the following criterion:

- If the project would achieve **net-zero GHG emissions,** the project is considered to comply with the 2045 CAP and the analysis is complete.

Net-zero GHG emissions means that the project's GHG emissions from construction and operational activities occurring at full buildout would result in zero total GHG emissions on an annual basis. In other words, all GHGs emitted the atmosphere during construction and operation by a project are balanced completely by GHG sequestration and removal over each calendar year period. Construction GHG emissions should be amortized for the project (typically 30 or 40 years) and added to the annual full buildout operational emissions to determine total annual emissions. Net-zero GHG emissions for a project does not consider GHG emissions from existing conditions or existing uses at the project site. For example, if a project emits 1,500 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year for both construction and operations but includes the planting of enough new trees to sequester 1,500 $MTCO_2e$ per year, the project would achieve net-zero GHG emissions.

To demonstrate that the project achieves net-zero GHG emissions, the applicant must submit a comprehensive quantitative project-specific analysis of all GHG emissions, sinks, and removals from construction and full buildout operations, consistent with CEQA guidelines and standard practice for modeling GHG emissions for projects. If the project meets this criterion, the project does not need to complete **Table F-1** below and the analysis is complete.

Transportation Screening Criteria: Projects may skip CEQA streamlining requirements #3, #4, #5, #11, and #12 of the *Demonstrate Compliance with the CEQA Streamlining Requirements*

section of Table F-1 below if they meet the following criteria (based on the 2020 Los Angeles County Department of Public Works Transportation Impact Analysis Guidelines[6]):

1. For development projects[7]:
    a. If the project does not have a retail component, and the project generates a net increase of less than 110 daily vehicle trips,[8] then it screens out.
    b. If the project has a retail component, and it contains retail uses that do not exceed 50,000 square feet of gross floor area,[9] then it screens out.
    c. If the project has a residential component, and 100 percent of the units, excluding manager's units, are set aside for lower income households,[10] then it screens out.
    d. If the project is located within a one-half mile radius of a major transit stop or an existing stop along a high-quality transit corridor[11] and meets all of the following criteria, then it screens out:
        i. Has a Floor Area Ratio greater than 0.75.[12]
        ii. Provides less parking than required by the Los Angeles County Code.[13]
        iii. Is consistent with the Southern California Associated of Governments' Regional Transportation Plan/Sustainable Communities Strategy.[14]
        iv. Does not replace residential units set aside for lower income households with a smaller number of market-rate residential units.
2. For transportation projects:[15]
    a. If the project would not include the addition of through traffic lanes on existing or new highways, including general-purpose lanes, high-occupancy vehicle lanes, peak-period lanes, auxiliary lanes, and lanes through grade-separated interchanges (except managed lanes, transit lanes, and auxiliary lanes of less than 1 mile in length designed to improve roadway safety),[16] then it screens out.
    b. If the project would reduce roadway capacity and VMT,[17] then it screens out.

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6 Los Angeles County Department of Public Works. 2020. *Transportation Impact Analysis Guidelines*. July 2020. Available: https://dpw.lacounty.gov/traffic/trafficreportmsg.cfm. Accessed February 2022.
7 The Transportation Impact Analysis (TIA) Guidelines provide a list of development project types, which include residential, office, manufacturing, institutional, and retail project types. For a complete list, see page 11 of the TIA Guidelines.
8 As referenced in: Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA.* December 2018.
9 Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA.* December 2018.
10 Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA.* December 2018.
11 Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.
12 Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.
13 Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.
14 Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.
15 The TIA Guidelines describe transportation projects as projects that would increase vehicular/roadway capacity.
16 As noted above, the TIA Guidelines describe transportation projects as projects that would increase vehicular/roadway capacity.
17 A list of transportation projects that are not likely to lead to a substantial or measurable increase in vehicle miles travelled are included in the County's TIA Guidelines, pp. 17–19.

If the project meets the above criteria, it may skip certain transportation portions of the 2045 CAP CEQA Streamlining Checklist (see Table F-1 for details).

Step 3: Demonstrate Compliance with the 2045 CAP CEQA Streamlining Requirements

Table F-1 identifies the CEQA streamlining requirements for projects. Projects must demonstrate compliance with the 2045 CAP CEQA streamlining requirements listed in Table F-1 or document why the requirements are not applicable or are infeasible.[18] The corresponding 2045 CAP measures and actions are indicated in the table to provide additional context. The full text of the 2045 CAP measures and actions is provided in the 2045 CAP (see Chapter 3 and Appendix E).

All applicants shall complete the following steps for the *Transportation, Building Energy and Water, Waste*, and *Agriculture, Forestry, and Other Land Use (AFOLU)* sections of **Table F-1** below (unless the project meets the transportation screening criteria identified in Step 1 above, in which case the project may skip completion of certain sections of the *Transportation* section of Table F-1):

Step 3a. Review the CEQA streamlining requirements described in the column titled "2045 CAP Streamlining Requirement."

Step 3b. Use the check boxes in the column titled "Project Complies" to indicate whether the "Project Complies," the requirement is "Not Applicable," or the "Project Does Not Comply and Alternative Measure Proposed."

Step 3c. Provide a qualitative analysis of the proposed project's compliance with the CEQA streamlining requirements in the column titled "Description of Project Measure(s)/Documentation of Compliance." This will be the basis for the CEQA analysis to demonstrate compliance with the 2045 CAP, and by extension, with SB 32. The qualitative analysis should provide:

i. A description of which streamlining requirements are included as part of the proposed project; or

ii. A description of why the streamlining requirement is not applicable to the proposed project; or

iii. A description of why the streamlining requirements are infeasible. If applicants select "Project Does Not Comply" or "Alternative Measure Proposed," they must complete Table F-2 to document what alternative project measures will be implemented to achieve a similar level of GHG reduction and how those GHG emissions reduction estimates were calculated.

Step 3d. Provide specific project design criteria and/or reporting metrics to support the proposed project's compliance with each CEQA streamlining requirement. Specific information is requested for each respective item in the 2045 CAP CEQA Streamlining Checklist.

Regarding item #2 above, the project applicant can only select "Not Applicable" if the requirement is not relevant to the project. The project applicant should only select "Project Does Not Comply and Alternative Measure Proposed" if it is infeasible, as defined by the CEQA Guidelines, for the

[18] Please note that the CEQA streamlining requirements are not mitigation measures as defined by CEQA.

project to comply with the checklist requirement. Sufficient documentation of such infeasibility must be supplied to the County to support such a determination. The County retains ultimate discretion for determining the feasibility of the checklist requirement for the proposed project. Further, if "Project Does Not Comply and Alternative Measure Proposed" is selected for a specific checklist requirement, then the project applicant **must** identify an alternative measure to achieve the same or greater level of GHG emissions reduction as the CEQA streamlining requirement with which the project does not comply.

If the project applicant cannot fully complete these requirements, then the 2045 CAP CEQA Streamlining Checklist may not be used for CEQA streamlining of GHG emissions impacts. See the *Projects That Are Not Eligible for CEQA Streamlining* section for additional instructions.

The 2045 CAP CEQA streamlining requirements are listed as either "Tier 1" or "Tier 2." These two levels are defined as follows:

> **Tier 1**: Required for all discretionary projects in order to use CEQA streamlining for GHG impacts.
>
> **Tier 2**: Encouraged for all discretionary projects. Although these measures are not required, projects are strongly encouraged to implement them. In Table F.1 below, these voluntary items are colored with gray shading.

In general, Tier 1 requirements were quantified in the 2045 CAP for GHG emissions reductions needed to achieve the 2030, 2035, and 2045 emissions reduction targets. Because these measures were quantified, they would be required for the 2045 CAP to achieve its full emissions reduction potential. Some Tier 1 measures were not quantified, but they either are required through other code or ordinance (such as compliance with the Transportation Demand Management Ordinance) or are deemed essential for the overall success of the 2045 CAP. Tier 2 requirements were identified as supporting actions but are not deemed essential for the overall success of the 2045 CAP.

Some Tier 1 and Tier 2 requirements point to future County regulations or ordinances that have not yet been developed, such as the forthcoming building decarbonization ordinance. In these instances, projects using the Checklist must only comply with currently adopted ordinances and requirements at the time of project approval.

The 2045 CAP CEQA Streamlining Checklist includes the following Tier 1 and Tier 2 requirements, organized by strategy area:

Energy Supply

1. Tier 1: Sunset Oil and Gas Operations
2. Tier 1: Utilize 100% Zero-Carbon Electricity

Transportation

3. Meets Transportation Screening Criteria
4. Tier 1: Increase Density Near High-Quality Transit Areas
5. Tier 1: Incorporate Bicycle and Pedestrian Infrastructure
6. Tier 1: Comply with the County Transportation Demand Management (TDM) Ordinance

7. Tier 1: Comply with the County's Transportation Impact Guidelines
8. Tier 1: Incorporate Electric Vehicle Charging Infrastructure
9. Tier 1: Decarbonize Trucks
10. Tier 1: Incorporate Zero-Emission Technologies for Off-Road Vehicles & Equipment
11. Tier 1: Electrify County Fleet Vehicles (for municipal projects only)
12. Tier 2: Achieve a High Jobs/Housing Balance
13. Tier 2: Encourage Transit, Active Transportation, and Alternative Modes of Transportation
14. Tier 2: Implement Parking Limitations

Building Energy and Water

15. Tier 2: Decarbonize Existing Buildings
16. Tier 2: Decarbonize New Buildings
17. Tier 1: Increase Building Energy Efficiency
18. Tier 1: Implement Water Use Efficiency and Water Conservation
19. Tier 2: Reduce the Life-Cycle Carbon Intensity of Building Materials and Phase Out the Use of High-Global Warming Potential (GWP) Refrigerants
20. Tier 2: Use Energy Storage and Microgrids
21. Tier 2: Use Recycled Water and Graywater for Non-potable Uses and Include Rainfall Capture

Waste

22. Tier 1: Compost Organic Materials
23. Tier 1: Recycle Recyclable Materials
24. Tier 2: Incorporate On-site Composting, Mulching, and/or Anaerobic Digestion

Agriculture, Forestry, and Other Land Use

25. Tier 1: Incorporate Tree Plantings and Expand Urban Forest Cover
26. Tier 2: Conserve Forests, Woodlands, Shrublands, Grasslands, Desert, and other Carbon-Sequestering Wildlands and Working Lands
27. Tier 2: Implement Regenerative Agricultural Practices

2045 CAP Appendix B, *Emissions Forecasting and Reduction Methods*, provides the quantitative basis for the CEQA streamlining requirements.

Step 4: Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions

Projects that propose alternative GHG emissions reduction measures to those identified in Table F-1 or propose to include additional GHG emissions reduction measures beyond those described in Table F-1 shall provide a summary explanation of the proposed measures and demonstrate

GHG reductions achievable though the proposed measures.[19] Documentation for these alternative or additional project measures shall be documented in **Table F-2,** *Applicant Proposed Alternative Project Emissions Reduction Measures*. Any applicants who select "Project Does Not Comply and Alternative Measure Proposed" in Table F-1 must complete the following steps for Table F-2.

Step 4a. In the column titled "Description of Alternative Measure," provide a qualitative description of what measure will be implemented, why it is proposed, and how it will reduce GHG emissions.

Step 4b. In the column titled "Description of GHG Reduction Estimate," demonstrate how the alternative project measure would achieve the same or greater level of GHG emissions reductions as the CEQA streamlining requirement that it replaces. Documentation and calculation files must be attached separately.

An example alternative project measure may be installing additional EV charging infrastructure beyond what is required by the California Green Building Standards Code (CALGreen Code), County ordinance, or requirements in the forthcoming Zero Emission Vehicle Master Plan, to support zero-emission vehicles beyond what is specified in the 2045 CAP's performance objectives for Measure T6 (Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales). The applicant would then demonstrate how this would achieve the same or greater level of GHG emissions reductions as the checklist requirement for which it serves as an alternative.

Carbon offset credits are not permitted to be used as alternative project emissions reduction measures.

Guidance for Quantifying GHG Reductions from Alternative Measures

In order to use alternative GHG emissions reduction measures to replace a CEQA streamlining requirement in Table F-1 below, project applicants must use the three-step process outlined below to quantitatively demonstrate how the alternative project measure would achieve the same or greater level of GHG emissions reductions as the CEQA streamlining requirement (or requirements) that it replaces.

Project applicants should follow these three steps:

Step 4c. Prepare a detailed quantified GHG emissions inventory for the project taking into consideration all GHG-reducing project features and 2045 CAP CEQA Streamlining Checklist items included as part of the project (including proposed mitigation measures, project design features, strategies being implemented, and other County requirements).

Project applicants shall prepare a detailed quantified GHG emissions inventory for the project taking into consideration all GHG-reducing project features and CEQA streamlining requirements included as part of the project (including proposed mitigation measures, project design features, strategies being implemented, and other County requirements), ***except*** for the alternative GHG emissions reduction measures proposed by the applicant to replace any Tier 1 CEQA streamlining requirement (as

[19] Please note that the alternative GHG emissions reduction measures are not mitigation measures as defined by CEQA.

described in Step 4e). Applicants should use the California Emissions Estimator Model (CalEEMod), CARB's Emission FACtor model (EMFAC),[20] the California Air Pollution Control Officers Association (CAPCOA) *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*, and other commonly accepted GHG modeling methods and protocols.

Step 4d. For each Tier 1 CEQA streamlining requirement that the project will not meet, include a quantified calculation of the additional GHG emission reductions that would have occurred had the project implemented the Tier 1 Checklist streamlining requirement.

Project applicants shall, for all Tier 1 CEQA streamlining requirements that the project will not meet, a quantified calculation of the additional GHG emission reductions that would have occurred had the project implemented those Tier 1 CEQA streamlining requirements. In order to do this, applicants shall prepare a project model run assuming the implementation of all Tier 1 CEQA streamlining requirement that the project will not meet. Applicants should then compare the project's GHG emissions from this scenario with the project's GHG emissions from Step 4c above. The difference in GHG emissions between the two scenarios represents the GHG emission reductions that would have occurred had the project implemented all Tier 1 CEQA streamlining requirements; this is the amount of GHG emissions required to be reduced in total by the alternative GHG emissions reduction measures.

Step 4e. Propose an alternative measure (or set of measures) and demonstrate quantitatively that the alternative measures would achieve a GHG emission reduction equivalent to the GHG emission reduction that would have resulted from complying with the Tier 1 CEQA streamlining requirement.

Project applicants shall provide a quantified measure or set of measures that closes the gap between the two scenarios as quantified in Step 4c and Step 4d. In order to do this, applicants shall prepare a project model similar to Step 4c but include all alternative GHG emissions reduction measures proposed by the applicant. The resulting GHG emissions from this model run must equal or be less than the GHG emissions resulting from the project model run in Step 4d above which assumes the implementation of all Tier 1 CEQA streamlining requirements. In other words, the GHG emission reductions achieved by the alternative measures must meet or exceed the GHG emission reductions achieved by the Tier 1 CEQA streamlining requirements.

Project applicants shall submit documentation to the City demonstrating all three steps above. This can include model run inputs and/or outputs, excel calculation files, or other documentation of the emission calculations.

Potential alternative GHG emissions reduction measures to be considered include, but are not be limited to, measures recommended in the South Coast Air Quality Management District's latest CEQA Air Quality Guidelines, the CARB Scoping Plan (December 2022, as may be revised), the CAPCOA *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* (December 2021, as may be revised), the

[20] California Air Resources Board. 2022. EMFAC2021 Model. Version v1.0.2. Available: https://arb.ca.gov/emfac/. Accessed June 2023.

CAPCOA CalEEMod, the California Attorney General's *Mitigation for Greenhouse Gas Emissions* guidance, and Reference Guides on Leadership in Energy and Environmental Design (LEED) published by the U.S. Green Building Council.

As for any project design features or mitigation measures implemented via the County's project approval and CEQA review process, the project applicant shall implement all alternative GHG emissions reduction measures proposed. For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits and implemented during construction. For operational GHG reduction measures to be incorporated into the project, the measures shall be implemented on ongoing basis.

Projects That Are Not Eligible for CEQA Streamlining

In some cases, a project may not be able to comply with all of the 2045 CAP CEQA streamlining requirements. This may be because the project is inconsistent with the General Plan's growth projections as described in Step 1. Or a project may not be able to feasibly incorporate all CEQA streamlining requirements as identified in Table F-1 and discussed in Step 3; such a project may further be unable to adequately identify alternative project measures to achieve a similar level of GHG reduction to each CEQA streamlining requirement with which a project cannot comply. Such projects are not eligible to streamline environmental review of their GHG impacts using the 2045 CAP's PEIR and may be required to prepare a comprehensive project-specific analysis of GHG emissions pursuant to the CEQA Guidelines (including the CEQA Guidelines Appendix G Environmental Checklist).

A comprehensive project-specific analysis of GHG emissions must be prepared for any project that elects not to use the Checklist for CEQA streamlining by completing Table F-1 and (if applicable) Table F-2. Such an analysis shall quantify existing and projected GHG emissions and evaluate potential impacts pursuant to the CEQA Guidelines (including the CEQA Guidelines Appendix G Environmental Checklist). It is strongly encouraged that the project incorporate all the CEQA streamlining requirements in the 2045 CAP CEQA Streamlining Checklist, though this is not required.

F.3 2045 CAP CEQA Streamlining Checklist

Table F-1, *General Plan and 2045 CAP CEQA Streamlining Checklist,* allows the applicant to demonstrate compliance with the 2045 CAP's GHG emissions reduction measures and actions. This table addresses ***Step 1:*** *Demonstrate Consistency with the General Plan Growth Projections*; ***Step 2:*** *Determine Whether the Project Screens Out of Certain CEQA Streamlining Requirements*; and ***Step 3:*** *Demonstrate Compliance with the CEQA Streamlining Requirements*. This checklist must be completed for all applicable projects electing to streamline their CEQA GHG analysis.

Table F-2, *2045 CAP Greenhouse Gas Emissions Reduction Alternative Measures*, allows the project applicant to document alternative GHG emissions reduction measures used to demonstrate compliance with the Table F-1 CEQA streamlining requirements. This table addresses ***Step 4:*** *Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions*. This checklist is required only for projects that propose to use alternative GHG emissions reduction measures.

Table F-1: General Plan and 2045 CAP CEQA Streamlining Checklist

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
Step 1: Demonstrate Consistency with the General Plan Growth Projections		
1. The Project is Consistent with the General Plan Growth Projections The growth projections included in the General Plan were used in the 2045 CAP to estimate unincorporated Los Angeles County GHG emissions over time. Therefore, projects must be consistent with the General Plan to comply with the CEQA streamlining requirements. To determine a project's consistency with the General Plan growth projections, please answer the following question and provide an explanation with supporting documentation. **Is the proposed project consistent with the existing land use designation of the Land Use Element and the 2021 Housing Element Update?** If "Yes," proceed to **Step 2: Determine Whether the Project Screens Out of Certain CEQA Streamlining Requirements** below. If "No," the proposed project may not streamline its GHG impacts analysis by using the 2045 CAP's EIR and must prepare a comprehensive project-specific analysis of GHG emissions and impacts pursuant to CEQA.	*Describe how the project is consistent with the General Plan growth projections. Provide additional supporting documentation as an attachment as needed.* *OR,* *Explain why the project is not consistent with the General growth projections, and whether the project would include a General Plan amendment. If the project includes a General Plan amendment, STOP HERE.*	☐ Yes ☐ No
Step 2: Determine Whether the Project Screens Out of the CEQA Streamlining Requirements		
Certain projects may screen out of the 2045 CAP CEQA Streamlining Requirements if they meet the following screening criterion. **Does the project achieve net-zero GHG emissions?** The project must conduct a comprehensive project-specific analysis of all GHG emissions, sinks, and removals, consistent with all CEQA guidelines and standard practice for modeling GHG emissions for projects, to demonstrate that the project achieves net-zero GHG emissions. If "Yes," the project would comply with the CEQA streamlining requirements and no additional analysis is needed (no project-specific GHG impact analysis would be required). If "No," proceed to **Step 3: Demonstrate Compliance with the CEQA Streamlining Requirements** below.	*If "Yes," attach to this checklist the estimated project GHG emissions. Provide supporting calculation files and documentation for this analysis. If the proposed project is determined to result in net-zero GHG emissions, STOP HERE.* *If "No," proceed to Step 3 below.*	☐ Yes ☐ No

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Step 3: Demonstrate Compliance with the CEQA Streamlining Requirements		
Energy Supply		
1. TIER 1: Sunset Oil and Gas Operations For any project involving the decommissioning, replacement, retrofit, or redesign of infrastructure or facilities associated with the oil and gas industry, including energy generation (i.e., cogen), the project must: A) Comply with the Oil Well Ordinance (Title 22). B) Reduce fossil fuel–based emissions by at least 80% compared to existing conditions. C) If the project site includes existing active and abandoned oil wells, examine all wells for fugitive emissions of methane. Reduce such existing emissions by a minimum of 80%. D) To reduce any residual fossil fuel–based emissions generated by the project, incorporate carbon removal technologies including direct air capture and carbon and sequestration, as feasible. **Supports 2045 CAP Measures (and Actions):** ES1 (ES1.1, ES1.2, ES1.3)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed as a replacement strategy (provide additional documentation as described below).* *IN ADDITION, provide documentation of the project's ability to reduce fossil fuel–based emissions, including fugitive methane emissions.* *Provide the number of oil and gas operations/wells closed. Provide documentation of any carbon removal technologies incorporated at the project site.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
2. TIER 1: Utilize 100% Zero-Carbon Electricity The project must utilize 100% zero-carbon electricity on-site. The project must comply with one of the following options: A) Install on-site renewable energy systems or participate in a community solar program to supply 100% of the project's estimated energy demand to the maximum extent feasible. B) Participate in Southern California Edison at the Green Rate level (i.e., 100% carbon-free electricity) for all electricity accounts associated with the project until SCE provides 100% carbon-free electricity for all accounts by default. C) Participate in the Clean Power Alliance at the Clean Rate level (i.e., 100% carbon-free electricity) for all electricity accounts associated with the project until CPA provides 100% carbon-free electricity for all accounts by default. D) A combination of #1, #2, and #3 above such that 100% of the project's electricity consumption is supplied by zero-GHG emission sources of power generation, whether by utilities or by on-site electricity generation or both. **Supports 2045 CAP Measures (and Actions):** ES2 (ES2.1, ES2.2), ES3 (ES3.1, ES3.2, ES3.3, ES3.4, ES3.5, ES3.6)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below)* *IN ADDITION, provide the project's anticipated electricity demand, the project's participation and opt-out rates for SCE's Green Rate and CPA's Clean Rate electricity rate options used by tenants; and the total kW of solar PV panels installed at the project site.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

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Transportation		
3. Meets Transportation Screening Criteria For development projects, does the project: A) have no retail component and generate a net increase of less than 110 daily vehicle trips? If "Yes," skip streamlining requirements #4, #5, #12, #13, and #14 below. Please complete items #6 through #11 below. If "No," proceed to item (B) below. For development projects, does the project: B) have a retail component and contains retail uses that do not exceed 50,000 square feet of gross floor area? If "Yes," skip streamlining requirements #4, #5, #12, #13, and #14 below. Please complete items #6 through #11 below. If the project contains retail and is mixed use, proceed to item (C) below. If "No," proceed to item (C) below. For development projects, does the project: C) have a residential component and 100% of the units, excluding manager's units, are set aside for lower income households? If "Yes," skip streamlining requirements #4, #5, #12, #13, and #14 below. Please complete items #6 through #11 below. If the project contains retail and is mixed use, proceed to item (D) below. If "No," proceed to item (D) below. For development projects: D) Is the project located within a one-half mile radius of a major transit stop or an existing stop along a high-quality transit corridor and: i. has a Floor Area Ratio greater than 0.75? ii. provides less parking than required by the Los Angeles County Code? iii. is consistent with the Southern California Association of Governments (SCAG) Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS)? iv. does not replace residential units set aside for lower income households with a smaller number of market-rate residential units? If "Yes," skip streamlining requirements #4, #5, #12, #13, and #14 below. Please complete items #6 through #11 below. If "No," proceed to streamlining requirement #3 below. For transportation projects, does the project meet one of the following transportation screening criteria?	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why such actions are infeasible and identify the alternative measure(s) proposed as an alternative strategy (provide additional documentation as necessary).*	☐ Yes ☐ No

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A) The project would not include the addition of through traffic lanes on existing or new highways, including general-purpose lanes, high-occupancy vehicle (HOV) lanes, peak-period lanes, auxiliary lanes, and lanes through grade-separated interchanges (except managed lanes, transit lanes, and auxiliary lanes of less than 1 mile in length designed to improve roadway safety). B) The project would reduce roadway capacity and VMT. If "Yes," skip streamlining requirements #4, #5, #12, #13, and #14 below. Please complete items #6 through #11 below. If "No," proceed to streamlining requirement #4 below. **Supports 2045 CAP Measures (and Actions):** T1 (T1.1, T1.2)		
4. TIER 1: Increase Density Near High-Quality Transit Areas If the project is located within a High Quality Transit Area (HQTA), it must achieve a minimum of 20 dwelling units (DU) per acre, consistent with the Housing Element Rezoning Program. If the project is not located within an HQTA, it must locate residential and employment centers within 1 mile of an HQTA. **Supports 2045 CAP Measures (and Actions):** T1 (T1.1, T1.2)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed as a replacement strategy (provide additional documentation as described below).*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
5. TIER 1: Incorporate Bicycle and Pedestrian Infrastructure The project must incorporate pedestrian and bicycle infrastructure into its design: A) Provide pedestrian facilities and connections to public transportation consistent with the Pedestrian Action Plan, Active Transportation Plans, and Vision Zero Action Plan, and any other relevant governing plan. B) Provide bicycle facilities consistent with the Bicycle Master Plan, Active Transportation Plans, and Vision Zero Action Plan, and any other relevant governing plan, and meet or exceed minimum standards for bicycle facilities in the Zoning Code and CALGreen Code. C) Increase sidewalk coverage to improve pedestrian access. D) Improve degraded or substandard sidewalks. E) Incorporate best practices to ensure pedestrian infrastructure is contiguous and links externally with existing and planned pedestrian facilities; best practices include high-visibility crosswalks, pedestrian hybrid beacons, and other pedestrian signals, mid-block crossing walks, pedestrian refuge islands, speed tables, bulb-outs (curb extensions), curb ramps, signage, pavement markings, pedestrian-only connections and districts, landscaping, and other improvements to pedestrian safety.	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed as a replacement strategy (provide additional documentation as described below)* *IN ADDITION, provide the length and/or amount of bicycle and pedestrian infrastructure incorporated, such as feet or miles of bikeways.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
F) Minimize barriers to pedestrian access and interconnectivity, such as walls, landscaping buffers, slopes, and unprotected crossings. G) Provide bicycle facilities for new and expanded buildings, new dwelling units, change of occupancy, increase of use intensity, and added off-street vehicle parking spaces. H) Provide short- and long-term (secure) bicycle parking for at least 5% of motorized vehicle capacity and nothing less than CALGreen Code requirements, whichever is more restrictive. I) Support the County's goal to increase bikeway miles by 300 percent by 2030 (including Class I bike paths, Class II bike lanes, and Class III bike routes). **Supports 2045 CAP Measures (and Actions):** T3 (T3.1, T3.2, T3.3)		
6. TIER 1: Comply with the County Transportation Demand Management (TDM) Ordinance The Project must comply with the TDM ordinance at the time of project approval. This may include preferential carpool/vanpool parking, bicycle parking, and shower facilities and locker rooms; trip reduction plans; transit-supportive infrastructure development; and similar strategies. Comply with any applicable VMT reduction target and incorporate any required monitoring mechanisms for development, subject to the ordinance. **Supports 2045 CAP Measures (and Actions):** T4 (T4.5)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below)* *IN ADDITION, provide the number of employers participating in the TDM program, the total trip reduction goals for the project's TDM program, and the total trips and VMT reduced via the project's TDM program.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
7. TIER 1: Comply with the County's Transportation Impact Guidelines The project must comply with the County's current Transportation Impact Analysis (TIA) Guidelines. Projects may screen out if they meet certain criteria, such as being located in a transit priority area or local-serving retail development less than 50,000 square feet. Projects that do not screen out must meet the VMT efficiency metrics identified by the TIA Guidelines (e.g., daily VMT per capita for residential projects that is 16.8% below the existing residential VMT per capita for the Baseline Area in which the project is located) and quantitatively demonstrate how these metrics are achieved, pursuant to the TIA Guidelines requirements. **Supports 2045 CAP Measures (and Actions):** T1, T2, T3, T4, T5	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed strategy (provide additional documentation as described below).*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

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8. TIER 1: Incorporate Electric Vehicle Charging Infrastructure The project must incorporate zero-emission vehicle (ZEV) infrastructure and incentives into its design as follows: A) Comply with any CALGreen Code requirement, County ordinance, building code, or condition of approval that requires a certain amount of electric vehicle (EV) charging infrastructure (EVCSs) and readiness. This may include minimum requirements for EV charging stations, EV-capable parking spaces, and EV-ready parking spaces. B) Comply with any provisions and requirements in the forthcoming Zero Emission Vehicle Master Plan.[1] C) Include electric options for promoting active transportation, such as electric scooters and e-bikes. D) Provide education and outreach to tenants and occupants about the benefits of ZEVs and the project's EV infrastructure. **Supports 2045 CAP Measures (and Actions):** T6 (T6.1, T6.2, T6.3, T6.4, T6.5, T6.6, T6.7)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below)* *IN ADDITION, provide the number of ZEVs in the project's tenant's and vendor fleet, if available; the number of public and private EVCSs installed; and the number of scooters/e-bikes available to tenants.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
9. TIER 1: Decarbonize Trucks For projects that include goods movement facilities and/or warehouses, the project must incorporate freight decarbonization technologies and infrastructure, including: A) Comply with any CALGreen Code requirement, County ordinance, building code, or condition of approval that requires a certain amount of EV charging infrastructure and readiness for goods movement facilities and trucks. B) Provide EVCSs at all new warehouse loading docks. C) Comply with any provisions and requirements in the forthcoming Zero Emission Vehicle Master Plan related to goods movement. D) Implement freight decarbonization technologies along highway corridors. E) For all goods movement facilities, install alternative fueling infrastructure such as EVCSs, green hydrogen fueling stations, and/or biomethane fueling stations. F) Comply with any established zero-emission delivery zones. **Supports 2045 CAP Measures (and Actions):** T8 (T8.1, T8.2, T8.3, T8.4, T8.5)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the number of ZEV trucks in the project's tenant's and vendor fleet if available and the number EVCS installed.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

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10. TIER 1: Incorporate Zero-Emission Technologies for Off-Road Vehicles & Equipment The project must: A) Prohibit the use of small equipment powered by gasoline, diesel, propane, or other fossil fuels, including lawn and garden equipment and outdoor power equipment, for all tenants and owners. B) Provide educational materials to tenants regarding the SCAQMD Electric Lawn and Garden Equipment Incentive and Exchange Program, Commercial Lawn & Garden Battery Buy-Down Rebate Program, the Residential Lawn Mower Rebate Program, the new requirements of AB 1346, and any other available options and incentives for purchasing zero-emission equipment, including rebates and subsidies offered by CARB, the County, or other agencies and entities. C) Use electric and zero-emission construction equipment during project construction to the maximum extent feasible. Such equipment shall include forklifts, manlifts, loaders, welders, saws, pumps, fixed cranes, air compressors, sweepers, aerial lifts, pressure washers, and other small equipment. At minimum, the project must use off-road construction equipment that meet CARB Tier 4 Final engine emission standards. D) Use electric and zero-emission agriculture and manufacturing equipment to the maximum extent feasible. These requirements must be stipulated in the contract specifications for the project's construction and for the project's future tenants and any landscaping contracts for the property or tenants. **Supports 2045 CAP Measures (and Actions):** T9 (T9.1, T9.2, T9.3)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide off-road vehicle and equipment fleet count, type, and fuel type, as available.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
11. TIER 1: Electrify County Fleet Vehicles (for municipal projects only) For all new municipal projects and facilities that include the purchase or operation of new fleet vehicles, including public transit buses and shuttles, all such fleet vehicles must be ZEVs. **Supports 2045 CAP Measures (and Actions):** T7 (T7.1, T7.2)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the number of new ZEV buses and the total ZEV percentage of the project's fleet.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

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12. TIER 2: Achieve a High Jobs/Housing Balance For projects with nonresidential development, the Project must incorporate the following design elements: A) Support the County's goal to achieve a job density of 300 jobs per acre. **Supports 2045 CAP Measures (and Actions):** T2 (T2.1)	*Describe how the project will achieve a job density of 300 jobs per acre.* *OR,* *Describe why this action is not applicable to your project.* *OR* *Describe why such actions are not incorporated into your project.* *IN ADDITION, provide the job density of the project in terms of jobs per acre.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
13. TIER 2: Encourage Transit, Active Transportation, and Alternative Modes of Transportation For transit projects only, incorporate the following: A) Expand and improve frequency of existing network of County shuttles. B) Install bus-only lanes and signal prioritization along major thoroughfares. C) Install full bus rapid transit infrastructure along priority corridors. For all other projects, incorporate the following: A) Provide new mobility services, such as micro transit, autonomous delivery vehicles, and on-demand autonomous shuttles, in unincorporated Los Angeles County. B) Offer free transit passes for students, youth, seniors, disabled, and low-income populations. C) Implement telecommuting by project tenants and residents. D) Establish temporary and permanent car-free areas at the project site. **Supports 2045 CAP Measures (and Actions):** T4 (T4.1, T4.2, T4.3, T4.6, T4.7, T4.8, T4.10)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project.* *IN ADDITION, for transit projects, provide the size of area served by transit, the number of employees and residents served by transit, the transit service frequency and headways, the increase in headways or frequencies provided by the project, total transit service hours provided by transit, the number and length of bus-only lanes, and information on signal prioritization on transit routes implemented by the project.* *For non-transit projects, provide the number of residents within one-half mile of bus or active transportation services; information on any new mobility services offered, information on free transit passes offered, the number of employers participating in telecommuting programs, and the number and location of car-free areas provided by the project.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
14. TIER 2: Implement Parking Limitations Projects should include the following characteristics: A) Shared and reduced parking strategies, such as shared parking facilities, carpool/vanpool-only spaces, shuttle facilities, EV-only spaces, and reduced parking below allowable amount B) Minimum amount of required parking C) Unbundled parking costs to reflect cost of parking D) Parking pricing to encourage "park-once" behavior E) Compliance with all County parking reform strategies and policies **Supports 2045 CAP Measures (and Actions):** T5 (T5.1)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions not incorporated into your project.* *IN ADDITION, provide the total number of parking spaces, carpool/vanpool-only spaces, shuttle facilities, EV-only spaces; information on parking costs and unbundling; and parking prices.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
Building Energy and Water		
15. TIER 2: Decarbonize Existing Buildings This action applies only to projects that include a retrofit, remodel, or redesign of an existing building. If the proposed project does not include a retrofit, remodel, or redesign, select "Not Applicable" in the *Project Complies* column. The project must incorporate the following design elements: A) Achieve zero GHG emissions for on-site energy use. B) Comply with all applicable Building Performance Standards.[2] C) Comply with all building carbon intensity limits.[3] D) If the project is a major renovation, achieve ZNE and/or comply with the City's ZNE ordinance.[4] **Supports 2045 CAP Measures (and Actions):** E1 (E1.1, E1.2, E1.3, E1.4, E1.5, E1.6)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the project's anticipated GHG emissions associated with on-site energy consumption (i.e., natural gas use and electricity use) and the number of existing buildings transitioned to zero-GHG buildings.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
16. TIER 2: Decarbonize New Buildings For projects under construction before 2030, the project must achieve zero GHG emissions for on-site energy use, and/or comply with the County's building decarbonization ordinance, unless the project meets specific exemptions identified in the ordinance.[5] For projects under construction after 2030, the project must be zero-net-energy (ZNE) and achieve zero GHG emissions for on-site energy use, and/or comply with the County's ZNE ordinance, unless the project meets specific exemptions identified in the ordinance.[6] **Supports 2045 CAP Measures (and Actions):** E2 (E2.1, E2.2, E2.3)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the number and square footage of zero GHG emission buildings built, all ZNE buildings built, and the total GHG emissions anticipated for all buildings.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
17. TIER 1: Increase Building Energy Efficiency This action applies only to projects that include a retrofit of an existing building. If the proposed project does not include a retrofit, select "Not Applicable" in the *Project Complies* column. The project shall incorporate the following energy efficiency measures into the design: A) Comply with all applicable building performance standards.[7] B) Incorporate strategic energy management programs to reduce building energy demands. C) Conduct an energy audit or benchmarking analysis to identify potential energy savings opportunities and implement such opportunities. D) Achieve CALGreen Code Tier 2 or voluntary building energy measures as they apply to the retrofit. E) Replace existing appliances with higher-efficiency models. F) Install heat-trapping surfaces to cool or green surfaces, as feasible. G) Participate in SoCalREN, SCE, CPA, or other energy efficiency programs. H) Conduct other energy efficiency retrofits. I) Achieve zero-net-energy, if feasible. **Supports 2045 CAP Measures (and Actions):** E4 (E4.1, E4.2, E4.3)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the total number of energy retrofits performed, the building size (square footage) retrofit, the total project energy use and anticipated energy savings through retrofits, and the number and area of cool and green roofs installed.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
18. TIER 1: Implement Water Use Efficiency and Water Conservation The project must comply with the current water conservation ordinance in place, including any requirements for LEED or Sustainable SITES standards.[8] The project must also incorporate water use efficiency and conservation measures, including: A) High-efficiency appliances/fixtures to reduce water use, and/or include water-efficient landscape design B) CALGreen Code Tier 1 and Tier 2 voluntary water conservation measures C) Low-flow or high-efficiency water fixtures D) Water-efficient landscapes with lower water demands than required by the DWR 2015 Model Water Efficient Landscape Ordinance E) Drought-tolerant and native plant species only F) A comprehensive water conservation strategy G) Educational materials provided to future tenants and building occupants about water-saving behaviors and water-conserving landscaping	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the project's estimated total water consumption (in GPCD or total gallons), the square footage of buildings that are water-neutral, and the project's building size (square footage).*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

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Supports 2045 CAP Measures (and Actions): E6 (E6.1, E6.2, E6.3, E6.4, E6.5)		
19. TIER 2: Reduce the Life-Cycle Carbon Intensity of Building Materials and Phase Out the Use of High-GWP Refrigerants The project must incorporate the following design elements to the maximum extent feasible: A) For projects that are not fully electric, incorporate biomethane into the natural gas mix in place of traditional natural gas. B) Use negative-carbon concrete for all construction. C) Use low-GWP refrigerants and fire suppression equipment for all uses on-site. D) Comply with all County codes and ordinances regarding building material carbon intensity and high-GWP refrigerants and other gases. **Supports 2045 CAP Measures (and Actions):** E3 (E3.1, E3.2, E3.3, E3.4)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project.* *IN ADDITION, provide the amount of biomethane used by the project, the quantify of negative-carbon concrete for construction, and the quantity of low-GWP refrigerants and fire suppression equipment used.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
20. TIER 2: Use Energy Storage and Microgrids The project must incorporate the following design elements to the maximum extent feasible: A) Install energy storage systems. B) Use a building-scale or community microgrid to support demand management and peak shaving. **Supports 2045 CAP Measures (and Actions):** ES4 (ES4.1, ES4.2, ES4.3, ES4.4, ES4.5)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project* *IN ADDITION, provide the total kW of energy storage capacity installed and operational information for any microgrids utilized, if applicable.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
21. TIER 2: Use Recycled Water and Graywater for Non-potable Uses and Include Rainfall Capture The project must implement water reuse strategies onsite through the following design elements: A) Require use of reclaimed/recycled water and/or graywater for outdoor uses. B) Install residential graywater systems that meet appropriate regulatory standards. C) Install rainfall capture systems. D) Install dual plumbing for the use of recycled water. **Supports 2045 CAP Measures (and Actions):** E5 (E5.1, E5.2, E5.3, E5.4)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project* *IN ADDITION, provide the amount of reclaimed/recycled water and/or graywater used by the project.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
Waste		
22. TIER 1: Compost Organic Materials The project must comply with all state and local requirements for composting and organic waste collection, including but not limited to Chapter 20.91 (Mandatory Organic Waste Disposal Reduction Ordinance) of the Los Angeles County Code, including all County requirements pursuant to AB 1826 and SB 1383. The project must also: A) Provide proper storage, collection, and loading of organics in a manner that is convenient and safe for all users of the building. Ensure there are sufficient sizes of collection containers for organics. Containers must be kept clean, be clearly labeled, and are co-located next to any other solid waste receptacles. Ensure sufficient pick-up of collection containers to meet the needs of the occupants. B) Include space for multi-stream collection containers for both recycling and organics in any location where a solid waste container is traditionally housed. This includes both outdoor collection containers serviced by a waste hauler or indoor collection containers utilized by occupants. Provide educational material and training to occupants and tenants in how to properly separate organics from all other solid waste and place organics in a separate container designated for organics. C) Ensure that all project occupants and tenants will separate compostables from all other refuse and place compostables in a separate container designated for composting. D) Require that all single-use food service ware (plates, bowls, cups) and accessories (straws, utensils, condiment cups) used by tenants at the project site be BPI certified compostable fiber, except where certain materials may be deemed medically necessary or necessary to ensure equal access for persons with disabilities. E) Require that any single-use accessories (straws, utensils, condiment cups) be only available on demand. F) Ensure that containers are audited annually to ensure proper service levels and to check for contamination. Report findings back to occupants within 30 days and to the County as requested. G) Work with the waste hauler to provide educational materials to tenants on at least an annual basis. H) Provide compliance data to the County as required for any current auditing program. **Supports 2045 CAP Measures (and Actions):** W1 (W1.1, W1.2) and W2 (W2.1, W2.2, W2.5)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the project's estimated organic waste generation (tons), the amount of organic waste sent to landfills, and the amount of organic waste generated by the project which is diverted from landfills.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
23. TIER 1: Recycle Recyclable Materials The project must comply with all state and local requirements for recycling, also including but not limited to Section 20.72.170 (Recyclable Materials Collection Program) of the Los Angeles County Code and all County requirements pursuant to AB 341 and AB 1826. The project must also: A) Comply with any zero waste ordinance in place at the time of project approval. B) Comply with all Mandatory Construction & Demolition (C&D) Recycling Program Requirements, including Chapter 20.87 (Construction and Demolition Debris Recycling and Reuse). C) Provide substantial storage, collection, and loading of recyclables in a manner that is convenient and safe for all users of the building. Ensure there are sufficient sizes and amount of collection containers for recyclables. Containers must be kept clean, be clearly labeled, and are co-located next to any other solid waste receptacles. Ensure sufficient pick-up of collection containers to meet the needs of the occupants. D) Include space for multi-stream collection containers in any location where a solid waste container is traditionally housed. This includes both outdoor collection containers serviced by a waste hauler or indoor collection containers utilized by occupants. Provide educational materials and training to occupants and tenants in how to properly separate recyclables from all other solid waste and place recyclables in a separate container designated for recycling. E) Ensure that all project occupants and tenants separate recyclables from all other refuse and place recyclables in a separate container designated for recycling. F) Require that all single-use food service ware (plates, bowls, cups) and accessories (straws, utensils, condiment cups) used by tenants at the project site be BPI certified compostable fiber, except where certain materials may be deemed medically necessary or necessary to ensure equal access for persons with disabilities. G) Require that any single-use accessories (straws, utensils, condiment cups) be only available on demand. H) Ensure that containers are audited annually to ensure proper service levels and to check for contamination. Report findings back to occupants within 30 days and to the County as requested. I) Work with the waste hauler to provide educational materials to tenants on at least an annual basis. J) Provide compliance data to the County as required for any current auditing program. **Supports 2045 CAP Measures (and Actions):** W1 (W1.1, W1.3)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the total C&D tonnage recycled and/or diverted from landfills, the project's estimated recyclable waste generation (tons), the amount of recyclable waste sent to landfills, and the amount of recyclable waste generated by the project which is diverted from landfills.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
24. TIER 2: Incorporate On-Site Composting, Mulching, and/or Anaerobic Digestion The project may incorporate organic waste processing capabilities, such as composting, mulching, or anaerobic digestion facilities (where applicable). Collaborate with PW and waste agencies to share organic processing information with interested parties. **Supports 2045 CAP Measures (and Actions):** W2 (W2.2, W2.3, W2.4)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project.* *IN ADDITION, provide information on any anaerobic digestion facilities constructed including their capacity and the amount of organic waste digested and converted to electricity, and the project's total energy generation from organic waste.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
Agriculture, Forestry, and Other Land Use (AFOLU)		
25. TIER 1: Incorporate Tree Plantings and Expand Urban Forest Cover The project must: A) Enhance and expand urban forest cover and vegetation by planting trees and other vegetation. All trees and vegetation planted must be drought-tolerant or California native trees and plants. B) Comply with the Urban Forest Management Plan. C) Replace all native trees removed by the project with an equal or greater number of new trees. D) To the extent feasible, incorporate equitable urban forest practices and prioritize: i. Tree- and park-poor communities ii. Climate and watershed-appropriate and drought/pest-resistant vegetation iii. Appropriate watering, maintenance, and disposal practices iv. Shading v. Biodiversity **Supports 2045 CAP Measures (and Actions):** A3 (A3.1, A3.2, A3.3)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the total number of trees planted, the total tree canopy cover, the project's total green space area, and the area of impervious surface converted to pervious surfaces.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
26. TIER 2: Conserve Forests, Woodlands, Shrublands, Grasslands, Desert, and other Carbon-Sequestering Wildlands and Working Lands For all projects involving the preservation, conservation, and restoration of agricultural lands, working lands, rangelands, forest lands, wetlands, and other wildlands in unincorporated Los Angeles County, the project may: A) Support the use of public and private land for urban and peri-urban agriculture, such as community gardens, and including urban vertical surfaces. B) Conserve and restore natural forest lands, wetlands and wildlands through land acquisitions and conservation easements. C) Preserve existing agricultural and farmlands, including those mapped as Agricultural Resource Areas. Expand adjoining areas to enlarge farmland area. D) Actively manage forests to reduce wildfire risk and prevent carbon loss in forest lands. **Supports 2045 CAP Measures (and Actions):** A1 (A1.1 and A1.2)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project.* *IN ADDITION, provide the total number of acres preserved, conserved, and restored by land type, the number and size of community gardens added, the amount of vertical surface converted, and the acres of forest land managed for wildfire risk reduction and carbon stock savings if applicable.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
27. TIER 2: Implement Regenerative Agricultural Practices For all agricultural projects, the project may: A) Utilize fallow and field resting practices to reduce bare-fallow land by adding cover crops and promoting crop rotation for active agricultural sites to improve soil quality and limit risks of nutrient erosion, pollutant runoff, and yield reduction. B) Implement a carbon farming plan with the primary objectives of carbon removal and regenerative agriculture. C) Use compost and/or organic fertilizer. **Supports 2045 CAP Measures (and Actions):** A2 (A2.1, A2.2)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project.* *IN ADDITION, provide the q*uantity of synthetic fertilizers and compost used / applied, the number of acres of cover crops using regenerative agricultural techniques, the tonnage of fertilizer/compost produced each year.	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES

NOTES:

Abbreviations: 2045 CAP = 2045 Los Angeles County Climate Action Plan*; AB = Assembly Bill; AFOLU = Agriculture, Forestry, and Other Land Use; C&D = Construction & Demolition; CALGreen Code = California Green Building Standards Code; CAP = Climate Action Plan; CARB = California Air Resources Board; CEQA = California Environmental Quality Act; County = County of Los Angeles; CPA = Clean Power Alliance; DU = dwelling unit(s); DWR = California Department of Water Resources; EIR = environmental impact report; EV = electric vehicle; EVCS = electric vehicle charging station; General Plan* = Los Angeles County General Plan 2035*; GHG = greenhouse gas; GWP = global warming potential; HOV = high-occupancy vehicle; HQTA = High Quality Transit Area; kW = kilowatts; LEED = Leadership in Energy and Environmental Design; MWELO = Model Water Efficient Landscape Ordinance; PV = photovoltaic; PW = Los Angeles County Department of Public Works; RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy; SB = Senate Bill; SCAG = Southern California Association of Governments; SCAQMD = South Coast Air Quality Management District; SCE = Southern California Edison; SoCalREN = Southern California Regional Energy Network; TDM = transportation demand management; TIA = Transportation Impact Analysis; VMT = vehicle miles traveled; WUI = wildland urban interface; ZEV = zero-emission vehicle; ZNE = zero net energy.*

1 *Although the County has not yet developed the Zero Emission Vehicle Master Plan, the County will develop such a Plan before 2030, pursuant to Implementing Action T6.1 in the 2045 CAP.*

2 *Although the County has not yet developed building performance standards, the County will develop such a standard before 2030, pursuant to Implementing Action E1.1 in the 2045 CAP.*

3 *Although the County has not yet developed carbon intensity limits, the County will develop such a standard before 2030, pursuant to Implementing Action E1.2 in the 2045 CAP.*

4 *Although the County has not yet developed a ZNE ordinance, the County will develop such a standard before 2030, pursuant to Implementing Action E1.3 in the 2045 CAP.*

5 *Although the County has not yet developed a building decarbonization ordinance, the County will develop such an ordinance before 2030, pursuant to Implementing Action E2.1 in the 2045 CAP.*

6 *Although the County has not yet developed a ZNE ordinance, the County will develop such a standard before 2030, pursuant to Implementing Action E2.2 in the 2045 CAP.*

7 *Although the County has not yet developed building performance standards, the County will develop such a standard before 2030, pursuant to Implementing Action E4.1 in the 2045 CAP.*

8 *Although the County has not yet developed a net-zero water ordinance, the County will develop such a standard before 2030, pursuant to Implementing Action E6.1 in the 2045 CAP.*

9 *Although the County has not yet developed building performance standards for building material carbon intensity and high-GWP refrigerants, the County will develop standards before 2030, pursuant to Implementing Actions E3.3 and E3.4 in the 2045 CAP.*

Table F-2: 2045 CAP Greenhouse Gas Emissions Reduction Alternative Measures

DESCRIPTION OF PROPOSED ALTERNATIVE MEASURE	DESCRIPTION OF GHG REDUCTION ESTIMATE
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*

F.4 Offsite GHG Reduction Program Framework

Introduction

Action ES5.4 of the 2045 CAP would establish an Offsite GHG Emissions Reduction Program (Offsite Program) for new development to use as a GHG reduction or mitigation pathway for 2045 CAP compliance and to fund programs for reducing GHG emissions in the built environment. This program would allow new development to fund decarbonization programs for existing development to accelerate 2045 CAP measures and actions or go beyond 2045 CAP measures and actions. Future projects that cannot achieve net-zero GHG emissions or are unable to comply with all CEQA streamlining requirements would have the option to participate in the Offsite Program. The Offsite GHG Reduction Program could be used for projects that propose alternative GHG emissions reduction measures to those identified in Table F-1, or that propose to include additional GHG emissions reduction measures beyond those described in Table F-1. This program would allow project applicants to implement local projects that reduce GHG emissions in unincorporated Los Angeles County (referred to herein as *offsite projects*). Such offsite projects must not otherwise be required by law or regulation and would not have happened but for the requirements placed on the project by the 2045 CAP CEQA Streamlining Checklist.

Once the County has instituted the Offsite GHG Reduction Program, project applicants will be able to use the program to complete Table F-2. Once established, the Offsite GHG Reduction Program should only be used after all feasible on-site GHG reduction measures are implemented at the project site to demonstrate compliance with the CEQA streamlining requirements.

This section represents a *framework* for the forthcoming Offsite Program; the actual program will be developed after the 2045 CAP is adopted.

CARB Guidance on Offsite GHG Reductions

As discussed in Section F.1, CARB supports "off-site GHG mitigation" in Appendix D of the 2022 Scoping Plan for projects that have implemented all feasible on-site GHG reductions: "If implementation of all feasible on-site GHG reduction measures is insufficient to reduce a project's impact to a less-than-significant level, the State recommends that the lead agency next explore options to fund or implement ***local***, off-site direct GHG reduction strategies."[21] The Offsite Program would achieve these goals.

Relationship to 2045 CAP Measures and Actions

The offsite projects that will be allowed in the program fall into two general categories:

1. Offsite projects *included* in the 2045 CAP's measures and actions.
2. Offsite projects *not included* in the 2045 CAP's measures and actions.

Offsite Projects Included in the 2045 CAP

This category represents projects (and the GHG emissions reductions they create) that *are* already included in the 2045 CAP's measures and actions. An allowable offsite project could

[21] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in January 2023.

involve, for example, accelerating measures, actions, and/or programs that are already identified in the 2045 CAP by providing additional funding to that program. Such projects would not add new programs or actions not already included in the 2045 CAP; they would expand upon and/or accelerate these programs and actions. Example projects are discussed below.

Offsite Projects Not Included in the 2045 CAP

This category represents projects (and the GHG emissions reductions they create) that are *not* already included in the 2045 CAP's measures and actions. An allowable offsite project could involve, for example, creating or funding programs for implementing new technologies (e.g., zero-emission construction equipment) or implementing new emissions reduction measures or actions not considered in the 2045 CAP. Example projects are discussed below.

Offsite Projects Not Eligible

Offsite projects that are implementing planned 2045 CAP measures and actions on the 2045 CAP's identified timeline are not eligible for the Offsite Program. Additionally, an offsite project activity that would be mandated by any current or future ordinance (such as a future ZNE ordinance for new buildings) cannot be used in the Offsite Program.

Carbon offset credits are not permitted to be used as offsite projects. In other words, projects that generate carbon offset credits to be traded on a voluntary market registry are not permitted to be used in this program.

Location

All offsite projects must be located within the jurisdictional boundaries of unincorporated Los Angeles County. Therefore, emissions reductions achieved by such offsite projects will be accounted for in future GHG inventory updates and will contribute toward the emissions reduction targets, which are based on the jurisdictional boundaries of unincorporated Los Angeles County. See 2045 CAP Appendix A for a discussion of the inventory and forecast boundaries.

Offsite projects shall be in the following locations, in order of priority, to the extent available: (1) Within the neighborhood surrounding the project site; (2) within the greater surrounding community (i.e., town); (3) within the same Planning Area; and (4) in other Planning Areas, but within unincorporated Los Angeles County.

Standards

All offsite projects must achieve **six specific standards** to ensure that the GHG reductions produced by offsite projects are environmentally sound; namely that the GHG reductions be real, permanent, quantifiable, verifiable, enforceable, and additional, defined as follows:

- **Real** means that the offsite project's GHG reductions are the direct result of complete emissions accounting. In other words, *real* means that GHG reductions or GHG enhancements result from a demonstrable action or set of actions, and are quantified using appropriate, accurate, and conservative methodologies that account for all GHG

emissions sources, GHG sinks, and GHG reservoirs within the offsite project boundary and account for uncertainty.[22]

- **Permanent** means either that GHG reductions and GHG removal enhancements are not reversible, or that when GHG reductions and GHG removal enhancements may be reversible, mechanisms are in place to replace any reversed GHG emissions reductions and GHG removal enhancements to ensure that all credited reductions endure for at least 100 years.
- **Quantifiable** means the ability to accurately measure and calculate GHG reductions or GHG removal enhancements relative to an offsite project's baseline in a reliable and replicable manner for all GHG emissions sources, GHG sinks, or GHG reservoirs included within the offsite project boundary, while accounting for uncertainty. GHG emissions reductions from an activity must be rigorously quantified, and such GHG reductions would only be permitted in an amount that corresponds to the GHG emissions that have been quantified. GHG emissions accounting must be accurate and adhere to standardized quantification methodologies, which are discussed further below.
- **Verifiable** means that an offsite project's assertion of GHG emissions reductions is well documented and transparent, such that it lends itself to an objective review by an accredited verification body. The forthcoming Offsite Program itself may require third-party verification.[23]
- **Enforceable** means the authority of the County to hold a particular party responsible to take appropriate action if any of the provisions of the Offsite Program are violated.
- **Additional** means that the offsite project is not otherwise required by law, regulation, or legally binding mandate, and none of the offsite project's GHG emissions reductions would otherwise occur. In other words, an offsite project activity is additional if it can be demonstrated that the activity would result in emissions reductions or removals exceeding what would be achieved in the absence of the incentive provided by the proposed project and the 2045 CAP CEQA Streamlining Checklist. Additionality is an important characteristic the Offsite Program because it indicates that the GHG reductions represent a net environmental benefit and a real reduction of GHG emissions and can thus be used to offset a project's new GHG emissions.

Proposed Process

If an applicant selects to use the Offsite Program as an alternative GHG emissions reduction measure beyond those described in Table F-1, a specific process must be followed. The process will consider the following topics, which are subject to modification by the County in the forthcoming Offsite Program.

Quantification: Project applicants shall provide evidence to the County showing that the offsite project(s) proposed achieve the amount of GHG emissions reductions required. Examples of

[22] In general, uncertainty should be accounted for by using conservative assumptions and/or parameter values that tend to underestimate, rather than overestimate, total GHG emissions reductions.

[23] Generally, third-party verification includes a review of all documentation, monitoring data, and procedures used to estimate GHG reductions, and culminate in the verification body's issuance of a report and statement that identifies the quantity of GHG reductions that can be issued to the offsite project. As part of the report and statement, the independent third party verifies that the offsite project has adhered to the pertinent protocol or methodology, to confirm that the offsite project's GHG reductions are real, permanent, quantifiable, enforceable, and additional.

such evidence include applicable methodologies associated with the GHG emissions reductions, quantification calculations, and supporting documentation.

Standards: Project applicants must demonstrate, with substantial evidence, that all six of the offsite project standards are met: *real, permanent, quantifiable, verifiable, enforceable*, and *additional*.

Enforcement: Project applicants shall obtain all necessary permits and approvals for implementation of the offsite project implementation and such materials shall be submitted to the County for review and approval before project approval.

Timing: Project applicants shall submit documentation to the County identifying the quantity of GHG emissions reductions required by the offsite project over a specific time frame to be identified in the Offsite Program (e.g., before project approval or permit issuance, over the course of buildout of the project).

Monitoring: Project applicants shall submit regular reports documenting the offsite project's achieved GHG emissions reductions over a specified time period (such as the previous or current calendar year).

Example Offsite Projects

- **Local building electrification programs**: Programs that target existing residential and commercial buildings in the project's vicinity for electrification, provided that such electrification actions are not already required by law or regulation, County building performance standards, or reach code requirements. For example, replacing a natural gas–fired heating, ventilation, and air conditioning system with an electric heat pump or replacing a gas stove with an induction cooktop.
- **Off-site EV chargers**: Programs that install EV charging stations, provided that such installations are not already required by law or regulation, or County reach code requirements and the forthcoming Zero Emission Vehicle Master Plan (Measure T6). For example, funding or directly installing EV chargers in multi-unit dwellings in disadvantaged or low-income areas, public locations (schools, libraries, city centers), workplaces, and key destinations (e.g., parks, recreation areas, sports arenas).
- **Local building solar programs**: Programs that target existing residential and commercial buildings in the project's vicinity for rooftop solar photovoltaic installations, provided that such installations are not already required by law or regulation, County building performance standards, or reach code requirements. For example, funding or directly installing rooftop solar installations or community solar systems.
- **Energy storage and microgrids**: Funding for or direct implementation of a microgrid to balance generation from non-controllable renewable power sources, such as solar, with distributed, controllable generation, such as natural gas–fueled combustion turbines; or a strategically deployed battery storage system to make the grid more flexible by unlocking renewable energy and replacing fossil fuel–generated electricity, especially during peak hours. Such programs would be allowed provided they are not already required by law or regulation, County building performance standards, or reach code requirements.
- **Truck and bus electrification programs**: Funding for the purchase of zero-emission vehicle trucks and buses to replace existing fossil fuel–powered trucks and buses;

coordination with local transportation agencies and school districts and replacement of diesel- or gasoline-fueled buses with less-polluting technologies such as compressed natural gas, electric, hybrid-electric, fuel cell, or other commercially available technologies. Such programs would be allowed provided they are not already required by law or regulation, County building performance standards, or reach code requirements.

- **Hydrogen fuel**: Funding for or programs that provide renewable hydrogen fueling stations to nearby truck fleets, such as at logistics warehouses, or other uses of renewable hydrogen fuel as a replacement for fossil fuels. Such programs would be allowed provided they are not already required by law or regulation, County building performance standards, or reach code requirements.

Environmental Impacts Pursuant to CEQA

Project applicants' CEQA documents would be required to disclose the impacts of any offsite projects that are proposed for funding or implementation. The Final PEIR for the 2045 CAP evaluates the potential environmental impacts of the 2045 CAP's measures and actions. For any offsite projects implemented via this program, then, to the extent that such projects include types of activities similar to those contemplated by the 2045 CAP's measures and actions, the resulting environmental impacts would be expected to be similar to those disclosed in the Final PEIR. Project applicants' CEQA documents may rely on the Final PEIR impact analysis for an offsite project similar to those contemplated by the 2045 CAP, unless a specific offsite project causes a new or substantially more severe impact for that project type not addressed in the Final PEIR.

Next Steps and Additional Guidance

This section represents a *framework* for the Offsite Program. The actual Offsite Program will be developed separately after the 2045 CAP is formally adopted and the Final PEIR is certified. Once the formal Offsite Program is developed, project applicants may use it to demonstrate compliance with the CEQA streamlining requirements as indicated above.

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APPENDIX G

Funding Sources

Table G-1 provides a list of potential funding sources for implementing the *2045 Los Angeles County Climate Action Plan* (2045 CAP). Programs and funding sources for implementing greenhouse gas (GHG) emissions reduction programs are developing rapidly and may change substantially from year to year. These include but not limited to the various grant programs that fall under the umbrella of California Climate Investments (funded from cap-and-trade revenues), and organizations like Southern California Regional Energy Network (SoCalREN) that provide financial assistance for energy efficiency improvements to residents, businesses, and public agencies.

The State of California offers a Funding Wizard that let users search for grants and other funding sources, using keywords and sector-based searches (e.g., transportation, energy, solid waste, urban greening, local agriculture, urban development, waste management, and water). A similar resource is the UpLift Resource Finder, which provides a searchable database of funding opportunities available to individuals, community groups, and local governments that are oriented toward benefits to disadvantaged communities. UpLiftCA was created by The Greenlining Institute in partnership with the California Climate Equity Coalition, comprising the Asian Pacific Environmental Network, Coalition for Clean Air, The Greenlining Institute, Public Advocates, and SCOPE.

Table G-1: Potential Funding Sources to Support CAP Implementation

PROGRAM	DESCRIPTION
Federal Programs	
Carbon Dioxide Transportation Infrastructure Finance and Innovation (CIFIA) Program	Administered by the U.S. Department of Energy, the CIFIA program extends loans and loan guarantees to support projects that involve the delivery of infrastructure (i.e., pipeline, shipping, rail, or other infrastructure) and associated equipment for the transportation of carbon dioxide. Eligible CIFIA projects must have project costs in excess of $100 million, and while project proposals must be submitted by a public entity, contracts are with private entities through public-private partnership arrangements.
Energy Efficient Mortgages	The Federal Housing Administration (FHA) offers an Energy Efficient Mortgage (EEM) Loan program that helps current or future homeowners save money on their utility bills by enabling borrowers who might not otherwise qualify for conventional loans on affordable terms to finance energy efficient improvements with their FHA mortgage. Qualified homebuyers or homeowners are automatically pre-approved for an additional 5–15% of their approved loan to do energy-efficient repairs to their homes without adding to their debt-to-income ratios. The EEM program recognizes that an energy-efficient home will have lower operating costs, making it more affordable for the homeowner.
ENERGY STAR® Portfolio Manager®	Portfolio Manager is a free tool supported by U.S. EPA that measures a building's energy performance and compares it to other similar buildings. It allows building owners and managers to track energy use and verify improvements. Approximately 40% of U.S. commercial building space is benchmarked in Portfolio Manager—making it the industry-leading benchmarking tool.
Federal Infrastructure Investment and Jobs Act	The Federal Infrastructure Investment and Jobs Act, passed in 2021, authorizes approximately $550 billion in new federal investment in America's transportation, communication, and water infrastructure, with much of the funding geared toward the clean energy transition and to increasing resilience to climate change. The legislation includes the following: • $39 billion of new investment to modernize transit and improve accessibility for the elderly and people with disabilities. • $7.5 billion to build a national network of electric vehicle chargers. • $73 billion for power infrastructure and the clean energy transmission. • $110 billion for roads, bridges, and other major projects. • $11 billion in transportation safety programs. • $39 billion in transit modernization and improved accessibility.
Federal Solar Investment Tax Credit	The federal residential solar energy credit is a tax credit that can be claimed on federal income taxes for a percentage of the cost of a solar PV system. The system must be placed in service during the tax year and generate electricity for a home located in the United States. In December 2020, Congress passed an extension of the investment tax credit, which provides a 26% tax credit for systems installed in 2020–2022 and 22% for systems installed in 2023. (Systems installed before December 31, 2019, were eligible for a 30% tax credit.) The tax credit expires starting in 2024 unless Congress renews it.

Federal Inflation Reduction Act	The Inflation Reduction Act, signed into law in August 2022, includes nearly $400 billion in climate-related funding and nearly $370 billion in investments in disadvantaged communities, prioritizing projects that repurpose retired fossil fuel infrastructure and employ displaced workers.
	The Inflation Reduction Act builds on the initial climate funding opportunities passed into law in the Infrastructure Investment and Jobs Act to support projects across EV charging, power infrastructure, and climate resilience. This law includes the following:
	• Energy Cost Investments:
	  ○ $9 billion in consumer home energy rebate programs, focused on low-income consumers, to electrify home appliances and for energy efficient retrofits.
	  ○ 10 years of consumer tax credits to make homes energy efficient and run on clean energy.
	  ○ A $4,000 consumer tax credit for lower/middle-income individuals to buy used clean vehicles, and an up to $7,500 tax credit to buy new clean vehicles.
	  ○ $1 billion grant program to make affordable housing more energy efficient.

PROGRAM	DESCRIPTION

	• American Energy Security and Domestic Manufacturing:
	  ○ Production tax credits to accelerate U.S. manufacturing of solar panels, wind turbines, batteries, and critical minerals processing, estimated to invest $30 billion.
	  ○ $10 billion investment tax credit to build clean technology manufacturing facilities.
	  ○ $500 million in the Defense Production Act for heat pumps and critical minerals processing.
	  ○ $2 billion in grants to retool existing auto manufacturing facilities to manufacture clean vehicles.
	  ○ Up to $20 billion in loans to build new clean vehicle manufacturing facilities.
	  ○ $2 billion for National Labs to accelerate breakthrough energy research.
	• Economy Decarbonization:
	  ○ Tax credits for clean sources of electricity and energy storage, and approximately $30 billion in targeted grant and loan programs for states and electric utilities to accelerate the transition to clean electricity.
	  ○ Tax credits and grants for clean fuels and clean commercial vehicles to reduce emissions from all parts of the transportation sector (see "Electric Vehicles Tax Credits [Inflation Reduction Act of 2022]").
	  ○ Grants and tax credits to reduce emissions from industrial manufacturing processes, including almost $6 billion for a new Advanced Industrial Facilities Deployment Program to reduce emissions from the largest industrial emitters.
	  ○ More than $9 billion for federal procurement of American-made clean technologies, including $3 billion for the U.S. Postal Service to purchase zero-emission vehicles.
	  ○ A $27 billion clean energy technology accelerator to support deployment of technologies to reduce emissions, especially in disadvantaged communities.
	  ○ A methane emissions reduction program to reduce leaks from the production and distribution of natural gas.
	• Environmental Justice:
	  ○ $3 billion for environmental and climate justice block grants to invest in community-led projects in disadvantaged communities and community capacity building centers to address disproportionate impacts related to pollution and climate change.
	  ○ $3 billion for neighborhood access and equity grants to reconnect communities divided by existing infrastructure barriers, mitigate negative impacts of transportation facilities or construction projects on disadvantaged or underserved communities, and support equitable transportation planning and community engagement activities.
	  ○ $3 billion for grants to reduce air pollution at ports to support the purchase and installation of zero-emission equipment and technology at ports.
	  ○ $1 billion for clean heavy-duty vehicles, like school and transit buses and garbage trucks.
	• Farmers, Forestland Owners, and Resilient Rural Communities:
	  ○ More than $20 billion to support climate-smart agriculture practices.
	  ○ $5 billion in grants to support healthy, fire-resilient forests, forest conservation, and urban tree planting.
	  ○ Tax credits and grants to support the domestic production of biofuels, and to build the infrastructure needed for sustainable aviation fuel and other biofuels.
	  ○ $2.6 billion in grants to conserve and restore coastal habitats and protect communities that depend on those habitats.

Renewable Electricity Production Tax Credit	The renewable electricity production tax credit is a per-kWh federal tax credit included under Section 45 of the U.S. tax code for electricity generated by qualified renewable energy resources. It provides a corporate tax credit of 1.3 cents/kWh for electricity generated from landfill gas, open-loop biomass, municipal solid waste resources, qualified hydroelectric, and marine and hydrokinetic (150 kilowatts or larger). Electricity generation from wind, closed-loop biomass, and geothermal resources results in a corporate tax credit of as much as 2.5 cents/kWh.
Low-Income Solar and Wind Investment Tax Credit	This investment tax credit is currently a 30% federal tax credit claimed against the tax liability of residential (under Section 25D) and commercial and utility (under Section 48) investors in solar energy property. The Section 25D residential investment tax credit allows homeowners to apply the credit to their personal income taxes. This credit is used when homeowners purchase solar systems and have them installed on their homes. In the case of the Section 48 credit, the business that installs, develops, and/or finances the project claims the credit.

PROGRAM	DESCRIPTION
Greenhouse Gas Reduction Fund	The Inflation Reduction Act amended the Clean Air Act to create a new program: the Greenhouse Gas Reduction Fund. This first-of-its-kind program will provide competitive grants to mobilize financing and leverage private capital for clean energy and climate projects that reduce GHG emissions—with an emphasis on projects that benefit low-income and disadvantaged communities—and further the Biden-Harris Administration's commitment to environmental justice. The Greenhouse Gas Reduction Fund provides $27 billion to U.S. EPA for expenditure until September 30, 2024. This includes: • $7 billion for competitive grants to enable low-income and disadvantaged communities to deploy or benefit from zero-emission technologies, including distributed technologies on residential rooftops; • Nearly $12 billion for competitive grants to eligible entities to provide financial and technical assistance to projects that reduce or avoid GHG emissions; and • $8 billion for competitive grants to eligible entities to provide financial and technical assistance to projects that reduce or avoid GHG emissions in low-income and disadvantaged communities.
Energy-Efficient Commercial Buildings Tax Deduction	The Energy-Efficient Commercial Buildings Tax Deduction incentivizes designers to meet or exceed an agency's energy reduction requirements for new and existing buildings. The Energy Policy Act of 2005 allows building owners to receive a tax deduction (codified in U.S. Code Title 26, Section 179D) for expenses incurred for qualified energy-efficient building investments. In government-owned buildings, the government may allocate this deduction to the person(s) primarily responsible for designing the improvements. The deduction may be taken in the year the energy-efficient improvements are placed in service.
Reconnecting Communities Pilot Program—Planning Grants and Capital Construction Grants	The Bipartisan Infrastructure Law established the new Reconnecting Communities Pilot discretionary grant program, funded with $1 billion over the next 5 years. It is the first-ever federal program dedicated to reconnecting communities that were previously cut off from economic opportunities by transportation infrastructure. Funding supports planning grants, capital construction grants, and technical assistance to restore community connectivity through the removal, retrofit, mitigation, or replacement of eligible transportation infrastructure facilities.
Resilient and Efficient Codes Implementation	$225 million for the Infrastructure Investment and Jobs Act to advance state and local jurisdiction efficiency and resilience of building energy codes, as well as provide long-term sustainability of measures and savings, and address equity, energy, environmental justice, and resilience priorities. Funding is appropriated for "eligible entities to enable sustained cost-effective implementation of updated building energy codes" through a competitive grant process over five years (Fiscal Years 2022 through 2026). Awardees eligible for this funding must include a relevant state agency, and priority will be given to teams that include strategic partnerships, such as a local building code agency, codes and standards developers, associations of builders and design and construction professionals, and many others. Projects must be tied to an updated building energy code, which includes any amendment or code update resulting in increased energy efficiency as compared to the previously adopted code.
Low Income Home Energy Assistance Program (LiHEAP)	LiHEAP is a federal program administered by the U.S. Department of Health and Human Services that provides assistance to eligible low-income households to manage and meet their immediate home heating and/or cooling needs. LIHEAP offers several services to help low-income households meet their home energy needs: • The Home Energy Assistance Program, which provides one-time financial assistance to help balance an eligible household's utility bill. • The Energy Crisis Intervention Program, which provides assistance to low-income households that are in a crisis situation, such as households receiving a 24- to 48-hour disconnect notice or service termination by their utility company, or households facing an energy-related crisis that could be deemed potentially life-threatening, such as a combustible appliance. • LIHEAP Weatherization, which provides free energy efficiency upgrades to lower monthly utility bills and improve household health and safety. • Energy budget counseling, and education on basic energy efficiency practices and instruction on the proper use and maintenance of installed weatherization measures.
Pollution Prevention (P2) Grant Program	P2 grants provide technical assistance to businesses to help them develop and adopt source reduction practices (also known as "pollution prevention" or "P2"). "P2" means reducing or eliminating pollutants from entering any waste stream or otherwise released into the environment prior to recycling, treatment, or disposal.

PROGRAM	DESCRIPTION
Source Reduction Assistance Grant Program	Source reduction assistance grants can support research, experiments, surveys, demonstration projects, education, and training related to source reduction approaches, which is also known as "pollution prevention" or "P2."
Justice40 Investments	Executive Order 14008, Tackling the Climate Crisis at Home and Abroad, established the Justice40 Initiative, which directs 40% of the overall benefits of certain federal investments—including investments in clean energy and energy efficiency; clean transit; affordable and sustainable housing; training and workforce development; the remediation and reduction of legacy pollution; and the development of clean water infrastructure—to flow to disadvantaged communities. Through the President's Inflation Reduction Act, Bipartisan Infrastructure Law, and the American Rescue Plan, federal agencies are making historic levels of investment to advance environmental justice.
Electric Vehicles Tax Credits (Inflation Reduction Act of 2022)	The Inflation Reduction Act of 2022 extends tax credits for EVs and establishes new tax credits for used EVs and commercial EVs: • Light Duty EV Tax Credit: Up to $7,500 to switch to an EV, extended through 2032. • Used EV Tax Credit: For the first time, used EVs will be eligible for federal tax credits of up to $4,000 or 30% of the sales price, whichever is lower. The sales price must be less than $25,000 and the vehicle must be at least two years old. • Commercial EV and Fuel Cell EV Tax Credit: New tax credit available to businesses, up to 15% for plug-in hybrid EVs and up to 30% for EVs and fuel cell EVs. As of December 2022, the credit extends to commercial and tax-exempt entities, making government entities eligible to claim the credit. The credit is up to $7,500 for vehicles under 14,000 pounds and up to $40,000 for all other vehicles. • EV Charging Equipment Tax Credit: Federal tax credit on charging equipment in low-income or non-urban areas that has been extended through 2032. For individual/residential uses, the tax credit remains unchanged at 30%, up to $1,000. For commercial uses, the tax credit is 6%, with a maximum credit of $100,000 per unit. • Clean Heavy-Duty Vehicles: $1 billion allocated to replace Class 6 and 7 heavy-duty vehicles with clean EVs. These rebates can be used for up to 100% of the costs for vehicles, infrastructure, training, and planning and technical activities to support electrification. • Diesel Emissions Reduction Act Program: $60 million to fund grants and rebates that protect human health and improve air quality by reducing harmful emissions from diesel engines. • Domestic Manufacturing Conversion Grants: $2 billion in cost-shared grants for domestic production of efficient hybrid, plug-in electric hybrid, plug-in electric drive, and hydrogen fuel cell EVs. • Advanced Technology Vehicle Manufacturing Program: $3 billion to originate, underwrite, and service loans to eligible automotive manufacturers and component manufacturers to finance the cost of re-equipping, expanding, or establishing manufacturing facilities in the U.S. to produce Advanced Technology Vehicles and qualifying components. • Advanced Manufacturing Production Credit: A long-term extension of this tax credit for investments in manufacturing facilities for clean energy technologies.
Moving Ahead for Progress in the 21st Century (MAP-21)	Federal funding through the MAP-21 program is administered through the state and regional governments. MAP-21 funding is administered through the California Department of Transportation, metropolitan planning organizations (the Southern California Association of Governments in Southern California), and regional transportation planning agencies (the Riverside County Transportation Commission in Riverside County). Most of the funding programs are transportation versus recreation oriented, with an emphasis on reducing auto trips and providing an intermodal connection. In most cases, MAP-21 provides matching grants of 50–100%.
Safe Routes to Schools	Safe Routes to Schools is an international movement focused on increasing the number of children who walk or bike to school by funding projects that remove barriers to doing so. These barriers include a lack of infrastructure and non-infrastructure projects, safety, and limited programs that promote walking and bicycling. In California, separate Safe Routes to School programs are available at both the state and federal levels, and both programs fund qualifying infrastructure projects.

PROGRAM	DESCRIPTION
U.S. Department of Energy (DOE)	The federal government, including DOE, provides grants and other financial incentives to local governments for renewable energy installations and alternative fuel vehicle and fueling infrastructure. Information regarding programs is available at http://www.grants.gov. DOE's Zero-Emission Transit Bus Tax Exemption exempts zero-emission transit buses from state sales and use taxes when the buses are sold to public agencies in California. Through the Hybrid and Zero Emission Truck and Bus Voucher Incentive Project and Low Oxides of Nitrogen (NOx) Engine Incentives, CARB provides vouchers to eligible fleets to reduce the incremental cost of qualified electric, hybrid, or natural gas trucks and buses at the time of purchase. Vouchers are available on a first-come, first-served basis. The DOE Loan Programs Office provides loan guarantees for innovative clean energy projects, fossil projects, nuclear projects, and energy infrastructure reinvestment projects under the Title 17 Innovative Clean Energy Loan Guarantee Program, authorized by the Energy Policy Act of 2005. Title 17 helps eliminate gaps in commercial financing for energy projects in the United States that utilize innovative technology to reduce, avoid, or sequester greenhouse gas emissions. Projects for funding include the following: • *Renewable Energy and Efficiency Energy projects* finance catalytic, replicable, and market-ready renewable energy and efficient energy technologies with $4.5 billion of available loan guarantees. Technology areas of interest include Advanced Grid Integration & Storage; Drop-In Biofuels; Waste-to-Energy; Enhancement of Existing Facilities; and Efficiency Improvements. • *Advanced Fossil Energy projects* have the potential to reduce carbon emissions in hard-to-decarbonize sectors. Eligible projects can utilize any fossil fuel and may come from across the spectrum of production and use, including resource development, energy generation, and end use. The four technology areas of interest are Advanced Resource Development, Carbon Capture, Low-Carbon Power Systems, and Efficiency Improvements. • *The Carbon Dioxide Transportation Infrastructure program* offers access to capital for large-capacity, common-carrier CO_2 transport projects (e.g., pipelines, rail, shipping, and other transport methods).
U.S. Department of Housing and Urban Development	The Home Improvement Program supports the implementation of energy efficient upgrades to qualifying low-to-moderate income households in owner-occupied single-family homes. The program is funded by the U.S. Department of Housing and Urban Development through allocation of the HOME Investment Partnerships Program formula grants.
USDA Supplemental Nutrition Assistance Program-Education (SNAP-Ed)	SNAP-Ed is a federally funded grant program that supports evidence-based nutrition education and obesity prevention interventions and projects for persons eligible for SNAP through complementary direct education, multi-level interventions, and community and public health approaches to improve nutrition.
USDA Water & Waste Disposal Loan & Grant Program	This program provides funding for clean and reliable drinking water systems, sanitary sewage disposal, sanitary solid waste disposal, and stormwater drainage to households and businesses in eligible rural areas. Eligibility includes most state and local governmental entities, private nonprofits, and federally recognized tribes.
WaterSense	WaterSense is a voluntary partnership program sponsored by U.S. EPA and is both a label for water-efficient products and a resource for helping residents and businesses save water.
State Programs	
CAL FIRE	The CAL FIRE Urban and Community Forestry Program focuses on the use of trees and associated vegetation to provide multiple-benefit solutions and to mimic the functions of natural forests in neighborhoods. CAL FIRE offers grants to eligible applicants on an annual basis, as funding permits. These grants are designed to assist communities in creating or implementing multi-benefit projects with a focus on GHG emissions and providing benefits to disadvantaged communities. The Urban and Community Forestry Grant is provided to communities and projects that achieve multiple objectives for community protection, including vegetation management, fire risk reduction, GHG reductions, and habitat improvement.

PROGRAM	DESCRIPTION
California Air Resources Board (CARB)	CARB offers several grants, incentives, and credits programs to reduce on-road and off-road transportation emissions. Residents, businesses, and fleet operators can receive funds or incentives depending on the program. • The California Vehicle Rebate Program provides up to $7,000 for recipients to purchase or lease a new plug-in hybrid EV, battery EV, or fuel cell EV. The program prioritizes low-income recipients. • The Car Sharing and Mobility Options Program provides funding for bikeshare options in low-income areas. • The Carl Moyer Program provides funding to replace older heavy-duty diesel vehicles and equipment with cleaner technologies, primarily in environmental justice and low-income communities. • Clean Mobility Options Voucher Pilot Program funds zero-emission mobility projects such as carsharing, bikesharing, vanpooling, ride-on-demand services, and innovative transit services in disadvantaged communities. • The Bus Replacement Grant Program offers grants for the purchase of new zero-emission buses to replace old gasoline, diesel, compressed natural gas, or propane buses. • The Hybrid and Zero Emission Truck and Bus Voucher Incentive Project accelerates commercialization by providing point-of-sale vouchers to make advanced vehicles more affordable. • The Clean Vehicle Assistance Program provides grants and affordable financing to help California residents with gross household incomes less than or equal to 400% of the federal poverty level to purchase a new of used hybrid vehicle or EV. • The Clean Cars 4 All Program (formerly known as the Enhanced Fleet Modernization Plus-Up Program) helps get lower-income consumers into cleaner technology vehicles by retiring their older, higher-polluting vehicles and upgrading to cleaner vehicles. Participants also have the option to replace their older vehicles for alternative mobility options such as public transit passes or electric bicycles. • The Clean Off-Road Equipment Voucher Incentive Project promotes the purchase of clean technology over internal combustion options, targeting commercial-ready off-road products that have not yet achieved a significant market foothold. • The $1 billion Proposition 1B Goods Movement Emission Reduction Program is a partnership between CARB and local agencies, air districts, and seaports to quickly reduce air pollutant emissions and health risks from freight movement along California's trade corridors. • The Lower-Emission School Bus Program provides funds to purchase new buses to replace old, high-emitting public school buses. • The Air Quality Improvement Program (AB 118) is a voluntary incentive program administered by CARB to fund clean vehicle and equipment projects, research on biofuels production, and the air quality impacts of alternative fuels, and workforce training. • CARB provides the Low Carbon Transportation Investments and Air Quality Improvement Program which provides mobile source incentives to reduce GHG, criteria pollutant, and toxic air contaminant emissions through the deployment of advanced technology and clean transportation in the light-duty and heavy-duty sectors.
California Climate Investments (CCI)	CCI uses proceeds from the cap-and-trade program to facilitate comprehensive and coordinated investments throughout California to further the state's climate goals. Through funding from the state's Greenhouse Gas Reduction Fund, CCI offers the following incentive programs: • The California Vehicle Rebate Program provides funding for recipients to purchase or lease a new plug-in hybrid EV, battery EV, or fuel cell EV. • The Clean Vehicle Assistance Program provides grants and affordable financing to help low-income Californians purchase a new or used hybrid vehicle or EV. • Various programs promote clean energy and energy efficiency.
California Department of Community Services and Development	The Low Income Weatherization Program supports owners and residents to lower their utility costs, save energy, and reduce GHG emissions from multifamily properties. This program is funded by the California Department of Community Services and Development and covers approximately 30–100% of energy efficiency upgrade costs for low-income residents in disadvantaged communities. The program also provides free property assessments, design assistance, and contractor coordination.

PROGRAM	DESCRIPTION
California Department of Conservation	The Multibenefit Land Repurposing Program funds groundwater sustainability projects that reduce groundwater use, repurpose irrigated agricultural land, and provide wildlife habitat. The program seeks to increase regional capacity to repurpose agricultural land to reduce reliance on groundwater while providing community health, economic well-being, water supply, habitat, and climate benefits.
California Department of Fish and Wildlife (CDFW)	CDFW implements a number of programs to support green infrastructure, parks, urban forestry, and agriculture, and ultimately reduce GHG emissions: • Funding opportunities for multi-benefit ecosystem restoration and protection projects under both Proposition 1 and Proposition 68. Funding focuses on planning, implementation, and acquisition projects across multiple priorities. • The Wetlands Restoration for Greenhouse Gas Reduction Program, which restores wetland ecosystems to provide essential services to California's people, wildlife, and fish. Wetlands have high carbon sequestration rates that can sequester carbon for decades. This program is part of CCI.
California Department of Motor Vehicles	California's Motor Vehicle Registration Fee Program provides funding for projects that reduce air pollution from on- and off-road vehicles. Eligible projects include purchasing alternative fueled vehicles and developing alternative fueling infrastructure. Grant funding and distribution information is available from local air districts and on the program's website.
California Department of Resources Recycling and Recovery (CalRecycle)	CalRecycle grant programs allow jurisdictions to assist public and private entities in management of waste streams. Incorporated cities and counties in California are eligible for funds. Program funds are intended to: • Reduce, reuse, and recycle all waste; • Reduce landfill disposal of organics, including food waste; • Encourage development of recycled-content products and markets; and • Protect public health and safety and foster environmental sustainability. The Recycling Market Development Zone Program combines recycling with economic development to fuel new businesses, expand existing ones, create jobs, and divert waste from landfills. This program provides attractive loans, technical assistance, and free product marketing to businesses that use materials from the waste stream to manufacture their products and are located in a zone. The Farm & Ranch Solid Waste Cleanup and Abatement Grant Program provides funding to help cleanup and prevent illegal dumping on "farm and/or ranch" property. Funding includes reimbursement for administrative, recycling/disposal (tires), equipment, material, and personnel costs.
California Department of Transportation (Caltrans)	Caltrans offers funding programs to support implementation of bicycle and pedestrian infrastructure: • The Active Transportation Program funds bike and pedestrian infrastructure projects, educational and promotional efforts, safe routes to school projects, and active transportation planning. The state awards half of the funds through a competitive grants process. Forty percent goes to metropolitan agencies to distribute and 10% goes to rural areas. At least 25% of all funds must benefit residents in disadvantaged communities. • Sustainable Communities Grants are issued to encourage local and regional planning that furthers state goals related to sustainability, preservation, mobility, safety, innovation, economy, heath, and social equity. • The Strategic Partnerships Grants help to identify and address statewide, interregional, or regional transportation deficiencies on the state highway system in partnership with Caltrans. This program also funds transit-focused planning projects that address multimodal transportation deficiencies. • Transportation Development Act Article 3 (SB 821) funding, also known as the Local Transportation Fund, is used by cities for the planning and construction of bicycle and pedestrian facilities.
California Department of Food and Agriculture (CDFA)	CDFA's Alternative Manure Management Program provides financial assistance for the implementation of non-digester manure management practices to help reduce GHG emissions. The Fertilizer Research and Education Program funds research and education to advance the environmentally safe and agronomically sound use and handling of fertilizing materials.

PROGRAM	DESCRIPTION
California Energy Commission (CEC)	The CEC funds both the California Capital Access Program and the CALeVIP program, which provide incentives for installation of vehicle charging infrastructure. The Southern California Incentive Project, part of CALeVIP, offers rebates of up to $70,000 per DC fast EVSE installation at new sites and 75% of total project costs, and up to $40,000 per DC fast EVSE installation at replacement or make-ready sites. Installations in disadvantaged communities are eligible for rebates for 80% of the total project cost, up to $80,000 per DC fast EVSE, regardless of installation site type. The California Capital Access Program provides small business borrowers and lenders incentives to finance the design, development, purchase, and installation of EV charging stations in California. The CEC's Clean Transportation Program (also known as Alternative and Renewable Fuel and Vehicle Technology Program) invests up to $100 million annually to support innovation and accelerate the development and deployment of advanced transportation and fuel technologies. The CEC is also the primary funder of the state's advanced microgrid projects, and to date has dedicated $84.5 million in matching funding to develop 20 projects across the state. The CEC provides loan programs through the Energy Conservation Assistance Act (ECAA) that support energy efficiency and energy generation projects. • The ECAA-Ed program provides zero-interest-rate loans to public school districts, charter schools, county offices of education, and state special schools. • The ECAA Low-Interest Loans program provides 1%-interest loans to local governments, special districts, public colleges and universities, public care institutions, and public hospitals for energy retrofits and some new construction projects.
California Natural Resources Agency	The California Natural Resources Agency offers a variety of grant and loan programs within its departments and conservancies: • The Urban Greening Grant Program funds projects that reduce GHG emissions by sequestering carbon, decreasing energy consumption, and reducing vehicle miles traveled. • The Environmental Enhancement & Mitigation Program funds projects that contribute to mitigation of the environmental effects of transportation facilities. These include urban forestry projects designed to offset vehicular CO_2 emissions. • The Urban Green Infrastructure Program provides funding for multi-benefit green infrastructure investments in or benefiting disadvantaged or severely disadvantaged communities.
California Public Utilities Commission (CPUC)	CPUC administers several programs to incentivize electrification, reduce GHG emissions, and support lower income households: • $200 million for the Technology and Equipment for Clean Heating and Building Initiative for Low Emissions Development programs, to cut carbon emissions in buildings and low-income households from fossil fuel combustion. • The California Solar Initiative provides incentives to low-income customers installing solar PV systems and to all utility customers installing solar water heating systems. The California Solar Initiative has a Single-family Affordable Solar Homes Program, managed by GRID Alternatives, that provides qualified low-income homeowners fixed, upfront, capacity-based incentives to help offset the upfront cost of a solar electric system. • The Self-Generation Incentive Program provides incentives to support existing, new, and emerging distributed energy resources, with rebates for qualifying distributed energy systems installed on the customer's side of the utility meter. Qualifying technologies include wind turbines, waste-heat-to-power technologies, pressure reduction turbines, internal combustion engines, microturbines, gas turbines, fuel cells, and advanced energy storage systems. • A $1 billion investment has been made over five years for the statewide Transportation Electrification Program to help accelerate EV adoption, with 70% of the funds to go toward charging for medium- and heavy-duty vehicles and 30% to go toward light-duty charging at or near multiunit dwellings. The program offers rebates for customer-side ("behind-the-meter") EV infrastructure investments at commercial, industrial, and residential sites beginning in 2025 and provides higher rebates for projects in underserved, disadvantaged, and tribal communities. • The California Alternate Rates for Energy (CARE) program offers up to 35% discounts on electric bills and a 20% discount on natural gas bills for qualifying lower-income households. • The Family Electric Rate Assistance Program offers an 18% discount on electricity bills for households whose income slightly exceeds CARE allowances.

PROGRAM	DESCRIPTION
California State Board of Equalization	Section 73 of the California Revenue and Taxation Code allows a property tax exclusion for qualifying new solar installations, meaning that property taxes will not increase for individuals if they install solar on their property. This tax exclusion was set to expire in 2016, but is now extended through January 1, 2025.
California Department of Housing and Community Development (HCD) Local Early Action Planning (LEAP) Grant	The LEAP Program provides over-the-counter grants complemented by technical assistance to local governments for the preparation and adoption of planning documents and process improvements that: • Accelerate housing production. • Facilitate compliance to implement the sixth-cycle Regional Housing Needs Assessment. Increasing the availability of affordable homes statewide is critical to bettering the quality of life of all Californians and to ending homelessness. In the 2019–20 Budget Act, Governor Gavin Newsom allocated $250 million for all regions, cities, and counties to do their part by prioritizing planning activities that accelerate housing production to meet the identified needs of every community. With this allocation, HCD established the LEAP Program with $119 million for cities and counties. LEAP provides one-time grant funding to cities and counties to update their planning documents and implement process improvements that will facilitate the acceleration of housing production and help local governments prepare for their sixth-cycle Regional Housing Needs Assessment much like the SB 2 Planning Grants.
California State Transportation Agency	The Transit and Intercity Rail Capital Program was created by SB 862 to provide grants from the state's Greenhouse Gas Reduction Fund to fund transformative capital improvements that will modernize California's intercity, commuter, and urban rail systems, and bus and ferry transit systems. The aim is to reduce GHG emissions by reducing congestion and vehicle miles traveled throughout California. The 2023 program includes approximately $1.3 billion for seven projects in the six-county SCAG region, to improve regional transportation and reduce GHG emissions, congestion, and vehicle miles traveled. The funding includes $600 million for the East San Fernando Valley Transit Corridor, part of the Los Angeles County Metropolitan Transportation Authority transit network.
Energy Upgrade California	Energy Upgrade California is a statewide program that educates California residents about opportunities to manage energy use, identify clean-energy options, and find rebates and incentives to increase energy-efficiency. The program is supported by CPUC, the CEC, various utilities, regional energy networks, community choice aggregations, businesses, nonprofits, and local governments. The Gateway Cities Energy Leader Partnership offers assistance in understanding this program and finding contractors that can assess and complete projects that are funding-eligible. Funding is provided by investor-owned energy utility customers under the auspices of CPUC and the CEC.
Strategic Growth Council (SGC)	SGC's Affordable Housing and Sustainable Communities Program funds land-use, housing, transportation, and land preservation projects to support infill and compact development that reduces GHG emissions. Funding for the program is provided by the state's Greenhouse Gas Reduction Fund. The Transformative Climate Communities Program funds community-led development and infrastructure projects that achieve major environmental, health, and economic benefits in California's most disadvantaged communities. Funded by California's Cap-and-Trade Program, the Transformative Climate Communities Program empowers the communities most affected by pollution to choose their own goals, strategies, and projects to enact transformational change—all with data-driven milestones and measurable outcomes. SGC's Urban Greening Grant Program funds urban greening projects and plans that reduce energy consumption, conserve water, improve air and water quality, and provide other community benefits. These funds assist entities in developing a master urban greening plan that will ultimately result in projects to help the state meet its environmental goals and the creation of healthy communities. These funds also assist entities to preserve, enhance, increase or establish community green areas such as urban forests, open spaces, wetlands and community spaces (e.g., community gardens).

PROGRAM	DESCRIPTION
Regional Programs	
Clean Power Alliance (CPA)	The CPA is the community choice aggregation serving local businesses and residents in greater Los Angeles County. CPA offers a variety of programs and funding sources geared toward local renewable energy generation and storage as well as demand response management. Since October 2022, customers in unincorporated Los Angeles County are receiving 100% renewable energy – wind, solar, geothermal – from CPA, compared to the 50% clean energy previously received. And most of the renewable energy is produced in California. The Powershare program offers income-qualified customers in under-resourced communities with discounted 100% renewable energy.
Property Assessed Clean Energy (PACE) programs	PACE programs offer financing of energy-efficient upgrades for different types of residential, commercial, and industrial properties. With the PACE framework, local governments provide initial funds for the installation of energy-efficient projects and renewable-energy systems. The property owner then repays the loan over a period of time. The Home Energy Renovation Opportunity program is an energy-efficient financing program designed specifically for residential upgrades where the loan becomes part of the property assessment and is repaid through property taxes.
Proposition A Local Return transit fund	Approved by voters in November 1980, Proposition A is a half-cent sales tax dedicated to transportation funding and was the first of its kind to address transportation challenges in Los Angeles County. Proposition A has funded transportation projects, improved bus service, initiated plans for a rail system that continues to be expanded today, and helped subsidize fares. The Proposition A expenditure plan includes three categories: 25% to Local Return programs, 35% to rail development, and 40% to discretionary.
South Coast Air Quality Management District (SCAQMD)	For the year 2018, AB 617 provided SCAQMD with $10.7 million in funding to develop community emissions reduction plans, conduct community monitoring and analysis, and implement best available retrofit control technology for facilities in the cap-and-trade program. With the passage of AB 617, SCAQMD expects to receive $107.5 million in new funding for eligible projects under the Carl Moyer Program, to replace older heavy-duty diesel vehicles and equipment with cleaner technologies, primarily in environmental justice and low-income communities. SCAQMD and the Mobile Source Air Pollution Reduction Review Committee provide Clean Transportation Funding to support a variety of emissions reduction programs including the Replace Your Ride Program and the Residential Electric Vehicle Charging Incentive Program. SCAQMD provides a variety of financial incentives to reduce emissions through the Vehicle and Engine Upgrade Programs, which include grants for incremental funding, subsidies, or vouchers, with many designed to promote voluntary introduction of new technologies on an accelerated schedule. • The Heavy-Duty Zero Emission Vehicle Replacement Grant offers grants for the replacement or repower of eligible Class 7 and 8 heavy-duty vehicles with low NOx vehicles. • The Goods Movement Emission Reduction Program (Proposition 1B Program) provides funding for projects that reduce emissions from goods movement operations near ports, railyards, distribution centers, and roads with high truck traffic. SCAQMD offers multiple rebates to incentivize installation of alternative fuel infrastructure and energy efficient upgrades, and improve air quality within the region. • The Clean Fuels Fund provides grants for the installation of alternative fuel infrastructure, expediting the transition of gasoline- and diesel-powered vehicles to those that operate on cleaner burning alternatives such as natural gas. • The Electric Lawn Mower Rebate Program offsets the costs of purchasing an electric lawn mower. Participants can purchase a new electric lawn mower, turn in their old gasoline lawn mower to an approved dismantler for permanent destruction, and then receive a rebate based on the purchase price of the new electric lawn mower. • The CLEANair Furnace Rebate Program, implemented by the Electric & Gas Industries Association, provides rebates to residents who purchase and install a compliant furnace that meets the SCAQMD Rule 1111 NOx emission limit.

PROGRAM	DESCRIPTION
Southern California Association of Governments (SCAG)	SCAG provides a variety of services to assist local jurisdictions with implementing bicycle infrastructure and to encourage the community to use active modes of transportation. • The Sustainable Communities Program provides direct technical assistance to jurisdictions to complete planning and policy efforts that enable implementation of the RTP/SCS. • SCAG's Go Human program is a community outreach and advertising campaign with the goals of reducing traffic collisions in Southern California and encouraging people to walk and bike more. This program is funded by grants from the California Office of Traffic Safety, the California Active Transportation Program, the Mobile Source Air Pollution Reduction Review Committee, and other local sponsors. The program encourages active transportation through education, advocacy, information sharing, and events.
Metropolitan Water District of Southern California (MWD)	SoCal Water$mart program is a partnership between MWD and its 26 member agencies including West Basin Municipal Water District, to fund home and business rebates.
Southern California Edison (SCE)	SCE's Charge Ready Program assists businesses, government organizations, and property owners with deploying the infrastructure and equipment necessary to support EV charging stations at their multi-family buildings, public sector, or business locations. The program includes rebates for EVSE installation, as well as technical assistance. Rebate amounts vary, and sites located in disadvantaged communities are eligible for additional rebates. The Charge Ready Transit Bus pilot program. designed specifically for transit agencies, provides financial assistance for bus charging stations and supporting electrical infrastructure. SCE offers the following tools and resources that enable residential customers and businesses to manage costs, reduce energy usage, and get payment assistance: • The Energy Savings Assistance program is available to certain homeowners and renters who receive electric services through a residential meter and have an SCE account. • For businesses, SCE offers Continuous Energy Improvement, a free consulting service. • The Mobile Home Upgrade program offers no-cost energy conservation evaluations by an energy specialist to identify opportunities for energy reduction and savings on electricity bills. The program also offers energy efficiency installations and improvements and is available to mobile homes or mobile home communities that have an active SCE service account. • The Direct Install Program for businesses to reduce energy costs. Under this program, businesses receive an energy efficiency evaluation and installation of energy efficient equipment including LED lights, fluorescent lighting, hi-bay lighting, refrigeration, and LED signs. • SCE offers special electric vehicle Time-of-Use rate plans that offer reduced rates when customers charge during off-peak hours. • SCE customers can join SCE's Green Rate or Community Renewables Program to tap into the power of the sun through new renewable energy options, without having to install their own solar panels. • SCE's Home Efficiency Guide provides information regarding home energy use and conservation opportunities. The Home Efficiency Guide emphasizes the benefits of electric appliances including increased energy efficiency, energy bill reduction, improvements to indoor air quality, and overall environmental benefits.
Southern California Gas Company (SoCal Gas)/Sempra Energy	SoCalGas offers programs to single-family residential, multifamily residential, and commercial customers to identify energy efficiency improvements that save money and energy. Cities can join a Local Government Partnership with SoCalGas to gain access to increased rebates and incentives, free facility audits, and assistance for community outreach/events. These programs are funded by California utility customers under the auspices of CPUC. • The Energy Savings Assistance Program provides weatherization services to low-income households served by SCE who meet the CARE program income guidelines. • The Comprehensive Mobile Home Program offers no-cost energy conservation evaluations and energy efficiency installations such as low-flow showerheads and faucet aerator. The program also provides natural gas energy efficiency improvements such as duct tests and seal of heating, ventilation, and air conditioning systems. • The Commercial Direct Install Program offers long-term energy savings to qualifying customers. Through this program, a trained energy efficiency representative will evaluate energy and water use to identify areas for businesses to save energy and water.

PROGRAM	DESCRIPTION
	• The Residential Direct Install Program has no income requirements and is available to renters and homeowners living in single-family and multifamily dwellings. This no-cost program provides energy improvements to eligible customers to help make their homes more comfortable and help conserve energy, which could lead to lower utility bills. • The SoCalGas Marketplace is an online tool that features incentives for energy-efficient home appliances and consumer electronics. • SoCalGas offers a special residential natural gas vehicle billing rate for customers who choose this option. Refueling a natural gas vehicle at home on this rate may yield a lower refueling cost compared with using a public station.
Local Funding	
County General Fund	Annual budgeting allocations fund departmental operations for staff resources to implement programs. Programs needing funding beyond staff resources are assessed through the annual budgeting and prioritization process.
Private and Nongovernmental Support	
Community-based nonprofits	Community-based nonprofits should be considered as resources for direct and indirect support, including funding, for program activation and operations. For example, GRID Alternatives helps provide access to clean, renewable solar energy to low-income families and hands-on job training to help workers enter the solar industry.
Private investors	Private investors may provide funding to local governments. For example, energy service companies can finance the upfront investments in energy efficiency, reimbursed by the local government over a contract period. Private companies may finance solar power installations, and then recoup their investment by selling the resulting power to the building owner.
Independent Energy Purchase/Solar Services Model	Local governments can finance solar PV system purchases and installations at no upfront cost by signing a long-term power purchase agreement with a developer and agreeing to host a PV system at its facility. The developer pays for the design, construction, and installation of the system, often arranging third-party financing. The investor who provides the upfront capital and owns the project receives returns from payments from the host developer. The host's payments are at a predetermined fixed price and are assessed much like a monthly utility payment. The local government, as host, benefits from the fixed-income price payments, reduced peaked energy costs, and reduced GHG emissions, all at no upfront cost.

Abbreviations: AB = Assembly Bill; CAL FIRE = California Department of Forestry and Fire Protection; CALeVIP = California Electric Vehicle Infrastructure Project; CalRecycle = California Department of Resources Recycling and Recovery; Caltrans = California Department of Transportation; CAP = climate action plan; CARB = California Air Resources Board; CARE = California Alternate Rates for Energy; CCI = California Climate Investments; CDFA = California Department of Food and Agriculture; CDFW = California Department of Fish and Wildlife; CEC = California Energy Commission; CIFIA = Carbon Dioxide Transportation Infrastructure Finance and Innovation; CO_2 = carbon dioxide; County = County of Los Angeles government; CPA = Clean Power Alliance; CPUC = California Public Utilities Commission; DC = direct current; DOE = U.S. Department of Energy; ECAA = Energy Conservation Assistance Act; EEM = Energy Efficient Mortgage; EV = electric vehicle; EVSE = electric vehicle supply equipment; FHA = Federal Housing Administration; GHG = greenhouse gas; HCD = California Department of Housing and Community Development; kWh = kilowatt-hour; LEAP = Local Early Action Planning; LED = light-emitting diode; LiHEAP = Low Income Home Energy Assistance Program; MAP-21 = Moving Ahead for Progress in the 21st Century; MWD = Metropolitan Water District of Southern California; NO_X = oxides of nitrogen; P2 = Pollution Prevention; PACE = Property Assessed Clean Energy; PV = photovoltaic; RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy; SB = Senate Bill; SCAG = Southern California Association of Governments; SCAQMD = South Coast Air Quality Management District; SCE = Southern California Edison; SGC = Strategic Growth Council; SNAP = Supplemental Nutrition Assistance Program; SNAP-Ed = Supplemental Nutrition Assistance Program-Education; SoCalGas = Southern California Gas Company; U.S. EPA = U.S. Environmental Protection Agency; USDA = U.S. Department of Agriculture

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APPENDIX H

2022 Scoping Plan Recommendations Consistency

Table H-1 compares the *2045 Los Angeles County Climate Action Plan* with the California Air Resources Board's recommendations for local governments contained in the *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) (CARB, 2022). The focus of the table is on Appendix D, *Local Actions,* of the 2022 Scoping Plan. This comparison solely serves as a demonstration of how the 2045 CAP aligns with the State's pathway to GHG emission reductions.

Reference:

California Air Resources Board (CARB), 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Sacramento, CA. November 16, 2022.

Table H-1: Consistency of the 2045 CAP with the 2022 Scoping Plan Recommendations

2022 SCOPING PLAN RECOMMENDATION	2045 CAP CONSISTENCY
Climate Action Plan Priority Strategies (2022 Scoping Plan Appendix D, Table 1)	

Convert local government fleets to ZEVs and provide EV charging at public sites.	The 2045 CAP is consistent with this recommendation through the following measures and actions:
	• **T6: Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales:** 140,000 total new public and private shared EVCS by 2045; 25,000 total new EVCS at County facilities.
	  ○ T6.2: Install EVCSs at existing buildings and right-of-way infrastructure throughout unincorporated Los Angeles County.
	  ○ T6.4: Install EVCSs at County facilities and properties for public, employee, and fleet use, prioritizing locations in frontline, BIPOC, and disadvantaged communities. Complete an assessment of EV charging locations, identifying gaps in publicly accessible stations for frontline, BIPOC, and disadvantaged communities. Provide EV purchase incentive information in multiple languages to frontline communities.
	• **T7: Electrify County Fleet Vehicles:** 100% light-duty (LD) vehicles are ZEV by 2045; 100% ZEV bus and shuttle vehicles by 2045; all new LD purchases ZEV.
	  ○ T7.1: Electrify the County bus and shuttle vehicle fleet, and partner with transit agencies for group purchasing and siting of shared charging and/or fueling infrastructure.
	  ○ T7.2: Electrify light-duty County fleet vehicles.
	• **T8: Accelerate Freight Decarbonization:** 95% of MD/HD vehicles are ZEV by 2045.
	  ○ T8.4: Streamline permitting of ZEV charging and fueling infrastructure for medium- and heavy-duty vehicles.
	  ○ T8.5: Electrify the County medium- and heavy-duty vehicle fleet.
	• **CAP Checklist:**
	  ○ For all new municipal projects and facilities that include the purchase or operation of new fleet vehicles, including public transit buses and shuttles, all such fleet vehicles must be ZEVs. This includes both County-owned vehicles along with contractor or vendor fleet vehicles.
	  ○ The project must incorporate zero emission vehicle (ZEV) infrastructure and incentives into its design.

Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed state building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans).	The 2045 CAP is consistent with this recommendation through the following measures and actions:
	• **T6: Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales:**
	  ○ T6.1: Develop a Zero Emission Vehicle Master Plan.
	  ○ T6.3: Require all new development to install EVCSs through a condition of approval/ordinance. Residential development must install EVCSs; nonresidential development must install EVCSs at a percentage of total parking spaces.
	• **T8: Accelerate Freight Decarbonization:**
	  ○ T8.3: Adopt Building Performance Standards for existing goods movement facilities and reach code requirements for major retrofits and renovations that require alternative

2022 SCOPING PLAN RECOMMENDATION	2045 CAP CONSISTENCY
	fueling infrastructure for medium- and heavy-duty vehicles. Require goods movement facilities to install alternative fueling infrastructure for medium- and heavy-duty vehicles at the point of sale. ○ T8.4: Streamline permitting of ZEV charging and fueling infrastructure for medium- and heavy-duty vehicles. • **T9: Expand Use of Zero-Emission Technologies for Off-Road Vehicles and Equipment:** 95% of off-road equipment in unincorporated Los Angeles County is ZEV by 2045; Increase the fleetwide percentage of construction, agriculture, and manufacturing equipment in the unincorporated Los Angeles County that are ZEVs to 100 percent by 2045. ○ T9.1: Partner with the South Coast Air Quality Management District and Antelope Valley Air Quality Management District to increase the use of zero-emission and near-zero-emission construction, agriculture, and manufacturing equipment. ○ T9.2: Identify types of ZEV equipment and green hydrogen equipment that are commercially available (e.g., forklifts, loaders, welders, saws, pumps, fixed cranes, air compressors, sweepers, aerial lifts, pressure washers) and require the use of these types of equipment on all new projects through an ordinance or conditions of approval. ○ T9.3: Require, to the maximum extent feasible, the use of zero-emission and near-zero-emission construction, agriculture, and manufacturing equipment for County projects. • **CAP Checklist**: The project must incorporate zero emission vehicle (ZEV) infrastructure and incentives into its design.
Reduce or eliminate minimum parking standards.	The 2045 CAP is consistent with this recommendation through the following measures and actions: • **T5: Limit and Remove Parking Minimums**: Reduce parking stipulations to reduce parking supply and encourage transit use; Unbundle parking costs to reflect cost of parking; Implement parking pricing to encourage "Park-once" behavior. ○ T5.1: Implement a comprehensive parking reform strategy, which should include, but not be limited to: elimination of minimum parking requirements for all new residential units, establishment of parking maximums within one-half mile of high-quality transit stops, creation and expansion of parking benefit districts, development of planning strategies for transitioning land dedicated to parking to alternative transit and public uses, and incentives for developers to provide less than maximum allowable parking. • **CAP Checklist:** Implement parking limitations.
Implement Complete Streets policies and investments, consistent with general plan circulation element requirements.	The 2045 CAP is consistent with this recommendation through the following measures and actions: • **T3: Expand Bicycle and Pedestrian Network to Serve Residential, Employment, and Recreational Trips:** Increase bikeway miles by 300% by 2035; Implement the County Bicycle Master Plan; Complete updates to the County's Pedestrian Action Plan, Bicycle Master Plan, and Active Transportation Plans every five years. ○ T3.1 through T3.3.

2022 SCOPING PLAN RECOMMENDATION	2045 CAP CONSISTENCY

	• **T4: Broaden Options for Transit, Active Transportation, and Alternative Modes of Transportation**: All transit corridors will have micromobility service; Improved services and access for children, elderly, disabled, and users needing accommodations for bicycles or active transportation.
	  ○ T4.1: Expand and improve the frequency of service of unincorporated Los Angeles County shuttles and explore new mobility services, such as micro transit, autonomous delivery vehicles, micro mobility, and on-demand autonomous shuttles.
	  ○ T4.4: Collaborate with Metro and other transit providers to set aside maintenance funds to ensure that public transit facilities, including stations and stops, are safe and clean to enhance the transit experience and increase ridership.
	  ○ T4.8: Establish temporary and permanent car-free areas.
	  ○ T4.10: Collaborate with Metro and other transit providers to ensure that all new forms of public transportation (e.g., new bus lines, new light rail service) are low- or zero-emission.
	• **CAP Checklist:**
	  ○ The project must incorporate pedestrian and bicycle infrastructure into its design.
	  ○ The project must comply with the County's TDM ordinance at the time of project approval.

Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, etc.	The 2045 CAP is consistent with this recommendation through the following measures and actions:
	• **Strategy 2: Increase Densities and Diversity of Land Uses Near Transit.**
	• **T1: Increase Density Near High-Quality Transit Areas:** Achieve a minimum of 20 dwelling units (DUs) per acre (maximum of 30 to 150 DUs per acre) for HQTAs.
	  ○ T1.1: Incentivize residential and community-serving uses to be developed in high quality transit areas (HQTAs), while ensuring inclusion of vital public amenities, such as parks and active transportation infrastructure.
	• **T2: Develop Land Use Plans Addressing Jobs-Housing Balance and Increase Mixed Use:** By 2030, achieve a job density of 300 jobs per acre; For communities with an imbalance of jobs/housing (+ 20%), develop community plans to identify and quantify strategies for bringing below 20%.
	  ○ T2.1: Develop community plans that will increase the percentage of residents who could live and work within the same community, and that could decrease VMT.
	• **T4: Broaden Options for Transit, Active Transportation, and Alternative Modes of Transportation**: By 2030, double transit service hours from 560,000 to 1.12 million; by 2030, install bus-only lanes and signal prioritization on all major transit thoroughfares; by 2030, ensure that 75% of unincorporated Los Angeles County residents live within one-half mile of shuttle or mobility service; etc.
	  ○ T4.1: Expand and improve the frequency of service of unincorporated Los Angeles County shuttles and explore new mobility services, such as micro transit, autonomous delivery vehicles, micro mobility, and on-demand autonomous shuttles.

2022 SCOPING PLAN RECOMMENDATION	2045 CAP CONSISTENCY
	○ T4.2 through T4.4. ○ T4.6: Offer free transit passes for students, youth, seniors, people with disabilities, and low-income populations. ○ T4.7 through T4.10. • **CAP Checklist:** ○ If the project is located within a High Quality Transit Area (HQTA), Specific Plan, or Area Plan, it must achieve a minimum of 20 dwelling units (DU) per acre, consistent with the Housing Element Update rezoning. ○ The project must comply with the County's TDM ordinance at the time of project approval ○ The project must comply with the County's current Transportation Impact Analysis (TIA) Guidelines.
Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking.	The 2045 CAP is consistent with this recommendation through the following measures and actions: • **T6: Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales.** ○ T6.6: Expand electric options for active transportation, such as electric scooters and e-bikes. Provide access to neighborhood electric vehicles, such as golf carts, shared EVs, and others. Develop policies and/or ordinances to expand these options. • **T3: Expand Bicycle and Pedestrian Network to Serve Residential, Employment, and Recreational Trips:** Increase bikeway miles by 300% by 2035; Implement the County Bicycle Master Plan; Complete updates to the County's Pedestrian Action Plan, Bicycle Master Plan, and Active Transportation Plans every five years. ○ T3.1 through T3.3. • **T4: Broaden Options for Transit, Active Transportation, and Alternative Modes of Transportation**: All transit corridors will have micromobility service; improved services and access for children, elderly, disabled, and users needing accommodations for bicycles or active transportation. ○ T4.1: Expand and improve the frequency of service of unincorporated Los Angeles County shuttles and explore new mobility services, such as micro transit, autonomous delivery vehicles, micro mobility, and on-demand autonomous shuttles. ○ T4.8: Establish temporary and permanent car-free areas. ○ T4.10: Collaborate with Metro and other transit providers to ensure that all new forms of public transportation (e.g., new bus lines, new light rail service) are low- or zero-emission. • **CAP Checklist:** ○ The project must incorporate pedestrian and bicycle infrastructure into its design. ○ The project must incorporate zero emission vehicle (ZEV) infrastructure and incentives into its design.

2022 SCOPING PLAN RECOMMENDATION	2045 CAP CONSISTENCY
Implement parking pricing or transportation demand management pricing strategies.	The 2045 CAP is consistent with this recommendation through the following measures and actions: • **T4: Broaden Options for Transit, Active Transportation, and Alternative Modes of Transportation.** ○ T4.5: Collaborate with Metro and other transit providers to develop and implement a transportation demand management (TDM) ordinance that requires development projects to incorporate measures such as subsidized transit passes and car share. • **T5: Limit and Remove Parking Minimums:** Parking strategies such as parking maximums, unbundling parking, or market price parking can help reduce VMT. • **CAP Checklist:** The project must comply with the County's TDM ordinance at the time of project approval. This may include preferential carpool/vanpool parking, bicycle parking, and shower facilities and locker rooms; trip reduction plans; transit-supportive infrastructure development; and similar strategies.

Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing the allowable density of a neighborhood).	The 2045 CAP is a policy document intended to reduce community-wide GHG emissions and would support development already allowed under the General Plan's land use assumptions as identified in the Land Use Element and 2021–2029 Revised County of Los Angeles Housing Element (2021–2029 Housing Element). No changes to General Plan land use designations, zoning, land use, or specific projects are proposed as part of the 2045 CAP.
	The 2045 CAP is consistent with this recommendation through the following measures and actions:
	• **T1: Increase Density Near High-Quality Transit Areas.**
	  ○ T1.1: Incentivize residential and community-serving uses to be developed in high quality transit areas (HQTAs), while ensuring inclusion of vital public amenities, such as parks and active transportation infrastructure.
	  ○ T1.2: Develop land use tools that will increase the production of a diversity of housing types, such as missing middle housing.
	• **T2: Develop Land Use Plans Addressing Jobs-Housing Balance and Increase Mixed Use.**
	  ○ T2.1: Develop community plans that will increase the percentage of residents who could live and work within the same community, and that could decrease VMT.
	• **CAP Checklist:**
	  ○ If the project is located within a High Quality Transit Area (HQTA), Specific Plan, or Area Plan, it must achieve a minimum of 20 dwelling units (DU) per acre, consistent with the Housing Element Update rezoning.
	  ○ The project must comply with the County's TDM ordinance at the time of project approval.
	  ○ The project must comply with the County's current Transportation Impact Analysis (TIA) Guidelines.

2022 SCOPING PLAN RECOMMENDATION	2045 CAP CONSISTENCY

Preserve natural and working lands by implementing land use policies that guide development toward infill areas and do not convert "greenfield" land to urban uses (e.g., green belts, strategic conservation easements).	The 2045 CAP is a policy document intended to reduce community-wide GHG emissions and would support development already allowed under the General Plan's land use assumptions as identified in the Land Use Element and 2021–2029 Revised County of Los Angeles Housing Element (2021–2029 Housing Element). No changes to General Plan land use designations, zoning, land use, or specific projects are proposed as part of the 2045 CAP.
	
	The 2045 CAP is consistent with this recommendation through the following measures and actions:
	• **Strategy 9: Conserve Forests and Connect Wildlands and Working Lands.**
	• **A1: Conserve Forests, Woodlands, Shrublands, Grasslands, Desert, and other Carbon-Sequestering Wildlands and Working Lands**: Preserve, conserve, and restore agricultural lands, working lands, rangelands, forest lands, wetlands, and other wildlands in unincorporated Los Angeles County: Reduce the amount of natural land converted for urbanized uses: 25% by 2030 (53 hectares conserved annually), 50% by 2035 (106 hectares conserved annually), 75% by 2045 (159 hectares conserved annually); Conserve and restore natural forest land: 2,000 acres by 2030, 4,000 acres by 2035, 6,000 acres by 2045.
	  ○ A1.1: Develop an open space conservation and land acquisition strategy that prioritizes wildlife connectivity to conserve native habitats for carbon sequestration.
	  ○ A1.2: Employ ecosystem-appropriate vegetation management of wildlands based on the best available science to reduce unintended human ignitions and wildfire risk and prevent carbon loss in forest lands. Leverage tools such as the Unified Land Management Plan and the Countywide Community Wildfire Prevention Plan.
	• **CAP Checklist:** For all projects involving the preservation, conservation, and restoration of agricultural lands, working lands, rangelands, forest lands, wetlands, and other wildlands in unincorporated Los Angeles County, the project may:
	  ○ Support the use of public and private land for urban and peri-urban agriculture, such as community gardens, and including urban vertical surfaces.
	  ○ Conserve and restore natural forest lands, wetlands, and wildlands through land acquisitions and conservation easements.
	  ○ Preserve existing agricultural and farmlands, including those mapped in unincorporated Los Angeles County as Agricultural Opportunity Areas. Expand adjoining areas to enlarge farmland area.
	  ○ Actively manage forests to reduce wildfire risk and prevent carbon loss in forest lands.

2022 SCOPING PLAN RECOMMENDATION	2045 CAP CONSISTENCY
Adopt all-electric new construction reach codes for residential and commercial uses.	The 2045 CAP is consistent with this recommendation through the following measures and actions: • **E2: Standardize All-Electric New Development:** This measure aims to electrify all applicable new buildings, while taking into consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face; All applicable new buildings will be all electric; Residential: 90% all-electric by 2030, 95% by 2035, and 100% by 2045; Nonresidential: 90% all-electric by 2030 (except large industry and possibly food service) 95% by 2035, and 100% by 2045. ○ E2.1: Adopt an ordinance requiring all applicable new buildings to be fully electric with no natural gas hookups. Include affordable housing considerations in these requirements, and develop supporting measures (financial support, technical assistance, or other incentives) to defray potential additional first costs in order to maintain housing affordability. • **CAP Checklist**: For projects under construction before 2030, the project must be fully electric with no natural gas infrastructure or appliances, as specified in the City's all-electric buildings ordinance, unless the project meets specific exemptions identified in the ordinance. For projects under construction after 2030, the project must be zero-net-energy and fully electric with no natural gas infrastructure or appliances, as specified in the City's ZNE ordinance, unless the project meets specific exemptions identified in the ordinance.

Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment with more efficient systems (such as Energy Star–rated equipment and equipment controllers).	The 2045 CAP is consistent with this recommendation through the following measures and actions:
	• **E1: Transition Existing Buildings to All-Electric.**
	  ○ E1.5: Create a comprehensive fund aggregation program to support energy efficiency, decarbonization, and resilience in new and existing affordable housing.
	  ○ E1.6: Create and resource an energy retrofit accelerator to provide a one-stop shop for guidance, technical support, training, and access to aggregated funds to support building owners and contractors. Target support to low-income communities and affordable housing.
	• **E4: Improve Energy Efficiency of Existing Buildings:** Retrofit existing building stock to reduce overall unincorporated Los Angeles County energy use: Reduce building Energy Use Intensity below 2015 levels 20% for residential, 15% for industrial, and 25% for commercial by 2030; 25% for residential and industrial and 35% for commercial by 2035; and 50% for residential and industrial and 50% for commercial by 2045.
	  ○ E4.1: Adopt Building Performance Standards for energy efficiency in existing buildings.
	  ○ E4.2: Adopt an energy efficiency ordinance for existing buildings, requiring all buildings over 20,000 square feet to benchmark and report their energy use and demonstrate their pathway to efficiency.
	  ○ E4.3: Convert existing County-owned heat-trapping surfaces to cool or green surfaces.

2022 SCOPING PLAN RECOMMENDATION	2045 CAP CONSISTENCY
	• **CAP Checklist**: Projects that include a retrofit, remodel, or redesign of an existing building must incorporate the following design elements: ○ All space heating and water heating must be electric. ○ With the exception of restaurants, all cooking appliances must be electric. ○ For restaurants, use electric cooking appliances to the maximum extent feasible. ○ Comply with all applicable Building Performance Standards. ○ Comply with all building carbon intensity limits. ○ If the project is a major renovation, achieve ZNE and/or comply with the City's ZNE ordinance.
Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings such as appliance rebates, existing building reach codes, or time of sale electrification ordinances.	The 2045 CAP is consistent with this recommendation through the following measures and actions: • **E1: Transition Existing Buildings to All-Electric**: Electrify 80% of residential buildings and 60% of nonresidential by 2045; require ZNE for all major renovations by 2045. ○ E1.1: Adopt Building Performance Standards for existing buildings and reach code requirements for major retrofits and renovations that require electric water and space heating. Require buildings to retrofit natural gas water and space heating to electric water and space heating at the point of sale. ○ E1.2: Increase alternatives to natural gas uses, such as for cooking, in existing buildings. Establish carbon intensity limits for existing nonresidential and residential buildings over a certain size. ○ E1.3: Adopt a ZNE ordinance for building renovations, based on certain criteria (such as commercial facilities with 10,000 square feet of additions). Adopt ZNE Building Performance Standards for certain buildings not undergoing major renovations or retrofits. ○ E1.4: Create and resource a plan for phased electrification of County facilities. Phase out gas-powered infrastructure and appliances as they need replacement. • **CAP Checklist**: Projects that include a retrofit, remodel, or redesign of an existing building must incorporate the following design elements: ○ All space heating and water heating must be electric. ○ With the exception of restaurants, all cooking appliances must be electric. ○ For restaurants, use electric cooking appliances to the maximum extent feasible. ○ Comply with all applicable Building Performance Standards. ○ Comply with all building carbon intensity limits. ○ If the project is a major renovation, achieve ZNE and/or comply with the City's ZNE ordinance.

2022 SCOPING PLAN RECOMMENDATION	2045 CAP CONSISTENCY

Facilitate deployment of renewable energy production and distribution and energy storage on privately owned land uses (e.g., permit streamlining, information sharing).	The 2045 CAP is consistent with this recommendation through the following measures and actions:
	• **ES2: Procure Zero-Carbon Electricity:** 100% enrollment in zero-carbon electricity service by 2030.
	  ○ ES2.1: Transition all County facilities within unincorporated areas to CPA's 100% Green Power option, SCE's 100% Green Rate option, or other available 100% renewable electricity service.
	  ○ ES2.2: Complete enrollment of the community in CPA's 100% Green Power or SCE's Green Rate option.
	• **ES3: Increase Renewable Energy Production:** Install rooftop solar PV on 35% of existing residential buildings and 32% of commercial buildings by 2045; install rooftop solar PV on 80% of new multifamily residential buildings and 40% of all new commercial buildings by 2030.
	  ○ ES3.1: Require rooftop solar PV for all new development.
	  ○ ES3.2: Install rooftop solar PV at existing buildings.
	  ○ ES3.5: Require and incentivize renewable energy for affordable housing developments for both new development and existing buildings.
	  ○ ES3.6: Streamline and prioritize permitting for solar and battery storage projects.
	• **ES4: Increase Energy Resilience**: Achieve community electricity storage and generation capacity equal to the community-wide 24-hour average usage by 2035/2045.
	  ○ ES4.1: Develop a program to deploy community resilience hubs at scale
	  ○ ES4.2: Invest in energy storage and microgrids at critical County facilities through CPA's Power Ready Program.
	  ○ ES4.3: Develop a publicly accessible community energy map that identifies opportunities for deploying distributed energy resources and microgrids to improve energy resiliency.
	  ○ ES4.4: Conduct feasibility studies to identify priority areas for solar and storage, combined with building- and community-scale microgrids and alternative technologies such as fuel cells and grid paralleling, to support demand management and peak shaving to increase grid resilience. Study implementation, costs, barriers, and obstacles and identify partnerships. Adopt regulations that establish this use and standards for its development. Limiting peak energy demand can eliminate or reduce the use of high-carbon peaker plants.
	  ○ ES4.5: Develop a Countywide program to promote energy efficiency and resilience measures in facilities providing critical community services
	• **CAP Checklist:**
	  ○ The project must utilize 100% zero-carbon electricity on-site.
	  ○ To the extent feasible, the project must install energy storage systems and use a building-scale or community microgrid to support demand management and peak shaving.

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Deploy renewable energy production and energy storage directly in new public projects and on existing public facilities (e.g., solar photovoltaic systems on rooftops of municipal buildings and on canopies in public parking lots, battery storage systems in municipal buildings).	The 2045 CAP is consistent with this recommendation through the following measures and actions:
	• **ES3: Increase Renewable Energy Production**: Install 20,000 kW of solar PV at County facilities.
	  ○ ES3.3: Identify and install solar PV systems at existing viable County facilities and properties.
	  ○ ES3.4: Explore the feasibility to install community-shared solar facilities on County properties where opportunities exist.
	  ○ ES3.6: Streamline and prioritize permitting for solar and battery storage projects.
	• **ES4: Increase Energy Resilience**: Establish a community resilience hub program to equip community serving County facilities (e.g., libraries, rec centers, senior centers); Provide solar and battery systems sufficient to support emergency cooling and other emergency functions; Locate at least one hub in each County district, with focus on vulnerable populations.
	  ○ ES4.1: Develop a program to deploy community resilience hubs at scale.
	  ○ ES4.2: Invest in energy storage and microgrids at critical County facilities through CPA's Power Ready Program.
	  ○ ES4.4: Conduct feasibility studies to identify priority areas for solar and storage, combined with building- and community-scale microgrids and alternative technologies such as fuel cells and grid paralleling, to support demand management and peak shaving to increase grid resilience. Study implementation, costs, barriers, and obstacles and identify partnerships. Adopt regulations that establish this use and standards for its development. Limiting peak energy demand can eliminate or reduce the use of high-carbon peaker plants.
	• **CAP Checklist:**
	  ○ The project must utilize 100% zero-carbon electricity on-site.
	  ○ To the extent feasible, the project must install energy storage systems and use a building-scale or community microgrid to support demand management and peak shaving.

Climate Action Plan Targets & Performance Standards (2022 Scoping Plan Appendix D, Table 2)	

Scoping Plan Scenario: 100 percent of light-duty vehicle sales are ZEVs by 2035.
 	
Recommendation: Potential data sources and tools to localize this for target-setting include EMFAC Fleet Database (by county) and Scenario Analysis Tool and Department of Motor Vehicles Database (by fuel type and registration).
	The 2045 CAP is consistent with this recommendation through the following measures and actions:
	• **T6: Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales**: Increase the fleetwide percentage total amount of light-duty vehicles in unincorporated Los Angeles County that are ZEVs to: 30% by 2030, 50% by 2035, and 90% by 2045; Increase the sales of new light-duty vehicles in unincorporated Los Angeles County that are ZEVs to: 68% by 2030 and 100% by 2035.
	  ○ T6.1: Develop a Zero Emission Vehicle Master Plan.
	  ○ T6.3: Require all new development to install EVCSs through a condition of approval/ordinance. Residential development must install EVCSs; nonresidential development must install EVCSs at a percentage of total parking spaces.

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	• **CAP Checklist:**
	  ○ For all new municipal projects and facilities that include the purchase or operation of new fleet vehicles, including public transit buses and shuttles, all such fleet vehicles must be ZEVs. This includes both County-owned vehicles and contractor or vendor fleet vehicles.
	  ○ The project must incorporate ZEV infrastructure and incentives into its design.

Scoping Plan Scenario: VMT per capita reduced 25 percent below 2019 levels by 2030 and 30 percent below 2019 levels by 2045; Potential data sources to localize this for target-setting include VMT modeling outputs prepared for, or consistent with, the travel outcomes associated with the adopted SCS or other applicable regional plan.
 	
Recommendation: Potential data sources to localize this for target-setting include VMT modeling outputs prepared for, or consistent with, the travel outcomes associated with the adopted SCS or other applicable regional plan.
	The 2045 CAP is consistent with this recommendation through the following measures and actions. The 2045 CAP does not achieve the same levels of per-capita VMT reduction as the Scoping Plan Scenario: Compared to 2019 levels, the CAP achieves a 10% reduction in per-capita VMT by 2030, 12% by 2035, and 16% by 2045, which is extremely aggressive for unincorporated Los Angeles County. However, the 2045 CAP is consistent with recommended approach using regional VMT modeling outputs/SCS implementation.
	• **Strategy 2: Increase Densities and Diversity of Land Uses Near Transit.**
	• **T1: Increase Density Near High-Quality Transit Areas:** Achieve a minimum of 20 dwelling units (DUs) per acre (maximum of 30 to 150 DUs per acre) for HQTAs.
	  ○ T1.1 and T1.2.
	• **T2: Develop Land Use Plans Addressing Jobs-Housing Balance and Increase Mixed Use**: By 2030, achieve a job density of 300 jobs per acre; For communities with an imbalance of jobs/housing (+ 20%), develop community plans to identify and quantify strategies for bringing below 20%.
	  ○ T2.1: Develop community plans that will increase the percentage of residents who could live and work within the same community, and that could decrease VMT.
	• **T3: Expand Bicycle and Pedestrian Network to Serve Residential, Employment, and Recreational Trips**: Increase bikeway miles by 300% by 2035; Implement the County Bicycle Master Plan; Complete updates to the County's Pedestrian Action Plan, Bicycle Master Plan, and Active Transportation Plans every five years.
	  ○ T3.1 through T3.3.
	• **T4: Broaden Options for Transit, Active Transportation, and Alternative Modes of Transportation**: By 2030, double transit service hours from 560,000 to 1.12 million; by 2030, install bus-only lanes and signal prioritization on all major transit thoroughfares 100% of all transit routes; by 2030, ensure that 75% of unincorporated Los Angeles County residents live within one-half mile of shuttle or mobility service.
	  ○ T4.1 through T4.10.
	• **CAP Checklist:**
	  ○ If the project is located within a High Quality Transit Area (HQTA), Specific Plan, or Area Plan, it must achieve a minimum of 20 dwelling units (DU) per acre, consistent with the Housing Element Update rezoning.
	  ○ The project must comply with the County's TDM ordinance at the time of project approval.

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	○ The project must comply with the County's current Transportation Impact Analysis (TIA) Guidelines. ○ The project must incorporate pedestrian and bicycle infrastructure into its design. ○ The project must comply with the County's TDM ordinance at the time of project approval. This may include preferential carpool/vanpool parking, bicycle parking, and shower facilities and locker rooms; trip reduction plans; transit-supportive infrastructure development; and similar strategies.
Scoping Plan Scenario: All electric appliances in new construction beginning 2026 (residential) and 2029 (commercial). **Recommendation**: Potential data sources to localize these for target-setting include: Commercial Building Energy Consumption Survey, California Commercial End Use Survey, Residential Appliance Saturation Survey.	The 2045 CAP is consistent with this recommendation through the following measures and actions: • **E2: Standardize All-Electric New Development**: All applicable new buildings will be all electric; Residential: 90% all-electric by 2030, 95% by 2035, and 100% by 2045; Nonresidential: 90% all-electric by 2030 (except large industry and possibly food service), 95% by 2035, and 100% by 2045. ○ E2.1: Adopt an ordinance requiring all applicable new buildings to be fully electric with no natural gas hookups. Include affordable housing considerations in these requirements, and develop supporting measures (financial support, technical assistance, or other incentives) to defray potential additional first costs in order to maintain housing affordability. • **CAP Checklist**: For projects under construction before 2030, the project must be fully electric with no natural gas infrastructure or appliances, as specified in the City's all-electric buildings ordinance, unless the project meets specific exemptions identified in the ordinance. For projects under construction after 2030, the project must be zero-net-energy and fully electric with no natural gas infrastructure or appliances, as specified in the City's ZNE ordinance, unless the project meets specific exemptions identified in the ordinance.
Scoping Plan Scenario: For existing residential buildings, 80 percent of appliance sales are electric by 2030 and 100 percent of appliance sales are electric by 2035 (appliances replaced at end of life). **Recommendation**: Potential data sources to localize these for target-setting include: Commercial Building Energy Consumption Survey, California Commercial End Use Survey, Residential Appliance Saturation Survey.	The 2045 CAP is consistent with this recommendation through the following measures and actions: • **E1: Transition Existing Buildings to All-Electric:** Electrify all the existing residential buildings stock 25% by 2030, 40% by 2035, 80% by 2045. ○ E1.1: Adopt Building Performance Standards for existing buildings and reach code requirements for major retrofits and renovations that require electric water and space heating. Require buildings to retrofit natural gas water and space heating to electric water and space heating at the point of sale. ○ E1.2: Increase alternatives to natural gas uses, such as for cooking, in existing buildings. Establish carbon intensity limits for existing nonresidential and residential buildings over a certain size. ○ E1.3: Adopt a ZNE ordinance for building renovations, based on certain criteria (such as commercial facilities with 10,000 square feet of additions). Adopt ZNE Building Performance Standards for certain buildings not undergoing major renovations or retrofits.

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	○ E1.5: Create a comprehensive fund aggregation program to support energy efficiency, decarbonization and resilience in new and existing affordable housing. ○ E1.6: Create and resource an energy retrofit accelerator to provide a one-stop shop for guidance, technical support, training, and access to aggregated funds to support building owners and contractors. Target support to low-income communities and affordable housing. • **CAP Checklist**: Projects that include a retrofit, remodel, or redesign of an existing building must incorporate the following design elements: ○ All space heating and water heating must be electric. ○ With the exception of restaurants, all cooking appliances must be electric. ○ For restaurants, use electric cooking appliances to the maximum extent feasible. ○ Comply with all applicable Building Performance Standards. ○ Comply with all building carbon intensity limits. ○ If the project is a major renovation, achieve ZNE and/or comply with the City's ZNE ordinance.
Scoping Plan Scenario: For existing commercial buildings, 80 percent of appliance sales are electric by 2030 and 100 percent of appliance sales are electric by 2045 (appliances replaced at end of life). **Recommendation**: Potential data sources to localize these for target-setting include: Commercial Building Energy Consumption Survey, California Commercial End Use Survey, Residential Appliance Saturation Survey.	The 2045 CAP is consistent with this recommendation through the following measures and actions: • **E1: Transition Existing Buildings to All-Electric**: Electrify all the existing nonresidential buildings stock 15% by 2030, 25% by 2035, 60% by 2045; require ZNE for all major renovations by 2045. ○ E1.1: Adopt Building Performance Standards for existing buildings and reach code requirements for major retrofits and renovations that require electric water and space heating. Require buildings to retrofit natural gas water and space heating to electric water and space heating at the point of sale. ○ E1.2: Increase alternatives to natural gas uses, such as for cooking, in existing buildings. Establish carbon intensity limits for existing nonresidential and residential buildings over a certain size. ○ E1.3: Adopt a ZNE ordinance for building renovations, based on certain criteria (such as commercial facilities with 10,000 square feet of additions). Adopt ZNE Building Performance Standards for certain buildings not undergoing major renovations or retrofits. ○ E1.5: Create a comprehensive fund aggregation program to support energy efficiency, decarbonization, and resilience in new and existing affordable housing. ○ E1.6: Create and resource an energy retrofit accelerator to provide a one-stop shop for guidance, technical support, training, and access to aggregated funds to support building owners and contractors. Target support to low-income communities and affordable housing. • **CAP Checklist**: Projects that include a retrofit, remodel, or redesign of an existing building must incorporate the following design elements: ○ All space heating and water heating must be electric. ○ With the exception of restaurants, all cooking appliances must be electric.

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	○ For restaurants, use electric cooking appliances to the maximum extent feasible. ○ Comply with all applicable Building Performance Standards. ○ Comply with all building carbon intensity limits. ○ If the project is a major renovation, achieve ZNE and/or comply with the City's ZNE ordinance.
Greenhouse Gas Targets (2022 Scoping Plan, pursuant to AB 1279)	
85% below 1990 levels by 2045.	The 2045 CAP is consistent with this target for the following reason: • **2045 Target:** The CAP has a target of 85% below 1990 levels by 2045, consistent with the state target.
Carbon neutrality by 2045.	The 2045 CAP is consistent with this target for the following reasons: • **2045 Target:** The CAP has a target of 85% below 1990 levels by 2045. The CAP does not have a target of carbon neutrality, but this is not required by the scoping plan and may not be appropriate for all jurisdictions. • **2045 Aspirational Goal:** The 2045 CAP also includes an aspirational goal to achieve carbon neutrality by 2045 to align with the We Are Still In Declaration and the state's carbon reduction targets and goals. • **Carbon Removal:** Action ES1.3 states, "Develop a carbon removal strategy that considers direct air capture and carbon capture and sequestration (CCS)." This program will be developed via the CAP into the future to help the County aim for carbon neutrality. Measures A1, A2, and A3 also call for and promote carbon sequestration to balance remaining direct emissions. • **CAP Checklist:** The checklist allows projects to screen out of completing the checklist in full if the project achieves zero GHG emissions compared to the existing on-site development at the project site.
GHG reduction targets should typically be estimated for specific years aligned with the State's long-term climate targets established through existing laws or policy guidance.	The 2045 CAP is consistent with this recommendation for the following reason: • **Multiple target years:** The CAP's targets for 2030 and 2045 align or exceed state targets for these years. The CAP also has an interim 2035 target on the trendline from 2018 to 2045.
Jurisdictions should consider their respective share of the statewide reductions necessary to achieve the State's long-term climate targets. Jurisdictions should also evaluate their GHG inventory when establishing targets consistent with the State's long-term climate targets and should tailor their inventory to ensure the sectors included in the State's targets align with those included in the local jurisdiction's inventory and target. Local governments should focus on sources and actions within their control.	The 2045 CAP is consistent with this recommendation for the following reasons: • **Inventory and forecast:** The 2045 CAP includes a 2015 baseline GHG emissions inventory, a 2018 GHG emissions inventory update, and projections of 2030, 2035, and 2045 emissions. GHG emissions for all of these years include emissions associated with all activities occurring within the boundaries of unincorporated Los Angeles County. • **Excluded sectors:** Sectors over which the County has no control were excluded from the inventory, forecast, and target. These include Cap-and-Trade covered entities (like large stationary sources and power plants), airports, ports and marine, military, and other sources.

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A jurisdiction that periodically examines their long-term GHG reduction trajectory is in a better position to determine whether GHG emission levels contemplated in their CAP are sustainable. This type of long-term approach benefits from interim reduction targets rather than a single target.	The 2045 CAP is consistent with this recommendation for the following reasons: • **Multiple targets:** The CAP includes separate targets for 2030, 2035, and 2045 (see above). • **Implementation and tracking:** Chapter 4 of the CAP includes an implementation and tracking plan, including regular inventory and CAP updates. Appendix E has specific performance goals and tracking metrics for each measure and action.
Align local GHG-reducing strategies and actions with the respective State policies that will deliver GHG emission reductions, if successfully implemented and supported at the local level. The CAP target-setting process should account for projected GHG emission reductions from State policies, programs, and strategies implemented over time.	The 2045 CAP is consistent with this recommendation for the following reason: • **Adjusted BAU forecast:** The Adjusted BAU forecast accounts for future growth under BAU conditions but makes adjustments for federal, state, and County legislative regulations that were implemented before the development of the 2045 CAP. These actions include the California Energy Commission's 2019 and 2023 Title 24 building energy efficiency requirements, the Renewable Portfolio Standards (SB 350), the California Department of Resources Recycling and Recovery (CalRecycle) 75 percent waste diversion initiative (AB 341), the Pavley and Advanced Clean Car Standards (AB 1493), and the Low Carbon Fuel Standards (Executive Order S-01-07).

Jurisdictions should avoid creating targets that are impossible to meet as a basis to determine significance. A net-zero target that makes it more difficult to achieve statewide goals by prohibiting or complicating projects that are needed to support the State's climate goals, like infill development or solar arrays, is not consistent with the State's goals.	The 2045 CAP is consistent with this recommendation for the following reasons:
	• **2045 Target:** The CAP has a target of 85% below 1990 levels by 2045, consistent with the state target.
	• **2045 Aspirational Goal:** The 2045 CAP also includes an aspirational goal to achieve carbon neutrality by 2045 to align with the We Are Still In Declaration and the state's carbon reduction targets and goals.
	• **Infill and affordable housing:** The CAP prioritizes infill and affordable housing development in a myriad of ways. For example:
	  ○ Action ES3.5 states, "Require and incentivize renewable energy for affordable housing developments for both new development and existing buildings."
	  ○ Action ES5.1 calls for requirements for new development, but includes "affordable housing considerations in these requirements, and develop supporting measures (financial support, technical assistance, or other incentives) to defray potential additional first costs in order to maintain housing affordability."
	  ○ Action E1.5 states, "Create a comprehensive fund aggregation program to support energy efficiency, decarbonization and resilience in new and existing affordable housing."
	• **Carbon Removal:** Action ES1.3 states, "Develop a carbon removal strategy that considers direct air capture and carbon capture and sequestration (CCS)." This program will be developed via the CAP into the future to help the County aim for carbon neutrality. Measures A1, A2, and A3 also call for and promote carbon sequestration to balance remaining direct emissions.

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	• **CAP Checklist:** The checklist allows projects to screen out of completing the checklist in full if the project achieves zero GHG emissions compared to the existing on-site development at the project site.
Equity and Affordable Housing (2022 Scoping Plan Appendix D, Section 1.1)	
Local policies that make it easier for people to afford homes in places with good access to jobs, services, open space, and education, as well as a variety of transportation options that reduce the need to drive, advance equity and reduce GHG emissions.	The 2045 CAP and other County programs and policies are consistent with this recommendation for the following reasons: [a] • **County Racial Equity Strategic Plan:** To address the implementation of the 2045 CAP strategies, measures, and actions in an equitable manner, the County identified applicable guiding principles from the Los Angeles County Draft Racial Equity Strategic Plan to assist with the equitable distribution of benefits and resources across all segments of a community. • **Grants Program:** Grants will be highly considered in place of the traditional rebate programs for frontline communities. • **Feasibility Studies:** Feasibility studies initiated by a CAP action will also include additional feasibility analysis for frontline communities to identify necessary additional support. • **Housing Element:** In 2022, the County updated its Housing Element to reduce regulatory barriers and provide incentives to promote the equitable distribution of sustainable housing development through programs that include but are not limited to the Rezoning Program, Residential Parking Program, Rent Stabilization Ordinance, and Affordable Housing and Sustainable Communities Program.
Ensuring that vulnerable communities benefit from efforts to reduce GHG emissions is crucial to the State's climate strategy.	The 2045 CAP and other County programs and policies are consistent with this recommendation for the following reasons: [a] • **County Racial Equity Strategic Plan:** To address the implementation of the 2045 CAP strategies, measures, and actions in an equitable manner, the County identified applicable guiding principles from the Los Angeles County Draft Racial Equity Strategic Plan to assist with the equitable distribution of benefits and resources across all segments of a community. • **Grants:** Grants will be highly considered in place of the traditional rebate programs for frontline communities. • **Monitoring and Reporting Program:** A monitoring and reporting mechanism will be developed to track the overall implementation of the CAP and monitor the rate of implementation in frontline communities. • **Inclusion of Tribal and Indigenous Communities:** Consultations with the Los Angeles City/County Native American Indian Commission and individual tribes will be held to start a dialogue on how climate change is impacting the indigenous population and what the County can do to support equitable implementation of CAP actions within their communities. • **T1: Increase Density Near High-Quality Transit Areas**: Implement and complete Housing Element Update rezoning programs to achieve the minimum densities; locate a majority of residential and employment centers in unincorporated Los Angeles County are within 1 mile of an HQTA.

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	○ T1.1: Incentivize residential and community-serving uses to be developed in high quality transit areas (HQTAs), while ensuring inclusion of vital public amenities, such as parks and active transportation infrastructure. ○ T1.2: Develop land use tools that will increase the production of a diversity of housing types, such as missing middle housing.
Local government is well-positioned to design housing policies to address climate goals and design climate policies to meet the State's housing needs. Land use strategies that support more compact development in infill areas, particularly those already displaying efficient resident travel patterns, have the greatest potential to reduce emissions. Infill housing development alleviates pressure to develop on the urban periphery, preserving natural and working lands and areas often at risk of wildfire.	The 2045 CAP and other County programs and policies are consistent with this recommendation for the following reasons: [a] • **Housing Element:** In 2022, the County updated its Housing Element to reduce regulatory barriers and provide incentives to promote the equitable distribution of sustainable housing development through programs that include but are not limited to the Rezoning Program, Residential Parking Program, Rent Stabilization Ordinance, and Affordable Housing and Sustainable Communities Program. • **T1: Increase Density Near High-Quality Transit Areas:** ○ T1.1: Incentivize residential and community-serving uses to be developed in high quality transit areas (HQTAs), while ensuring inclusion of vital public amenities, such as parks and active transportation infrastructure. ○ T1.2: Develop land use tools that will increase the production of a diversity of housing types, such as missing middle housing. • **T2: Develop Land Use Plans Addressing Jobs-Housing Balance and Increase Mixed Use:** By 2030, achieve a job density of 300 jobs per acre; For communities with an imbalance of jobs/housing (+ 20%), develop community plans to identify and quantify strategies for bringing below 20%. ○ T2.1: Develop community plans that will increase the percentage of residents who could live and work within the same community, and that could decrease VMT. • **T4: Broaden Options for Transit, Active Transportation, and Alternative Modes of Transportation:** By 2030, double transit service hours from 560,000 to 1.12 million; by 2030, install bus-only lanes and signal prioritization on all major transit thoroughfares 100% of all transit routes; by 2030, ensure that 75% of unincorporated Los Angeles County residents live within one-half mile of shuttle or mobility service ○ T4.1: Expand and improve the frequency of service of unincorporated Los Angeles County shuttles and explore new mobility services, such as micro transit, autonomous delivery vehicles, micro mobility, and on-demand autonomous shuttles. ○ T4.2 through T4.4. ○ T4.6: Offer free transit passes for students, youth, seniors, people with disabilities, and low-income populations. ○ T4.7 through T4.10. • **CAP Checklist:** ○ If the project has a residential component and 100% of the units, excluding manager's units, are set aside for lower income households, then the project can screen out of several of the required transportation elements.

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	○ If the project is located within a one-half mile radius of a major transit stop or an existing stop along a high-quality transit corridor an and does not replace residential units set aside for lower income households with a smaller number of market-rate residential units, then the project can screen out of several of the required transportation elements. ○ If the project is located within a High Quality Transit Area (HQTA), Specific Plan, or Area Plan, it must achieve a minimum of 20 dwelling units (DU) per acre, consistent with the Housing Element Update rezoning. ○ The project must comply with the County's TDM ordinance at the time of project approval. ○ The project must comply with the County's current Transportation Impact Analysis (TIA) Guidelines.
Accelerating housing production to meet the extraordinary need for more homes can help reduce vehicle miles traveled (VMT) and GHG emissions and advance health and equity objectives when new housing is developed in types and locations that align with these goals, and particularly when accompanied by complementary policies and investments to create sustainable communities and prevent displacement of existing residents.	The 2045 CAP and other County programs and policies are consistent with this recommendation for the following reasons: [a] • **Housing Element:** In 2022, the County updated its Housing Element to reduce regulatory barriers and provide incentives to promote the equitable distribution of sustainable housing development through programs that include but are not limited to the Rezoning Program, Residential Parking Program, Rent Stabilization Ordinance, and Affordable Housing and Sustainable Communities Program. • **Anti-Displacement:** As part of a larger effort to stem displacement of vulnerable populations, the County's General Plan Housing Element includes Program 43, which will assess displacement and gentrification risk through a Displacement Risk Study. The data will be presented through an Anti-Displacement Mapping Tool to ensure that the most current information is available as County departments implement anti-displacement efforts. The Anti-Displacement Mapping Tool will help to inform the implementation of CAP actions in communities that are already vulnerable to displacement or gentrification. Equity strategies may include the utilization of grant programs to prevent passing the costs to tenants or additional public engagement to clear up any misconception of property assessments. • **T1: Increase Density Near High-Quality Transit Areas:** ○ T1.1: Incentivize residential and community-serving uses to be developed in high quality transit areas (HQTAs), while ensuring inclusion of vital public amenities, such as parks and active transportation infrastructure. ○ T1.2: Develop land use tools that will increase the production of a diversity of housing types, such as missing middle housing. • **CAP Checklist:** ○ If the project has a residential component and 100% of the units, excluding manager's units, are set aside for lower income households, then the project can screen out of several of the required transportation elements. ○ If the project is located within a one-half mile radius of a major transit stop or an existing stop along a high-quality transit corridor and does not replace residential units set aside for lower income households with a smaller number of market-rate residential units, then the project can screen out of several of the required transportation elements.

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Fostering transportation-efficient, resource-rich, accessible, and inclusive communities is a key strategy for climate, equity, health, and affordability. Increasing housing opportunities in transportation-efficient locations is a necessary paradigm shift and is part of the State's GHG emission reduction strategy.	The 2045 CAP and other County programs and policies are consistent with this recommendation for the following reasons: [a]
	• **Housing Element:** In 2022, the County updated its Housing Element to reduce regulatory barriers and provide incentives to promote the equitable distribution of sustainable housing development through programs that include but are not limited to the Rezoning Program, Residential Parking Program, Rent Stabilization Ordinance, and Affordable Housing and Sustainable Communities Program.
	• **T1: Increase Density Near High-Quality Transit Areas:**
	  ○ T1.1: Incentivize residential and community-serving uses to be developed in high quality transit areas (HQTAs), while ensuring inclusion of vital public amenities, such as parks and active transportation infrastructure.
	  ○ T1.2: Develop land use tools that will increase the production of a diversity of housing types, such as missing middle housing.
	• **T2: Develop Land Use Plans Addressing Jobs-Housing Balance and Increase Mixed Use:** By 2030, achieve a job density of 300 jobs per acre; For communities with an imbalance of jobs/housing (+ 20%), develop community plans to identify and quantify strategies for bringing below 20%.
	  ○ T2.1: Develop community plans that will increase the percentage of residents who could live and work within the same community, and that could decrease VMT.
	• **T3: Expand Bicycle and Pedestrian Network to Serve Residential, Employment, and Recreational Trips:** Increase bikeway miles by 300% by 2035; Implement the County Bicycle Master Plan; Complete updates to the County's Pedestrian Action Plan, Bicycle Master Plan, and Active Transportation Plans every five years.
	  ○ T3.1 through T3.3.
	• **T4: Broaden Options for Transit, Active Transportation, and Alternative Modes of Transportation**: All transit corridors will have micromobility service; Improved services and access for children, elderly, disabled, and users needing accommodations for bicycles or active transportation; by 2030, double transit service hours from 560,000 to 1.12 million; by 2030, install bus-only lanes and signal prioritization on all major transit thoroughfares 100% of all transit routes; by 2030, ensure that 75% of unincorporated Los Angeles County residents live within one-half mile of shuttle or mobility service.
	  ○ T4.1: Expand and improve the frequency of service of unincorporated Los Angeles County shuttles and explore new mobility services, such as micro transit, autonomous delivery vehicles, micro mobility, and on-demand autonomous shuttles.
	  ○ T4.2 through T4.4.
	  ○ T4.6: Offer free transit passes for students, youth, seniors, people with disabilities, and low-income populations.
	  ○ T4.7 through T4.10.
	• **CAP Checklist:**
	  ○ If the project has a residential component and 100% of the units, excluding manager's units, are set aside for

2022 SCOPING PLAN RECOMMENDATION	2045 CAP CONSISTENCY
	lower income households, then the project can screen out of several of the required transportation elements. ○ If the project is located within a one-half mile radius of a major transit stop or an existing stop along a high-quality transit corridor and does not replace residential units set aside for lower income households with a smaller number of market-rate residential units, then the project can screen-out of several of the required transportation elements. ○ If the project is located within a High Quality Transit Area (HQTA), Specific Plan, or Area Plan, it must achieve a minimum of 20 dwelling units (DU) per acre, consistent with the Housing Element Update rezoning. ○ The project must comply with the County's TDM ordinance at the time of project approval. ○ The project must comply with the County's current Transportation Impact Analysis (TIA) Guidelines.
Policies to facilitate both market rate and subsidized affordable housing production in infill neighborhoods should, over time, stabilize housing costs, minimize displacement, and create new housing opportunities in transportation-efficient locations.	The 2045 CAP and other County programs and policies are consistent with this recommendation for the following reasons: [a] • **Housing Element:** In 2022, the County updated its Housing Element to reduce regulatory barriers and provide incentives to promote the equitable distribution of sustainable housing development through programs that include but are not limited to the Rezoning Program, Residential Parking Program, Rent Stabilization Ordinance, and Affordable Housing and Sustainable Communities Program. • **Grants Program:** Grants will be highly considered in place of the traditional rebate programs for frontline communities. • **T1: Increase Density Near High-Quality Transit Areas:** ○ T1.1: Incentivize residential and community-serving uses to be developed in high quality transit areas (HQTAs), while ensuring inclusion of vital public amenities, such as parks and active transportation infrastructure. ○ T1.2: Develop land use tools that will increase the production of a diversity of housing types, such as missing middle housing. • **CAP Checklist:** ○ If the project has a residential component and 100% of the units, excluding manager's units, are set aside for lower income households, then the project can screen out of several of the required transportation elements. ○ If the project is located within a one-half mile radius of a major transit stop or an existing stop along a high-quality transit corridor and does not replace residential units set aside for lower income households with a smaller number of market-rate residential units, then the project can screen out of several of the required transportation elements. ○ If the project is located within a High Quality Transit Area (HQTA), Specific Plan, or Area Plan, it must achieve a minimum of 20 dwelling units (DU) per acre, consistent with the Housing Element Update rezoning.

2022 SCOPING PLAN RECOMMENDATION	2045 CAP CONSISTENCY
CEQA Streamlining (2022 Scoping Plan Appendix D, Section 2)	
Once adopted, CEQA-qualified CAPs provide local governments with a valuable tool for 1) coordinated climate planning in their community and 2) streamlining the CEQA GHG analysis for projects consistent with a CEQA-qualified CAP.	The 2045 CAP is consistent with this recommendation for the following reason: • **CEQA Qualified CAP:** the 2045 CAP is a CEQA-qualified CAP (see above).
This tiering and streamlining evaluates whether the proposed project would demonstrate consistency with 1) the adopted plans, as well as the growth and land use assumptions that underlie the CEQA-qualified CAP, and 2) all applicable GHG reduction measures identified in the CAP.	The 2045 CAP is consistent with this recommendation for the following reason: • **Growth consistency:** The CAP Checklist requires that projects be consistent with the General Plan including the Land Use Element and the 2021-2029 Housing Element.
CAP compliance checklists can be used with a CEQA-qualified CAP for future CEQA streamlining. The CAP compliance checklists are then included as part of the proposed project's CEQA analysis documenting the project's consistency with the CEQA-qualified CAP.	The 2045 CAP is consistent with this recommendation for the following reason: • **CAP Checklist:** Appendix F is the CAP checklist for projects.
CARB has identified three priority areas that address the State's largest sources of emissions that local governments have authority or influence over.	**CAP measures and actions:** the CAP includes all the suggested measures and strategies recommended by CARB. See the *GHG Reduction Strategies and Actions* section above.

Abbreviations:
2021–2029 Housing Element = 2021–2029 Revised County of Los Angeles Housing Element; 2022 Scoping Plan = 2022 Scoping Plan for Achieving Carbon Neutrality*; 2045 CAP* = 2045 Los Angeles County Climate Action Plan*; AB = Assembly Bill; BAU = business-as-usual; BIPOC = Black, Indigenous, and People of Color; Board = Board of Supervisors; CalRecycle = California Department of Resources Recycling and Recovery; CAP = climate action plan; CARB = California Air Resources Board; CCS = capture and carbon and sequestration; CEQA = California Environmental Quality Act; City = City of Los Angeles; County = County of Los Angeles government; Countywide = Los Angeles County in its entirety, inclusive of both unincorporated areas and all 88 incorporated cities; CPA = Clean Power Alliance; DU = dwelling unit; EMFAC = EMission FACtors; EV = electric vehicle; EVCS = electric vehicle charging station; General Plan = Los Angeles County General Plan 2035; HQTA = high quality transit area; kBtu = one thousand British thermal units; kW = kilowatt; LD = light-duty; MD/HD = medium-duty/heavy-duty; Metro = Los Angeles County Metropolitan Transportation Authority; PV = photovoltaic; SB = Senate Bill; SCE = Southern California Edison; SCS = Sustainable Communities Strategy; TDM = transportation demand management; TIA = Transportation Impact Analysis; unincorporated Los Angeles County = the unincorporated areas of Los Angeles County; VMT = vehicle miles traveled; ZEV = zero-emission vehicle; ZNE = Zero Net Energy*
NOTE:
Some of the listed policies and programs go beyond what is identified in the 2045 CAP but are components of the 2045 CAP's implementation plan as discussed in Chapter 4.

Exhibit C

2045 CLIMATE ACTION PLAN

Final Program Environmental Impact Report

October 2023

State Clearinghouse #2021120568

Prepared for:
Los Angeles County Department of Regional Planning
320 West Temple Street, 13th Floor
Los Angeles, California 90012

Prepared by:
Environmental Science Associates
626 Wilshire Boulevard Suite 1100
Los Angeles, California 90017

ESA

2045 CLIMATE ACTION PLAN

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ESA

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CHAPTER 1
Introduction

1.1 Purpose

This Program Environmental Impact Report (PEIR) has been prepared by the County of Los Angeles (County)[1] in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code, § 21000 et seq.), and the CEQA Guidelines (14 California Code of Regulations, § 15000 et seq.). The County of Los Angeles serves as "Lead Agency" for the preparation of the Environmental Impact Report for the Revised Draft 2045 CAP (Project). (CEQA Guidelines, § 15050.) This Final PEIR evaluates environmental impacts that would occur if the Project was adopted and implemented.

The purpose of an EIR is "to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided." (Pub. Resources Code, § 21002.1(a).) This Final PEIR analyzes the significant environmental effects of the Project, identifies feasible mitigation measures to avoid or reduce these impacts, and presents alternatives to the proposed Project that could avoid or reduce significant impacts. This Final PEIR was prepared to disclose this information to decisionmakers, members of the public, and public agencies, so that decisionmakers can make informed decisions about the Project.

The purpose of this Final PEIR is to: respond to all comments received by the County regarding the environmental information and analysis contained in the Recirculated Draft PEIR during the official comment period, as required by CEQA; and provide in one place all clarifications, corrections, or minor revisions to the text, tables, figures, and appendices of the Recirculated Draft PEIR generated either from responses to comments or independently by the County. The Final PEIR has been prepared in compliance with CEQA Guidelines section 15132. This Final PEIR, dated October 2023, consists of the following documents:

- **Chapter 1***, Introduction,* contains a summary of project refinements since the issuance of the Recirculated Draft PEIR and discussion of topics received on the Revised Draft 2045 CAP that do not raise significant environmental issues related to the Recirculated Draft PEIR (Section 1.2.2);

[1] Please note the use of the following terms in this document: "unincorporated Los Angeles County" refers to the unincorporated areas of Los Angeles County; "Countywide" refers to Los Angeles County in its entirety, inclusive of both unincorporated areas and all 88 incorporated cities; and "County" refers to County of Los Angeles government.

- **Chapter 2**, *Response to Comments,* provides a list of public comments and responses to written comments received on the Recirculated Draft PEIR; and
- **Chapter 3**, *Revisions to the Recirculated Draft PEIR* identifies text changes to the Recirculated Draft PEIR.

This Final PEIR includes two appendices:

- **Appendix A**, *Public Notices*, contains copies of public notices issued for the Recirculated Draft PEIR.
- **Appendix B,** *Appendix F of the Revised Draft 2025 CAP,* includes a clean version of the CEQA Streamlining Checklist (Checklist) and a version marked to show the revisions that have been made to the Checklist since the March 2023 issuance of the Revised Draft 2025 CAP.

1.2 Environmental Review Process

1.2.1 Notice of Preparation and Public Scoping

The County published and distributed a Notice of Preparation (NOP) on December 23, 2021, which was accompanied by an Initial Study, to advise interested federal, state, regional, and local agencies and the public that a PEIR would be prepared for the Project. The County sent the NOP package to: the Governor's Office of Planning and Research, State Clearinghouse; potentially affected federal, state, and local agencies; and others included on a distribution list established for this Project. The NOP and Initial Study were also posted in the office of the County Clerk and online from December 29, 2021, through February 1, 2022. The NOP was published in the following 14 different newspapers throughout Los Angeles County on or before January 3, 2022: *Acton/Agua Dulce News, Antelope Valley News, Gardena Valley News, Glendale Independent, La Opinión, Sentinel, Malibu Times, Pasadena Star-News, San Gabriel Valley News, The Acorn, The Argonaut, The Daily Breeze, The Signal,* and *Whittier Daily.*

A public scoping meeting was held virtually via Zoom on January 13, 2022, at 5:00 p.m. to provide information to the public about the Project and the CEQA process, and to solicit input from attendees. The County provided details about the Draft 2045 CAP (including the Project objectives), as well as the CEQA process (including the timeline and schedule for environmental review, CEQA resource areas, the purpose of the scoping meeting, and opportunities for members of the public to engage in the process), and then opened the meeting to receive comments and questions. Information about the location of documents for review, contact information for the receipt of scoping input, and the deadline to provide scoping input was also provided.

The EIR scoping period lasted from January 3, 2022, through and including February 1, 2022. In addition to oral comments made at the public meeting, written input was received from 21 entities. The Recirculated Draft PEIR presents all input received during the scoping period in Appendix A, *Scoping*, and identifies all who provided input during the scoping process in Table 1-1, *Providers of Scoping Letters*, of the Recirculated Draft PEIR. All scoping input received during the scoping period was considered in the preparation of the Draft PEIR.

1.2.2 Draft PEIR Public Review

The County issued a Draft PEIR for the Draft 2045 CAP on May 25, 2022. Upon completion of the Draft PEIR, notice of the public review period was given in accordance with CEQA Guidelines section 15087. After the July 18, 2022 conclusion for the comment period for the Draft PEIR, the County elected to revise the Draft 2045 CAP in response to public and other input received, and to add a 2045 target consistent with new legislation, Assembly Bill (AB) 1279.

1.2.3 Recirculated Draft PEIR and Public Review

The Recirculated Draft PEIR was made available for agency and public review for 45 days. The comment period began on March 30, 2023, and concluded on May 15, 2023. The Recirculated Draft PEIR was provided to the State Clearinghouse for circulation to interested state agencies. Printed copies of the Recirculated Draft PEIR and electronic copies of all appendices and all documents referenced in the Recirculated Draft PEIR were available for public review during normal hours at the following County libraries:

AC Bilbrew Library
150 E El Segundo Blvd
Los Angeles, CA 90061

Acton Agua Dulce Library
33792 Crown Valley Rd
Acton, CA 93510

Charter Oak Library
20540 E Arrow Highway Suite K
Covina, CA 91724

East Los Angeles Library
4837 E 3rd St
Los Angeles, CA 90022

Hacienda Heights Library
16010 La Monde St
Hacienda Heights, CA 91745

La Crescenta Library
2809 Foothill Blvd
La Crescenta, CA 91214

Stevenson Ranch Library
25950 The Old Road
Stevenson Ranch, CA 91381

Topanga Library
122 N Topanga Canyon Blvd
Topanga, CA 90290

An electronic copy of the Recirculated Draft PEIR was available for all-hours access on the County's website: https://planning.lacounty.gov/long-range-planning/climate-action-plan/documents/. A printed copy of the Recirculated Draft PEIR was made available for public review by appointment during normal business hours at the Los Angeles County Department of Regional Planning's headquarters office located at 320 W. Temple Street, Los Angeles, CA 90012.

Notifications and updates of the availability of the Recirculated Draft PEIR and information about how to access it were sent directly to responsible, trustee, and local affected agencies and to tribal entities and members, organizations, and individuals by U.S. Post and via the Revised Draft 2045 CAP specific email listserv. Notice of the availability of the Recirculated Draft PEIR also was published in the following 14 newspapers of general circulation: *Acton/Agua Dulce News, Antelope Valley News, Gardena Valley News, Glendale Independent, La Opinión, Sentinel,*

Malibu Times, Pasadena Star-News, San Gabriel Valley News, The Acorn, The Argonaut, The Daily Breeze, The Signal, and *Whittier Daily.*

The County conducted all required noticing and scoping for the Project in accordance with CEQA Guidelines section 15083 and conducted the public review for the Recirculated Draft PEIR in compliance with CEQA Guidelines section 15087.

The County received 21 correspondences following issuance of the NOA for the Recirculated Draft PEIR. Some comment letters solely addressed the Revised Draft 2045 CAP, others solely addressed the Recirculated Draft PEIR, others addressed both documents. The Final PEIR identifies all who provided input, regardless of the subject of the letter, in Table 2 1, *Commenting Parties*, of the Final PEIR.

1.2.4 Availability of the Final PEIR and Public Review

An electronic copy of the Final PEIR (including this Response to Comments document) is being provided to all public agencies who commented on the Recirculated Draft PEIR. Notice of the availability of this Final PEIR and details about how to access it are also being provided to others on the distribution list for the Project. An electronic version will be posted on the County's website: https://planning.lacounty.gov/long-range-planning/climate-action-plan/documents/.

The Final PEIR is also available for public review during normal hours at the following locations, at least until the County decides whether to certify the PEIR and approve, approve with modifications, or deny the Project:

AC Bilbrew Library
150 E El Segundo Blvd
Los Angeles, CA 90061

Acton Agua Dulce Library
33792 Crown Valley Rd
Acton, CA 93510

Charter Oak Library
20540 E Arrow Highway Suite K
Covina, CA 91724

East Los Angeles Library
4837 E 3rd St
Los Angeles, CA 90022

Hacienda Heights Library
16010 La Monde St
Hacienda Heights, CA 91745

La Crescenta Library
2809 Foothill Blvd
La Crescenta, CA 91214

Stevenson Ranch Library
25950 The Old Road
Stevenson Ranch, CA 91381

Topanga Library
122 N Topanga Canyon Blvd
Topanga, CA 90290

Future notifications regarding scheduled Planning Commission hearings on the Project will be published and distributed in accordance with the law. For general questions and assistance, please contact Thuy Hua, AICP, Supervising Planner, by telephone at (213) 974-6461 or email at climate@planning.lacounty.gov.

1.3 Project Overview

Approval of the Revised Draft 2045 CAP would require an amendment to the *Los Angeles County General Plan 2035* (General Plan) to replace the *Unincorporated Los Angeles County Community Climate Action Plan 2020* (2020 CCAP), an implementing component of the General Plan's Air Quality Element. In early 2020, the County released a public discussion draft of the 2045 CAP (Public Discussion Draft). After receiving comments from stakeholders, the County decided to revise and update the Public Discussion Draft. The County issued the Draft 2045 CAP in April 2022 and issued a Revised Draft 2045 CAP in March 2023. The impacts of the Revised Draft 2045 CAP are analyzed in the Recirculated Draft PEIR.

1.3.1 Project Summary

The Project is the County's plan toward meeting greenhouse gas (GHG) emissions reduction targets for unincorporated Los Angeles County by the years of 2030, 2035, and 2045. It was developed with the goals of implementing the GHG emissions reduction policies of the General Plan Air Quality Element and ensuring that the County contributes its share to statewide GHG emissions reductions.

The Project includes an update to the Air Quality Element to refine goals, policies, and implementation language to set the framework for the Revised Draft 2045 CAP.

With these goals in mind, the objectives of the Revised Draft 2045 CAP are as follows:

(1) Identify detailed programs, actions, and performance goals to achieve the climate action policies of the General Plan.

(2) Identify GHG emissions reduction targets tailored to the unincorporated County that closely align with state and County climate goals.

(3) Provide a road map for reducing GHG emissions to achieve the County's GHG emissions reduction targets.

(4) Encourage sustainable housing production at all levels of affordability, including increasing housing densities near transit to the extent allowed in the General Plan.

(5) Demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide CEQA streamlining for development projects (serve as a "qualified CAP") via the Checklist.

The Revised Draft 2045 CAP would be implemented in all unincorporated areas of the County, which make up an approximately 1,696,000-acre (approximately 2,650-square-mile) area that is approximately 65 percent of the total land area of Los Angeles County. The unincorporated areas in the northern portion of Los Angeles County include Angeles National Forest, parts of Los Padres National Forest and the Mojave Desert, and the Antelope Valley. In the western portion of the county, the unincorporated areas include Marina del Rey and the Santa Monica Mountains. The unincorporated areas in the southern and eastern portions consist of noncontiguous land areas

including unincorporated areas in South Los Angeles, East Los Angeles, and the San Gabriel Valley.

The Revised Draft 2045 CAP includes the following:

- A GHG emissions inventory for 2018
- Emissions forecasts for 2030, 2035, and 2045
- GHG emissions targets for 2030, 2035, and 2045
- A suite of GHG emissions reduction strategies, measures, and actions to reduce GHG emissions from major sectors
- A technical modeling appendix to explain the Draft 2045 CAP's GHG emissions reduction estimates
- A consideration of environmental justice and equity concerns
- Implementation and monitoring measures to ensure successful climate action
- A new CEQA streamlining checklist to allow future projects to streamline GHG emissions analyses pursuant to CEQA, should they so choose.

1.3.2 Project Refinements Since Issuance of the Recirculated Draft PEIR

Since the County's issuance of the Recirculated Draft PEIR, refinements have been made to the previously published text of Chapter 2, *Project Description*, to address changes to the Revised Draft 2045 CAP and input received on the Recirculated Draft PEIR. Refinements to the Recirculated Draft PEIR include minor corrections to improve writing clarity, grammar, and consistency; clarifications, additions, or deletions resulting from specific responses to comments; and changes to update information in the Recirculated Draft PEIR. For example, refinements have been made to: i) Revised Draft 2045 CAP measures and actions to clarify that earlier references to *electrification* were intended more generally to mean *decarbonization*; ii) Appendix F of the Revised Draft 2045 CAP (CEQA Streamlining Checklist) to clarify the streamlining process; and iii) performance objectives for some measures. All refinements are shown in Chapter 3, *Revisions to the Recirculated Draft PEIR*, Section 3.2.3, of this Final PEIR.

1.3.2.1 Analysis of Project Refinements

The Project refinements identified in Chapter 3, *Revisions to the Recirculated Draft PEIR*, Section 3.2.3, would result in no new significant information. There are no new significant impacts and no substantial increase in the severity of a significant impact than was disclosed in the Recirculated Draft PEIR. The refinement changes result in no change to the conclusions reached in the Recirculated Draft PEIR. Accordingly, the proposed refinements are not considered "significant new information" requiring recirculation under CEQA Guidelines section 15088.5.

1.4 Comments on the Revised Draft 2045 Climate Action Plan

Below are general responses that address eight topics of interest in comments received solely on the Revised Draft 2045 CAP. Not every individual topic raised in comments on the Revised Draft 2045 CAP is addressed below. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, such that no response is required pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County acknowledges receipt, has reviewed all input received on the Revised Draft 2045 CAP, and has made it available as part of the record. For comments that raise significant environmental issues related to the Recirculated Draft PEIR, responses are provided within Chapter 2, Section 2.2, *General Responses*, and Section 2.3, *Individual Responses*.

1.4.1 The Revised Draft 2045 Climate Action Plan

The Revised Draft 2045 CAP is a comprehensive framework for the County to achieve GHG emissions reductions pursuant to the Board of Supervisors' directive to support the goals of the Paris Climate Agreement and local climate pursuits. The Revised Draft 2045 CAP sets new GHG emission reduction targets that are consistent with state goals pursuant to Senate Bill (SB) 32, Assembly Bill (AB) 1279, and the California Air Resource Board's 2022 Scoping Plan. It identifies strategies, measures, and actions to mitigate GHG emissions from community activities and identifies next steps for the County to take that include the development of regulatory ordinances and incentive programs.

The Revised Draft 2045 CAP includes a GHG emissions inventory, projections for future emissions, and a road map for reducing emissions from the transportation, stationary energy, waste, industrial, agricultural, and land use sectors. The Revised Draft 2045 CAP also captures GHG emission reduction estimates from actions or programs already initiated by the County in the last several years. Data provided in the Revised Draft 2045 CAP represents the most complete and accessible data available at the time the analysis was conducted. Climate action planning best practices, modeling protocols, and data sources evolve quickly, and the County would regularly assess technological advances and changes in regulations that relate to the Revised Draft 2045 CAP. The Revised Draft 2045 CAP's full datasets would be updated before preparation of the next CAP to reflect the most complete data at that time.

The Revised Draft 2045 CAP includes quantified (for GHG emission reductions) and actionable steps for discretionary development projects that voluntarily choose to streamline their GHG impact analysis under CEQA. Appendix F of the Revised Draft 2045 CAP lists those actions. The Revised Draft 2045 CAP aligns with CARB's 2022 Scoping Plan, as shown in Appendix H of the Revised Draft 2045 CAP. Several discretionary development projects are highlighted in the 2022 Scoping Plan[2] and the County anticipates that initiation of similar future projects within the County would help the County meet the Revised Draft 2045 CAP's GHG reduction targets, and

[2] California Air Resources Board. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. Appendix D, "Local Actions." November 16, 2022. Pages 25-26. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in June 2023.

achieve many voluntary actions in the Checklist for projects that choose to pursue streamlining. Discretionary projects that choose not to streamline their GHG impacts analysis must prepare a project-specific impact analysis under CEQA.

The County has considered requests for changes to the Revised Draft 2045 CAP during the public comment period. Accepted suggestions have been incorporated into the document. Some suggestions requested providing a high level of detail for certain programs; however, implementation programs require further development, as the County intends to engage stakeholders to develop specific locational criteria or other specific factors during implementation. Other suggestions included accelerating or extending timeframes for action. Largely, those suggestions were not incorporated because the County would need to conduct further study to assess the feasibility of accelerating such action. However, some of these suggestions were incorporated and the County has accelerated timeframes for certain actions (such as Action ES4.3).

The suite of actions in the Revised Draft 2045 CAP is intended to be viewed as a collective strategy to achieve the performance objectives of the Revised Draft 2045 CAP measures and to meet the Revised Draft 2045 CAP's overall GHG emission reduction targets. No singular action will achieve the GHG emission reduction targets and the aspirational goal of carbon neutrality. Appendix E of the Revised Draft 2045 CAP identifies the prioritization of actions and associated time frames for implementation. Further, implementation would take place over numerous years at an aggressive pace, as described in the Revised Draft 2045 CAP (Appendix E), The Revised Draft 2045 CAP's implementation and monitoring program includes performance indicators for each measure and select actions; these would be used to track progress toward achieving each measure's and action's performance objectives, which the County would monitor on an annual basis. The County would adjust implementing actions, timeframes for implementation, performance objectives, and tracking metrics as appropriate during preparation of the next CAP update.

Adoption of the Revised Draft 2045 CAP would allow the County to proceed forward on a clear and integrated path that demonstrates the consideration of all the GHG emissions contributing sectors—transportation, stationary energy, waste, industrial processes and product use, and agriculture, forestry, and other land uses. The Revised Draft 2045 CAP would make the County more competitive to secure state and federal dollars for local projects, such as infrastructure improvements.

1.4.2 Housing Needs

In 2022, the County adopted the 2021-2029 Housing Element to promote equitable development with a focus on sustainable housing that counters environmental injustice. It sets forth implementation programs that encourage the private sector to not only build but also improve housing to counter the historical patterns of segregation and environmental injustice impacting communities of color. The intersection of sustainability and housing development form the basis of the Housing Element's Strategy 6 (Ensure Sustainability in Housing Production). To meet state, regional, and local sustainability goals, the County must minimize wherever possible the negative impacts of housing production on the environment. The Housing Element encourages

planned housing in areas covered by a County-approved area plan or specific plan that has been analyzed by the County under CEQA and that plans for housing, affordable housing, natural resource protection, open space preservation, adequate water supplies, necessary infrastructure, wildfire protection, energy conservation, and other sustainable development features.

The Housing Element developed the Rezoning Program as one of the first steps to facilitate sustainable housing production. The Rezoning Program excludes 86 percent of the unincorporated areas containing natural, hazard, or resource constraints from County-initiated rezoning to facilitate higher density residential development. These physically hazardous areas include environmentally sensitive areas containing Western Joshua Trees and other endangered, listed, candidate species or species of concern, and/or areas lacking in basic infrastructure, particularly access to water supplies. Additional areas within unincorporated Los Angeles County designated as the Coastal Zone and national recreation areas or national forests were also excluded from the Rezoning Program. The remaining 14 percent of the unincorporated County is able to accommodate the County's state-mandated regional housing needs allocation (RHNA). The County is currently implementing the Rezoning Program through the Area Plan process and is named as Programs 7 (East San Gabriel Valley Area Plan), 8 (Metro Area Plan), 18 (South Bay Area Plan), 19 (West San Gabriel Valley Area Plan), and 20 (Westside Area Plan) in the Housing Element. The Rezoning Program will establish higher housing densities in areas that are the least constrained and possess the necessary infrastructure for increased housing. For other areas within unincorporated Los Angeles County, the County has previously planned for housing through County-approved specific plans and area plans and analyzed the potential environmental impacts of such housing under CEQA. The County continues to encourage housing in these designated areas.

A barrier to housing production is the entitlement process itself, which the County has made more efficient through ordinance amendments, organizational change, technology, and increased effectiveness in case processing. However, compliance with CEQA can result in lengthy delays to housing production and remains a significant barrier to the production of housing development. While CEQA reform is not within the purview of the County, the County has initiated and proposed several procedural modifications to the CEQA review process that streamlines the process.

One area of opportunity to streamline the CEQA process for housing production is to develop a qualified GHG reduction plan pursuant to CEQA Guidelines section 15183.5(b), which allows certain projects meeting specified conditions to rely on the County's cumulative analysis of GHG emissions impacts and mitigations rather than conduct individualized project analyses. As discussed in the Recirculated Draft PEIR, the Revised Draft 2045 CAP would meet the requirements of a qualified GHG emissions reduction plan per CEQA Guidelines section 15183.5(b)(1) (Recirculated Draft PEIR, Chapter 1, pp. 2-9 to 2-12). Housing projects electing to incorporate GHG emission reduction features identified in a CAP are ultimately considered to not have greater impacts than what has already been analyzed. As such, qualifying housing projects can save time and cost associated with conducting a comprehensive GHG analysis. Providing the option to streamline CEQA analysis through the Revised Draft 2045 CAP helps the County meet the Housing Element's goal of sustainable housing production and provides time and cost savings to housing project developers. The County's 2045 CAP is identified as the Housing Element's Program 3.

Addressing housing affordability remains one of the key strategies for facilitating housing development in the County. In combination with the other housing strategies, the Housing Element outlines a suite of housing affordability programs. The Inclusionary Housing Ordinance will require new residential projects to set aside a percentage of units for affordable housing, which may also be satisfied through new off-site construction. A Multifamily Housing Rehabilitation Study will assess the feasibility of providing loans or grants to help multifamily building owners address code violations and make repairs or upgrades, while keeping rents affordable to lower-income tenancies through affordability covenants or County rent subsidies. The Preservation Database will allow the County to pursue proactive strategies to maintain affordability in properties at risk of converting to market-rate rents and will include other County data sources to assess the loss of affordable housing stock. The Displacement Risk Study and accompanying interactive anti-displacement mapping tool offers the County a robust index to assess vulnerability of economic displacement and provides a methodology for understanding where displacement pressures threaten residential stability for vulnerable communities. The Affordable Housing Preservation Ordinance currently requires the replacement of affordable rental units that have been demolished, vacated, or converted from rental to for-sale within specified timeframes. The suite of existing and forthcoming housing affordability programs and studies will help people of all income levels to benefit from sustainable housing development and decarbonized buildings.

1.4.3 Equitable Implementation

Engagement is an important part of equitably implementing the Revised Draft 2045 CAP. One of the Climate Equity Guiding Principles is to authentically engage communities by informing stakeholders that are most impacted and using local knowledge to determine implementation and investments that benefit frontline communities. Authentic community engagement makes progress toward achieving structural and procedural equity in climate action. Although the Revised Draft 2045 CAP's Figure 1-3, *Integrating Equity into 2045 CAP Implementation*, identifies a main "Engage" stage, engagement will happen throughout the stages of planning, design, implementation, monitoring, and performance of the Revised Draft 2045 CAP strategies, measures, and actions.

County lead and partner departments identified in Appendix E of the Revised Draft 2045 CAP will carry out implementation. The Climate Equity Guiding Principles and Equity Approach described in the Revised Draft 2045 CAP structures engagement opportunities that the County would incorporate into the planning process. The first stage of identifying frontline communities and vulnerable populations will ensure that frontline communities and trusted community partners who serve as channels of communication between the County and communities are included early on in the process.

Engagement is woven throughout the different stages shown in the Revised Draft 2045 CAP's Figure 1-3. Each stage requires meeting people where they are and in formats that enable active dialogue and participation. The information gathered from engagement will help the County respond to the needs of the frontline communities by designing implementation pathways that support community needs and include necessary protections. Engagement is also incorporated

after an implementation project is completed so that all parties can collectively reflect on the process and so the County can improve in meeting community needs.

Distributional equity ensures equitable implementation of the Revised Draft 2045 CAP in frontline communities through the fair allocation of resources and benefits that reduce or remove carbon from buildings and lessen climate change burdens. The Equity Approach provides multiple ways to ensure distributional equity is considered through funding opportunities. The County recognizes that the traditional rebate funding structure may not be a viable funding mechanism for communities that are already financially burdened. A grant program that provides upfront funding for direct installation of solar panels, electric heat pump appliances, or electric vehicle (EV) chargers can alleviate financial burdens and fast track environmental benefits from implementation of the Revised Draft 2045 CAP strategies, measures, and actions.

Another facet of equitable implementation is ensuring that Revised Draft 2045 CAP measures and actions will not cause harm to renters in frontline communities through displacement or increased rent as a result of retrofitting housing units with GHG-emissions-reducing features. The 2021-2029 Housing Element includes policies to protect against residential displacement and develop tenant protections.

Appendix G of the Revised Draft 2045 CAP provides a list of potential funding sources for implementation. While this appendix provides a broad listing of funding sources currently available, programs and funding sources for climate action may change substantially from year to year. Appendix G provides information on funding search resources that can be used to research currently available programs, such as the State of California Funding Wizard and the UpLift Resource Finder, which is a searchable database of funding opportunities oriented to benefit disadvantaged communities. The County will use these two resources along with the list in Appendix G to secure funding that will benefit frontline communities.

The Revised Draft 2045 CAP recognizes that prioritizing the implementation of actions in frontline communities would provide timely benefits to communities that traditionally have fewer resources to invest in a carbon-free environment. Table 4-1, *Tracking Metrics for Monitoring Progress of 2045 Climate Action Plan Implementation*, provides a list of tracking metrics for each Revised Draft 2045 CAP strategy. The County will track these metrics to measure implementation progress in frontline communities and compare this progress with the unincorporated Los Angeles County as a whole. This information will be reported to the Board of Supervisors in the General Plan Annual Progress Report and the public-facing progress-tracking dashboard. The General Plan Annual Progress Report allows the County to analyze the data for equitable implementation and make adjustments to implementation strategies as needed.

1.4.4 Monitoring and Reporting

The County will track measure and action implementation status (e.g., initiated, ongoing, completed), to assess the effectiveness of the measures and actions in the Revised Draft 2045 CAP against the performance objectives, and make adjustments to the tracking metrics as needed. The County will monitor each Revised Draft 2045 CAP measure and action using the metrics identified in Appendix E, *Implementation Details* (see Table E-1), subject to data availability.

Tracking the performance objectives for each quantified GHG reduction measure on a periodic basis will inform the County and community over time as to how the Revised Draft 2045 CAP implementation actions are working toward achieving GHG reduction targets and will help the County reprioritize actions in future updates to the Revised Draft 2045 CAP.

The County will report on the implementation progress of each measure in the Revised Draft 2045 CAP as part of the General Plan Annual Progress Report. In the first two years of implementation, the County will identify where further efforts and additional resources may be needed. In this initial phase, the County will identify the data sources needed to report on the effectiveness of implementation. The County will also develop a dashboard as part of the reporting on implementation of the Revised Draft 2045 CAP. This dashboard will be updated on an annual basis and will provide information on the ongoing efforts of the Revised Draft 2045 CAP actions through data and spatial displays. The dashboard will also track equity-based metrics to measure progress of implementation in frontline communities compared to unincorporated Los Angeles County as a whole.

The Revised Draft 2045 CAP recognizes that prioritizing the implementation of Revised Draft 2045 CAP actions in frontline communities will provide timely benefits to communities that traditionally have fewer resources to invest in a carbon-free environment. Table 4-1, *Tracking Metrics for Monitoring Progress of 2045 Climate Action Plan Implementation*, provides a list of tracking metrics for each Revised Draft CAP strategy, which would include tracking the same metrics in frontline communities. This will provide a comparison of progress in frontline communities compared to the unincorporated County as a whole. This information will be reported to the Board of Supervisors in the General Plan Annual Progress Report and public-facing progress tracking dashboard. The General Plan Annual Progress Report will allow the County to analyze the data for equitable implementation and make adjustments as needed.

1.4.5 Transportation

The Revised Draft 2045 CAP proposes goals and actions for transportation emissions reduction, as well as improvements to public transit, bike and pedestrian infrastructure, and development of jobs and housing near high-quality transit areas (HQTAs). Data shows that transportation is responsible for the majority of GHG emissions in unincorporated Los Angeles County (Revised Draft 2045 CAP, Chapter 2, pp. 2-5). This is because land use patterns developed over time—including unincorporated Los Angeles County road and highway networks, streetscapes, and parking infrastructure—have been designed to prioritize and promote the use of cars and trucks.

These patterns have entrenched the status quo for single-occupancy vehicle use and exacerbate inequality and disinvestment in Black, Indigenous, and People of Color (BIPOC) and disadvantaged communities. Vehicle tailpipe emissions of criteria pollutants and toxic air contaminants have resulted in negative health outcomes and pollution burdens for many communities, especially those located near highways and industrial areas.[3] The lack of housing

[3] California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005. Available at http://www.aqmd.gov/docs/default-source/ceqa/handbook/california-air-resources-board-air-quality-and-land-use-handbook-a-community-health-perspective.pdf. Accessed August 2023.

and high cost of living in unincorporated Los Angeles County mean that increased costs in transportation expenses result in displacement and a regressive system where disadvantaged communities must spend increasingly more on gas and transportation to access jobs and affordable housing.

To address these issues, the Revised Draft 2045 CAP proposes strategies for decarbonizing transportation in ways that provide many co-benefits for unincorporated Los Angeles County residents, employees, and employers. Through the proposed actions, the Revised Draft 2045 CAP aims to provide investment in publicly accessible transit infrastructure, increase access and reliability to zero emission vehicles (ZEVs), and promote density and development of housing near existing transit, all while protecting and increasing affordable housing. To track these efforts, Appendix E, *Implementation Details*, provides program information that will provide the framework for implementing and tracking the County's progress to achieving the proposed actions.

The Revised Draft 2045 CAP Transportation chapter comprises three strategies and nine measures. Strategy 2, *Increase Densities and Diversity of Land Uses Near Transit*, would coordinate land use development that leads to outcomes associated with reduced vehicle miles traveled (VMT), such as increased densities near transit, improved jobs-housing balance, and strategically located land uses that can reduce travel distances for many trip purposes. To achieve increased housing production and reduced vehicle use, Measure T1 proposes increased density near HQTAs, which would increase housing opportunities that are affordable and near transit to reduce VMT. Implementing actions include T1.1, which incentivizes development of residential and community-serving HQTAs while ensuring inclusion of vital public amenities, such as parks and active transportation infrastructure. Action T1.2 would develop land use tools that will increase the production of a diversity of housing types, such as missing middle housing. Measure T2 would work to develop land use plans addressing jobs-housing balance and increase mixed-use development. Implementation measure T2.1 aims to develop community plans that will increase the percentage of residents who could live and work within the same community, which decrease VMT. Performance objectives for Measure T2 include achieving a Countywide job density of 300 jobs per acre by 2030 to align with the 2021-2029 Housing Element Rezone Areas and the County's SB 743 VMT Tool, and for communities with an imbalance of jobs/housing (±20 percent), the County will develop community plans to identify and quantify strategies for bringing that imbalance below 20 percent.

Strategy 3, *Reduce Single-Occupancy Vehicle Trips*, focuses on development of transportation networks that increase the accessibility, comfort, and convenience of active travel modes to help reduce trips made in single-occupancy vehicles. The measures and actions listed under these two strategies aim to reduce the amount of time spent and miles traveled in vehicles throughout the County. For Strategy 3, the County proposes expanding bicycle and pedestrian networks and would identify specific Countywide infrastructure upgrades that are needed to increase the safety and connectivity of active transportation corridors. These corridors should be planned to provide broad connectivity to local communities. The County acknowledges the availability of federal funding infrastructure upgrades, such as Class II bike lanes, which would support Measures T3.1, T3.2, and T3.3 to direct more supplemental planning and funding toward the city's active transportation infrastructure needs. Measure T4 aims to broaden options for transit, active

transportation, and alternative modes of transportation. This includes prioritizing improvements to infrastructure to make the use of existing systems safer and more user-friendly and increase usership and access to different transit options. Improvements to infrastructure, such as shade structures and first-mile/last-mile options, help to increase ridership and support local transit systems that prioritize electric and zero-emission technologies. Also, a major component of Strategy 3 is Measure T5, which aims to limit and remove parking minimums, reduce VMT for uses located in HQTAs, and transition land to beneficial public uses rather than parking. The County has already begun efforts to develop the Multifamily Residential Parking Ordinance in compliance with Assembly Bill 2097, which would reduce parking minimum standards in specific areas that can accommodate parking reductions.

Strategy 4, *Institutionalize Low-Carbon Transportation,* focuses on expanding the use and access to ZEVs. Measure T6 aims to Increase ZEV market share and reduce gasoline and diesel fuel sales, which will be supported by the forthcoming Zero Emission Vehicle Master Plan and CARB's Advanced Clean Cars II regulation, which will both be key to the implementation and expansion of EV ownership in the County. The County will do its part by implementing Measure T7 to electrify County-owned fleet vehicles. This strategy also aims to reduce emissions from diesel- and gasoline-powered off-road equipment, including construction, landscaping, recreational, and commercial and industrial equipment through Measure T8, accelerating freight decarbonization, and Measure T9, expanding the use of zero-emission technologies for off-road vehicles and equipment. In developing the Revised Draft 2045 CAP, the County understands that state and federal laws will direct and influence future standards for non-ZEV vehicles and sales. The Revised Draft 2045 CAP is not a regulatory document, but is rather a plan-level framework for the County to implement, and sets strategies, measures, and actions to reach emissions reductions targets, which includes ZEV market share. The County will continue to monitor state and federal regulation relating to ZEVs and will ensure that implementation of the Revised Draft 2045 CAP is consistent and in compliance with state and federal law.

1.4.6 Agriculture, Forestry, and Other Land Use

Strategy 9 addresses the Agriculture, Forestry, and Other Land Use (AFOLU) sector in the Revised Draft 2045 CAP. Strategy 9 includes an overarching goal to conserve and restore natural lands to keep carbon in the ground. It includes two quantified measures (Measures A1 and A3), which were calculated for their GHG emissions reduction potential. Measures A1 and A3 are not considered Core Measures since they are not measures with the highest reduction potential; however, they are important contributing measures to achieve carbon neutrality. Measure A1 is a focused, subsector program to preserve, conserve, and restore agricultural lands, working lands, woodlands, rangelands, forest lands, wetlands, and other wildlands in unincorporated Los Angeles County. The performance objective for Measure A1 is a way to track the progress of Measure A1. Ordinances such as the Significant Ecological Areas Ordinance provide the mechanism to set development standards that would require development projects to preserve a certain amount of the natural land. Action A1.1 directs the County to develop an open space conservation and land acquisition strategy that proactively conserves native habitats for carbon sequestration.

Measure A3 captures the County's current process to develop an Urban Forest Management Plan (UFMP) to plant trees, increase unincorporated Los Angeles County's tree canopy cover, add green space, and convert impervious surfaces. The three actions under Measure A3 identify specific plan, programs, and tools to implement the measure. The County would implement these actions in a coordinated manner, along with other actions listed in the Revised Draft 2045 CAP to maximize the GHG emissions reductions.

Action A3.1 requires the creation and implementation of an UFMP that prioritizes: (1) tree- and parks-poor communities; (2) climate- and watershed-appropriate and drought/pest-resistant vegetation; (3) appropriate watering, maintenance, and disposal practices; (4) provision of shade; and (5) biodiversity. The County is currently developing the UFMP and has conducted public engagement with stakeholders and communities to cover topics such as environmental justice, public health, and active transportation. The County has reached out to tribal governments within Los Angeles County to solicit subject matter expertise on indigenous land management practices and cultural connections to the urban forest.

Action A3.2 is an expansion of the County's Parkway Tree Planting Program in the public right-of-way within unincorporated Los Angeles County. The Department of Public Health is currently developing Community Pedestrian Plans that provide a list of proposed pedestrian projects and cost estimates. Such proposed pedestrian projects include planting street trees.

Action A3.3 requires the County to develop an ordinance requiring that all removed native trees be replaced by an equal or greater number of new trees. Discretionary projects are currently subject to tree replacement requirements when native trees are removed. A future ordinance can expand such requirement to ensure there is not a net decrease in trees that contribute to carbon sequestration.

1.4.7 Notice and Public Review

The County sent the Notice of Availability (NOA) for the Recirculated Draft PEIR via USPS mail to California state agencies, incorporated city governments, and members of the public who requested written notices. It was also emailed to the Project email list to inform those who requested Project updates. The NOA was published in 14 newspapers of general circulation within the County. The NOA was also uploaded to the Project website along with Revised Draft 2045 CAP and Recirculated Draft PEIR documents. Since changes to the Recirculated Draft PEIR were predicated on changes to the Revised Draft 2045 CAP, the Revised Draft 2045 CAP was released prior to the Recirculated Draft PEIR on March 16, 2023, to offer additional review time to read the changes driving the analysis in the Recirculated Draft PEIR. The comment period for the Recirculated Draft PEIR began on March 30, 2023, and ended on May 15, 2023, which met the legal CEQA noticing and comment period requirement of 45 days, and was not extended.

Emails were sent to the Project email list to announce the start of the public review period for both the Revised Draft 2045 CAP and Recirculated Draft PEIR. During those 45 days, the County hosted seven open meeting hours advertised as lunchtime office hours, posted the Revised Draft 2045 CAP on the Project website, distributed via email an informational video on the Project, and held meetings with responsive stakeholder groups to facilitate review and discussion.

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CHAPTER 2
Recirculated Draft PEIR Comments and Responses to Comments

2.1 Comments Received

Under CEQA, the lead agency "shall evaluate comments on environmental issues" received from commenters who have reviewed a draft environmental impact report (EIR), and prepare written responses that "describe the disposition of each significant environmental issue that is raised by commenters." (Public Resources Code, § 21091(d); CEQA Guidelines, § 15088). Responses to comments on the Recirculated Draft Program EIR (PEIR) comply with the CEQA Guidelines such that the level of detail in responses correspond to the level of detail provided in the comment. (CEQA Guidelines, § 15088(c).)

The County received twenty-one (21) correspondences in response to the Recirculated Draft PEIR Notice of Availability. Some comment letters solely address the Revised Draft 2045 CAP or topics unrelated to the Recirculated Draft PEIR and as such, are not addressed in this Chapter 2. Table 2-1, *Commenting Parties*, provides a comprehensive list of all commenting parties and further identifies correspondence containing comments on significant environmental issues that are addressed in this Chapter 2. All written correspondences timely received and fairly presented are included in the County's administrative record for this Project and will be considered as part of the decision-making process.

Some comments are similar to others. Rather than repeat a response for numerous similar comments, the County provides a collective, or "general" response to similarly-themed comments in Section 2.2, *General Responses*. Responses to individual comments are provided in Section 2.3, *Individual Responses*. These responses are available in the following subsections:

Section 2.3.1, Responses to Comments from Agencies and Tribes

Section 2.3.2, Responses to Comments from Organizations

Section 2.3.3, Responses to Comments from Individuals

TABLE 2-1
COMMENTING PARTIES

Comment Letter Number	Name	Date(s)	Response to Comment
Agencies and Tribes			
A1	California Air Resources Board	5/15/2023	Responses are provided in Section 2.3.1, Responses to Comments from Agencies and Tribes.
A2	San Manuel	4/26/2023	Responses are provided in Section 2.3.1, Responses to Comments from Agencies and Tribes.
A3	Los Angeles County Sanitation Districts	5/15/2023	Responses are provided in Section 2.3.1, Responses to Comments from Agencies and Tribes.
Organizations			
O1	Abundant Housing LA	5/15/2023	This comment on the Revised Draft 2045 CAP does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses general comments received on the Revised Draft 2045 CAP.
O2	Acton Town Council	5/15/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations.
O3	Altadena Town Council	5/15/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations.
O4	Altadena Wild	5/15/2023	This comment on the Revised Draft 2045 CAP does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses general comments received on the Revised Draft 2045 CAP.
O5a O5b	BizFed	5/9/2023 5/15/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations.
O6	Building Industry Association	5/15/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations.
O7	Center for Biological Diversity	5/15/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations.
O8	Communities for a Better Environment	5/16/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations.

TABLE 2-1 (CONTINUED)
COMMENTING PARTIES

Comment Letter Number	Name	Date(s)	Response to Comment
O9	Endangered Habitats League	4/11/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations.
O10	FivePoint Newhall Land and Farming Company	5/15/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations.
O11 (*intentionally omitted*)	---	---	---
O12	League of Women Voters	3/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations.
O13	Santa Clarita Organization for Planning and the Environment	5/15/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations.
O14	Southwest Mountain States Regional Council of Carpenters	5/12/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations.
O15	Tejon Ranch Company	5/15/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations.
O16	The Greenlining Institute	5/15/2023	This comment on the Revised Draft 2045 CAP does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses general comments received on the Revised Draft 2045 CAP.
Individuals			
I1	Chelsea Katan	4/10/2023	Responses are provided in Section 2.3.3 Responses to Comments from Individuals.
I2	Emmanuel Alcantar	5/11/2023	Responses are provided in Section 2.3.3 Responses to Comments from Individuals.

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2.2 General Responses

Because several of the comment letters raised similar issues on the Recirculated Draft Program Environmental Impact Report (Recirculated Draft PEIR), a set of consolidated responses are set forth below to comprehensively address common topics.

2.2.1 General Response 1: CEQA Alternatives

This General Response 1 clarifies questions raised about the alternatives evaluated in the Recirculated Draft PEIR. Singular, more focused questions are addressed by Individual Responses in Section 2.3 of this document.

As explained in the Recirculated Draft PEIR, Chapter 4, *Alternatives* (at p. 4-1), CEQA requires a lead agency to analyze a reasonable range of potentially feasible alternatives to a proposed project that could feasibly attain most of the basic objectives of the project while substantially reducing or eliminating significant environmental impacts. (CEQA Guidelines, § 15126.6.) CEQA also requires an EIR to evaluate a "no project" alternative to allow decision-makers to compare impacts of approving a project with the impacts of not approving it. (CEQA Guidelines, § 15126.6(e).) An EIR's discussion of alternatives is ordinarily sufficient if a reasonable range of options is presented. (See *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 234 Cal.App.4th 214.) The Recirculated Draft PEIR for the Revised Draft 2045 CAP meets these requirements.

EIRs must discuss a reasonable range of alternatives to the project as a whole and are not required to consider alternatives to particular components of a project. (*California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957.) Also, CEQA does not require EIRs to consider in detail multiple variations of the alternatives. (*Village Laguna of Laguna Beach v. Board of Supervisors* (1982) 134 Cal.App.3d 1022 [an EIR should 'not become vulnerable because it fails to consider in detail each and every conceivable variation of the alternatives stated.'.)

Screening Criteria

For this proposed Project, the County screened multiple alternatives and thereafter selected alternatives to be discussed in the PEIR consistent with CEQA Guidelines Section 15126.6. See Recirculated Draft PEIR Section 4.2, *Alternatives Development and Screening* (p. 4-1 et seq.). The four factors listed below were considered in screening potential alternatives (Recirculated Draft PEIR Section 4.2, p. 4-2).

1. Whether the alternative would meet most of the basic Project objectives. Recirculated Draft PEIR Section 2.3.2 (p. 2-9) lists the five project objectives of the Revised Draft 2045 CAP as follows: i) Identify detailed programs, actions, and performance goals to achieve the climate action policies of the *Los Angeles County General Plan 2035* (General Plan); ii) identify GHG emissions reduction targets tailored to the unincorporated County that closely align with state and County climate goals; iii) provide a road map for reducing GHG emissions to achieve the County's GHG emissions reduction targets; iv) encourage sustainable housing production at all levels of affordability, including increasing housing densities near transit to the extent allowed in the General Plan; and v) serve as a qualified CAP via the Revised Draft

2045 CAP CEQA Streamlining Checklist (Checklist). A fundamental purpose of an EIR's discussion of alternatives is to suggest different ways that project objectives could be achieved at less environmental cost. The project purpose is the "touchstone" for the selection of alternatives. (CEQA Guidelines Section 15124(b).) Recirculated Draft PEIR Section 2.3.1 (p. 2-8 et seq.) explains that the purpose of the Revised Draft 2045 CAP is to further the vision and goals of the OurCounty Sustainability Plan and implement the GHG emissions reduction strategies of the General Plan's Air Quality Element to effectively meet GHG emissions reduction targets for 2030, 2035, and 2045 that are consistent with the state's targets and legislative actions.

2. Whether the alternative would be potentially feasible, where "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

3. Whether the alternative would be able to avoid or substantially lessen any of the potentially significant impacts of the Project.

4. Whether implementation of the alternative is remote or speculative. For this analysis, "remote" means unlikely or having only a slight chance of occurring, and "speculative" means unsupported, theoretical, or based on conjecture or guesswork.

5. Demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide California Environmental Quality Act (CEQA) streamlining for development projects (serve as a "qualified CAP") via the 2045 Climate Action Plan CEQA Streamlining Checklist (2045 CAP Checklist).

If a potential alternative did not meet one or more of the screening criteria, then it failed screening and was not carried forward for more detailed review in the PEIR.

Alternatives Not Carried Forward for Detailed Analysis in the PEIR

The Recirculated Draft PEIR initially considered eleven (11) potential alternatives and carried forward three (3) plus the CEQA-required No Project Alternative for more detailed evaluation. The seven alternatives that initially were considered but ultimately not carried forward for more detailed evaluation are described in Section 4.3, *Alternatives Rejected from Detailed Consideration* (p. 4-3 et seq.). They are: a Carbon Neutrality Target by 2045 Alternative (Section 4.3.1, p. 4-3 et seq.); a More Aggressive Timeline to Carbon Neutrality Alternative (Section 4.3.2, p. 4-4); a Minimize Loss of Carbon Sequestration Caused by Development Alternative (Section 4.3.3, p. 4-5); a Substantially Reduced Vehicle Miles Traveled Alternative (Section 4.3.4, p. 4-5 et seq.); an Aquatic Impact Avoidance Alternative that was developed and considered in response to input received during the scoping period (Section 4.3.5, p. 4-7 et seq.); a Complete Phase-Out of Oil and Gas Operations by 2030 Alternative (Section 4.3.6, p. 4-9 et seq.); and a Limited-Scope CAP Alternative (Section 4.3.7, p. 4-10 et seq.). Section 4.3 explains the rationale for the decision not to carry each of these seven alternatives forward for more detailed review.

Alternatives Analyzed in Detail in the Recirculated Draft PEIR

Three alternatives passed the screening criteria and, together with the CEQA-required No Project Alternative, were carried forward into the Recirculated Draft PEIR for evaluation. The three are described in Section 4.4 (p. 4-11 et seq.). They are: Alternative 1: Carbon Offset Alternative (Section 4.4.2, p. 4-13 et seq.); Alternative 2: Zero Net Energy Buildings Alternative (Section 4.4.3, p. 4-14 et seq.); and Alternative 3: Lower Targets Alternative (Section 4.4.4, p. 4-16 et seq.). The No Project Alternative is described in Section 4.4.1 (p. 4-11).

Recirculated Draft PEIR Section 4.5 provides a comparative impact analysis of Alternatives 1 through 3 and the No Project Alternative on a resource-by-resource basis in Table 4-6, *Summary of Impacts of the Project and Alternatives* (p. 4-23 et seq.). Table 4-6 summarizes the significant environmental impacts of the Project and each Project alternative and provides a fact-based comparison of the alternatives' impacts with the Project's impacts on a criterion-by-criterion basis. Table 4-6 analyzes each impact and provides an overall conclusion for each resource area, stating whether each Project alternative results in impacts less than, the same as, or similar to but less than/greater than the Project's impacts. Where a program-level alternative could result in a significant impact, the Recirculated Draft PEIR identifies one or more mitigation measures to avoid or reduce the severity of the impact. See, for example, Table 4-6 regarding aesthetics (p. 4-23 et seq.), identifying that implementation of Mitigation Measure 3.2 would reduce Impact 3.2-10 to less than significant for Alternatives 1 through 3.

The range of alternatives evaluated in the Recirculated Draft PEIR includes a breadth of policy outcomes, from achieving carbon neutrality faster than 2045 and taking no County-directed action to reduce GHG emissions in the unincorporated areas at all, and explores other approaches to achieve most of the basic Project objectives other than the approach identified by the Project as proposed in the Recirculated Draft PEIR. Recirculated Draft PEIR Section 4.6 (p. 4-20 et seq.) identifies both the No Project Alternative and Alternative 3 as the Environmentally Superior Alternatives.

Alternatives Suggested in Comments on the Recirculated Draft PEIR

Commenters suggested that the Recirculated Draft PEIR should have evaluated the following additional alternatives:

- Alternative for the development of small-scale renewable resource generation (O2-8)
- Alternative for battery storage resources to be distributed throughout urban load pockets to supply local energy needs and for expanding and streamlining battery storage (O2-8, O2-11, O2-24, O2-25, O2-26, O2-28)
- Alternative to replace roadways with cool or green surfaces (O2-42)
- Alternative for distributed energy resources (O7-50)

CEQA does not require an EIR to consider alternatives to a component of a project, but rather recommends that alternatives focus on alternatives to the project as whole. (*California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957 [an EIR is required to describe

alternatives to the proposed project as a whole, not to the various facets thereof].) Measure ES3, *Increase Renewable Energy Production* (Recirculated Draft PEIR Section 2.6.2.1, p. 2-22 et seq.), which includes Action ES3.6, and Measure ES4, *Increase Energy Resilience* (p. 2-23), are components of the Project rather than the entirety of the Project. Accordingly, the Recirculated Draft PEIR need not evaluate alternatives to specific measures and implementing actions for the Revised Draft 2045 CAP's renewable energy policies and to achieve its renewable energy targets. For example, the Recirculated Draft PEIR need not have analyzed alternative strategies for expanding and streamlining battery storage, a specific implementing action, in unincorporated areas of the County.

The County agrees that small-scale renewable energy generation and distributed battery storage resources can support community self-sufficiency in terms of meeting electricity needs without relying on the regional electrical grid. However, given the unique mixes of loads, generation sources, and existing infrastructure, no single distributed energy resource solution alone would be (as described in Comment O2-8) "intrinsically resilient and demonstrably reliable." See, for example, a publication by the Institute of Electrical and Electronics Engineers (IEEE) 2017[1] ("Balance between generation and loads [in a microgrid operating independently from the grid] also has to be continuously maintained throughout the operation of the islanded microgrid. Changing loads, especially large block loading, can have a more dramatic effect on overall stability on the islanded system than when grid connected."). See also reports suggesting that electrical interconnection, not isolation, is the "way to improve the reliability and resilience of critical infrastructure."[2] Despite potential resiliency and reliability challenges of sole-reliance on small-scale renewable energy generation and distributed battery storage resources, the County believes that such resources are an appropriate part of a larger energy solution and encourages microgrid deployment (particularly to support the critical needs of vulnerable communities impacted by grid outages) through programs such as the CPUC's Microgrid Incentive Program, which provides funding for community, local and tribal government-driven, reliability and resilience microgrid projects.[3]

Comments suggested that distributed generation and storage facilities cause fewer environmental impacts than utility-scale systems, for example because they avoid development of open desert landscapes (Comment O2-8). However, distributed generation and storage are not without adverse environmental impacts, which are discussed in Recirculated Draft PEIR Section 3.1.3.6 and quantitatively analyzed throughout Chapter 3, *Environmental Impacts and Mitigation Measures* (p. 3.1-1 et seq.). For example, distributed energy systems take up space located closer

1 IEEE, 2017. Challenges of Microgrid Deployment. February 2017. Available online: https://smartgrid.ieee.org/bulletins/february-2017/challenges-of-microgrid-deployment#:~:text=Balance%20between%20generation%20and%20loads,system%20than%20when%20grid%20connected. Accessed August 22, 2023.

2 The Conversation, 2021. Texas electricity grid failure shows how microgrids offer hope for a better future. February 23, 2021. Available: https://theconversation.com/texas-electricity-grid-failure-shows-how-microgrids-offer-hope-for-a-better-future-155708. Accessed August 22, 2023. (Quoting the Canadian Electricity Association in contrast to the State of Texas's election to remain electrically isolated in the time leading up to the February 2021 grid failure that resulted in widespread power outages and dozens of deaths: "Every Canadian province along the U.S. border is electrically interconnected with a neighbouring U.S. state or states, with many provinces boasting multiple international connections. The result of the integrated Canada-U.S. electric grid is a flexible, reliable and secure grid on both sides of the border.").

3 California Public Utilities Commission (CPUC), 2021. Resiliency and Microgrids.

to the end-user and, as a result, could cause adverse land use or aesthetic impacts.[4] Incidents or accidents during normal operation of a distributed energy system, potentially resulting in a hazardous materials spill or fire, also could cause a significant hazard to the public or the environment due to the proximity of the system to the end user. For example, a 2-megawatt battery storage facility near Phoenix, Arizona, exploded and caught fire in April 2019, injuring nine first responders and highlighting the risks of deploying neighborhood-scale battery storage systems due to flammability and explosive characteristics.[5] As one media outlet observed, "The explosion revealed that lithium-ion batteries can be dangerous, even in the hands of experienced professionals."[6] While opinions may differ about the proper balance of resource impacts (for example, whether to prioritize renewable energy capacity over open landscape views or whether to remove fire risks farther from homes and businesses), science and experience show that any decision to prioritize one type of development to the exclusion of the other would result in environmental trade-offs.

Regarding the replacement of roadways with cool or green surfaces, the County notes that Alternative 1: Carbon Offset Alternative would allow for green pavement projects. According to the US EPA, cool pavements include "a range of established and emerging technologies that communities are exploring as part of their heat island reduction efforts." For details about heat islands, see Individual Response to Comment O2-17.

Further, each of the four suggested alternatives was not analyzed in detail based on infeasibility. Each of the suggested alternatives is inconsistent with agency goals and policies, and therefore is impractical or undesirable from a policy standpoint. The development of small-scale renewable resource generation, distributed energy resources, distributed battery storage resources, and the replacement of roadways with cool or green surfaces, each as an alternative to the Project, would unduly limit the County's ability to realize the long-term GHG emission reduction benefits associated with implementation of the Revised Draft 2045 CAP; none of these suggested alternatives would provide a clear pathway for the County to meet and exceed the statewide 2030 GHG reduction goal identified in SB 32 or meet the 2045 carbon neutrality goal established by AB 1279. Each of these suggested alternatives also is infeasible because it would fail to meet most of the basic Project Objectives: as stand-alone alternatives, the development of neither small-scale renewable resource generation, distributed energy resources, distributed battery storage resources, or the replacement of roadways with cool or green surfaces, would identify detailed programs, actions, and performance goals to achieve the climate action policies of the General Plan (Project Objective 1); identify GHG emissions reduction targets tailored to the unincorporated County that closely align with state and County climate goals (Project Objective 2); provide a road map for reducing GHG emissions to achieve the County's GHG emissions

4 U.S. EPA, 2023a. Distributed Generation of Electricity and its Environmental Impacts. Updated May 15, 2023 Available: https://www.epa.gov/energy/distributed-generation-electricity-and-its-environmental-impacts. Accessed August 24, 2023.

5 AZ Central, 2020. Cause of APS battery explosion that injured 9 first responders detailed in new report. July 27, 2020. Available: https://www.azcentral.com/story/money/business/energy/2020/07/27/aps-battery-explosion-surprise-new-report-findings/5523361002/. Accessed August 24, 2023.

6 Greentech Media, 2020. APS Details Cause of Battery Fire and Explosion, Proposes Safety Fixes. July 27, 2020. Available: https://www.greentechmedia.com/articles/read/aps-battery-fire-explosion-safety-lithium-mcmicken-fluence. Accessed August 24, 2023.

reduction targets (Project Objective 3); encourage sustainable housing production at all levels of affordability, including increasing housing densities near transit to the extent allowed in the General Plan (Project Objective 4); or demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide CEQA streamlining for development projects (serve as a "qualified CAP") via the 2045 CAP Checklist (Project Objective 5).

2.2.2 General Response 2: Relationship between the Revised Draft 2045 CAP and the General Plan

The County received public comments questioning the Revised Draft 2045 CAP's relationship to the General Plan and how the Revised Draft 2045 CAP will be used by project applicants. Multiple comments request the Revised Draft 2045 CAP not be incorporated into the General Plan, state there is no obligation to approve an aspirational policy CAP or adopt one into the General Plan, and suggest that the Revised Draft 2045 CAP should be solely aspirational in nature. This General Response 2 clarifies questions raised about the relationship between the Revised Draft 2045 CAP and the County's General Plan. Discussion of the requirements of the Checklist and how the Checklist relates to both the Revised Draft 2045 CAP and the County's General Plan is included in General Response 3. Singular, more focused comments are addressed by Individual Responses in Section 2.3 of this document.

The General Plan provides the policy framework and long-range vision for growth in the unincorporated County. It establishes goals, policies, and programs to foster healthy, livable, and sustainable communities, and provides a guide for future land use, housing, and economic development. The Revised Draft 2045 CAP is a policy document that would support development allowed under the General Plan. No changes to General Plan land use designations, zoning, or land use–specific projects are proposed as part of the Revised Draft 2045 CAP.

The Revised Draft 2045 CAP is not a regulatory document but is rather a plan-level framework for the County to implement, and instead sets strategies, goals, and actions to reach emissions reductions targets, which includes zero emissions vehicles market share. (Recirculated Draft PEIR, p. 2-8.)

The Revised Draft 2045 CAP, once finalized and approved, would require an amendment to the General Plan to replace the existing implementation strategy of the Air Quality Element, known as the *Unincorporated Los Angeles County Community Climate Action Plan 2020* (2020 CCAP). In addition to the Revised Draft 2045 CAP, the proposed project evaluated in the Recirculated Draft PEIR includes proposed revisions to the General Plan's Air Quality Element, which would also require a General Plan amendment. The revisions to the General Plan's Air Quality Element are set forth in Table 2-1, Proposed Updates to the Los Angeles County 2035 General Plan Air Quality Element, and Table 2-2, Proposed Updates to the Los Angeles County 2035 General Plan Implementation Program Updates, in Chapter 2, *Project Description*. The Revised Draft 2045 CAP is consistent with these revisions and helps implement them.

The Revised Draft 2045 CAP builds on previous climate action work from the 2020 CCAP, adopted in October 2015 as a subcomponent of the Air Quality Element of the General Plan, and includes new emissions reduction targets aligned with Assembly Bill (AB) 1279 and the 2022 Scoping Plan.

The Revised Draft 2045 CAP lays out the reduction strategies, measures, and actions for County implementation within Chapter 3. The Revised Draft 2045 CAP provides definitions for *strategies* (overall sector-level goals of the Revised Draft 2045 CAP that aim for overarching goals within each emissions sector), *measures* (focused, sub-sector-specific programs and goals that include performance standards that are designed to be quantified for GHG emission reductions), and *actions* (specific policies, programs, or tools that shall be implemented to support long-range planning). (Revised Draft 2045 CAP, p. 1-2.) The Recirculated Draft PEIR is intended to provide CEQA compliance for the County measures and actions as described in the Revised Draft 2045 CAP.

The Revised Draft 2045 CAP also includes a voluntary consistency checklist for applicants who choose to streamline CEQA GHG analyses for their projects. (This checklist was proposed to be mandatory for all discretionary projects in the Revised Draft 2045 CAP but in response to public comments, it has been made voluntary in the proposed Final 2045 CAP.)

Comments, such as O5b-39, have stated that there is no state requirement that the County adopt the Revised Draft 2045 CAP as a part of its General Plan. However, the Revised Draft 2045 CAP is an implementation program of the Air Quality Element of the General Plan. In California, local governments regulate many activities that contribute to GHG emissions and air pollutants, including land use and transportation planning, zoning and urban growth decisions, implementation of building codes and other standards, and control of municipal operations. Local governments have typically addressed climate change either in policies in their general plans or through adoption of a CAP.

Comments, such as O15-11, have questioned whether the Revised Draft 2045 CAP can be amended without undergoing further CEQA review. Future amendments to the Revised Draft 2045 CAP would represent a change to the County's General Plan implementation program and would be a discretionary action subject to CEQA compliance.

Additionally, comments have raised concerns regarding third parties initiating lawsuits against the County and future project applicants for failing to comply with the General Plan and litigation challenging infrastructure, housing, job creation, and other projects (such as comments O6-15, O6-24, and O15-4). Comments point to examples of cities that have included CAPs in their general plans that have led to litigation. While potential litigation challenging future projects is always a possibility, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. Any project approval is subject to legal challenge and there is no evidence presented by the commenters suggesting that it is more likely that future projects implementing the Revised Draft 2045 CAP would be challenged. These comments raising potential legal challenges do not raise significant environmental issues related to the Recirculated

Draft PEIR and no further response is required on this issue pursuant to CEQA Guidelines Section 15088(a).

The Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan. As such, consistency with the General Plan would be determined by comparing a future project to the Air Quality Element goals and policies rather than with the detailed implementation programs identified in the Revised Draft 2045 CAP.

Several comments, such as O2-31 and O6-15, claim that once the Revised Draft 2045 CAP is adopted by the County, all Revised Draft 2045 CAP goals will become "binding" for all future County land use and development decisions. There is a critical difference between Revised Draft 2045 CAP performance goals (as identified in the Revised Draft 2045 CAP strategies, measures, and actions) and the requirements in the Checklist in order for new projects to use CEQA GHG analysis streamlining. The Recirculated Draft PEIR is intended to provide CEQA compliance for the County's measures and actions as described in the Revised Draft 2045 CAP. As such, the performance goals in the Revised Draft 2045 CAP are *Countywide goals*, not requirements or mandates for individual projects; all project-level requirements in order for projects to use CEQA streamlining are identified in the Checklist itself. For a discussion of what is required of discretionary projects for CEQA streamlining, please refer to General Response 3 below.

In a related vein, other comments (such as O6-15, O15-5, and O15-39), state that any future project that is not consistent with every single relevant Revised Draft 2045 CAP measure would be inconsistent with the General Plan and therefore have a significant and unavoidable impact on land use and GHG emissions pursuant to CEQA, triggering the need for an EIR. Firstly, as explained in General Response 3 below, demonstrating compliance with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis. The Checklist is clear about what is required of projects that choose to streamline their CEQA GHG impact analysis. (See Appendix F, p. F-8 et seq., CEQA Streamlining Checklist Instructions.) As mentioned above, General Plan consistency will be determined by whether a project is consistent with the Air Quality Element goals and policies, not with the Revised Draft 2045 CAP measures that help implement these policies.

A few comments such as O9-9 and O9-10 express concerns about how future proposed General Plan amendments would use the Checklist as well as concerns about why the Revised Draft 2045 CAP includes Measure ES5.3 (Evaluate a program for reducing GHG emissions for new developments that require General Plan amendments). The Revised Draft 2045 CAP has been revised to remove Measure ES5.3 (Revised Draft 2045 CAP, p. 3-25.) All new development projects requiring a General Plan amendment must prepare project-specific GHG impact analyses as required by CEQA. Please see General Response 3 below for additional discussion.

For additional discussion of the Revised Draft 2045 CAP CEQA Streamlining Checklist and what is required of discretionary projects electing to streamline their GHG impacts evaluation pursuant to CEQA, please refer to General Response 3 below.

2.2.3 General Response 3: Revised Draft 2045 CAP CEQA Streamlining Checklist

The County has received multiple comments questioning how the Revised Draft 2045 CAP and the Checklist apply to development projects. Comments have alleged that if a project cannot demonstrate consistency with the Revised Draft 2045 CAP, then the project applicant must prepare a full GHG analysis, even if the project would otherwise qualify for CEQA streamlining or an addendum. Comments have questioned whether project applicants must use the Checklist if they are not streamlining their project GHG analysis under the Revised Draft 2045 CAP.

Several comments allege various issues with the content and requirements set forth in Appendix F of the Revised Draft 2045 CAP, formally called the "2045 Climate Action Plan Consistency Review Checklist" and renamed the "2045 Climate Action Plan CEQA Streamlining Checklist" in the Recirculated Draft PEIR (hereafter referred to as the "Checklist"). These comments fall within four primary categories and are responded to in the four subsections below:

1. Comments (such as O6-21) that confuse *consistency with* the Revised Draft 2045 CAP with *CEQA streamlining* of project-level GHG analysis based on the Revised Draft 2045 CAP Recirculated Draft PEIR. Some comments state that any project that fails to comply with all Revised Draft 2045 CAP strategies, measures, and actions would be inconsistent with the Revised Draft 2045 CAP and have a significant adverse GHG impact (such as O5b-16). (See subsection 2.2.3.1.)

2. Comments that claim that the Checklist's requirements are overly burdensome and prescriptive for new development projects attempting to streamline their GHG impacts analysis under CEQA (by using the Checklist). For example, some comments, such as O5a-3, claim that all projects must meet a job density value of 300 jobs per acre, and that this requirement is untenable. Other comments, such as O6-32, claim that Checklist requirements would violate constitutional provisions. Some comments (such as O15-8) suggest that the Checklist will be used to stop development via litigation. (See subsection 2.2.3.2.)

3. Comments that claim that many Checklist requirements represent deferral of mitigation, pointing to several requirements that rely on future plans and ordinances. Such comments also express concern that the Revised Draft 2045 CAP and Checklist do not evaluate the feasibility (cost, technological, and otherwise) of the Revised Draft 2045 CAP measures and requirements for new projects (such as Comments O6-12 and O15-60). (See subsection 2.2.3.3.)

4. Comments such as O6-14 and O15-55 express concern that the Checklist does not quantify GHG emission reductions for each CAP measure and action included in the Checklist, or for each CEQA streamlining requirement in the Checklist, and therefore that project applicants do not have adequate basis or guidance for demonstrating GHG reduction equivalency for Alternative Project Emissions Reduction Measures. (See subsection 2.2.3.4.)

This General Response 3 clarifies questions raised multiple times with respect to the requirements of the Checklist and how the Checklist relates to both the Revised Draft 2045 CAP and the County's General Plan. More discussion of the relationship between the Revised Draft 2045 CAP and the County's General Plan is included in General Response 2. Singular, more focused questions are addressed by Individual Responses in Section 2.3 of this document.

In some cases, adjustments to the language of the Recirculated Draft PEIR and the Revised Draft 2045 CAP, including the CEQA Streamlining Checklist, are included to clarify and amplify the Recirculated Draft PEIR and Revised Draft 2045 CAP in response to comments received on the Recirculated Draft PEIR. These adjustments do not change the conclusions of the Recirculated Draft PEIR regarding environmental impact analyses or mitigation measures and do not include or require any new mitigation measures; thus, the revisions do not constitute significant new information that would trigger recirculation of the Recirculated Draft PEIR under CEQA Guidelines section 15088.5. Rather, the revisions serve to clarify and amplify the content of the Recirculated Draft PEIR.

Purpose of the Checklist as a CEQA Streamlining Tool

The CEQA Guidelines recognize the important role of climate action plans in the CEQA process (CEQA Guidelines, § 15183.5), which sets forth a basic framework for developing a plan to reduce GHG emissions. (CEQA Guidelines, § 15183.5(b).) Pursuant to CEQA Guidelines sections 15064(h)(3) and 15130(d), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan or mitigation program under specified circumstances. (CEQA Guidelines, § 15183.5(b).) When a project is consistent with the Revised Draft 2045 CAP, the County may presume that the project's GHG emissions are less than significant. If there is substantial evidence that the effects of a particular project may be cumulatively considerable notwithstanding the project's compliance with the specified requirements in the Revised Draft 2045 CAP, an EIR must be prepared for the project. (CEQA Guidelines, § 15183.5(b)(2).)

The County has developed the Checklist, Appendix F, as a subcomponent of the Revised Draft 2045 CAP implementation program. For applicants choosing to streamline project-specific GHG CEQA analysis, the Checklist would be used to determine the consistency of future projects with the Revised Draft 2045 CAP. The Checklist provides individual projects with the opportunity to demonstrate that they are reducing GHG emissions. If a project would be consistent with the General Plan and can demonstrate consistency with the Revised Draft 2045 CAP by completing the Checklist, the project would be considered consistent with the Revised Draft 2045 CAP and eligible for CEQA streamlining of its project-level GHG analysis. (Recirculated Draft PEIR, p. 2-40.)

In response to comments received, the County has revised Appendix F to provide that the Checklist will be used *only* for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b)(2). This voluntary use includes future project approvals for previously planned projects.

Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis. As such, the County has renamed the "2045 Climate Action Plan Consistency Review Checklist" to "2045 Climate Action Plan CEQA Streamlining Checklist" to provide further clarity on the role of the Checklist as a tool exclusively for projects intending to streamline from the Revised Draft 2045 CAP Recirculated Draft PEIR.

In response to comments, the County is now proposing that the Checklist *not* be used as a tool for evaluating a project's consistency with the County's General Plan. Projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist. Such projects would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist.

To document the proposed change in use of the Checklist and provide further clarity regarding the role of Checklist, the County has revised sections of the Revised Draft 2045 CAP and Recirculated Draft PEIR in the following ways, as shown in the examples below (these examples do not include all text changes to the Revised Draft 2045 CAP and Recirculated Draft PEIR):

> "*The project review checklist will be used ~~in one two ways: 1)~~ for projects consistent with the 2045 CAP, to demonstrate CAP consistency that allows for streamlined project-specific CEQA GHG analysis~~, or 2) for projects required or electing to prepare project-specific CEQA GHG analyses, to demonstrate that all feasible applicable checklist measures or alternative project emission reduction measures have nevertheless been implemented, either as project features or GHG mitigation measures. Projects that do not implement all feasible applicable checklist measures or alternative project emission reduction measures may have significant GHG impacts because they could conflict with an applicable GHG reduction plan per Guidelines Appendix G Section VII. They may also be inconsistent with the General Plan because the CAP is a component of the Air Quality Element~~*." (Recirculated Draft PEIR, Project Description, p. 2-33.)
>
> "*The project review checklist will be used ~~one two ways: (1)~~ for projects consistent with the 2045 CAP, to demonstrate CAP consistency that allows for a streamlined project-specific CEQA GHG analysis~~; or (2) for projects required or electing to prepare project-specific CEQA GHG analyses, to demonstrate that all feasible applicable checklist measures or alternative project emissions reduction measures have nevertheless been implemented, either as project features or as GHG mitigation measures. Projects that do not implement all feasible applicable checklist measures or alternative project emissions reduction measures may have significant GHG impacts because they could conflict with an applicable GHG reduction plan per CEQA Guidelines Appendix G, Section VII.~~*" (Revised Draft 2045 CAP, Ch. 1, p. 1-5.)
>
> "*~~Projects that do not implement all feasible applicable checklist measures or alternative project emissions reduction measures may have significant GHG impacts because they could conflict with an applicable GHG reduction plan per CEQA Guidelines Appendix G Section VII. They may also be inconsistent with the General Plan because the CAP is a component of the Air Quality Element.~~"* (Revised Draft 2045 CAP, Ch. 3, p. 3-24.)
>
> *Projects that ~~are not consistent~~ elect not to use the 2045 CAP CEQA Streamlining Checklist for CEQA streamlining ~~with the 2045 CAP~~ must prepare a comprehensive project-specific analysis of GHG emissions. The analysis must quantify existing and projected GHG emissions and it is strongly encouraged that the project incorporate all ~~the~~ CEQA ~~measures~~ streamlining requirements in this 2045 CAP CEQA Streamlining*

Checklist ~~to the extent feasible, as defined by CEQA[2] and subject to the County's discretion~~, although this is not required. ~~Cumulative GHG impacts may be significant for any project that is not consistent with the 2045 CAP per the CEQA Guidelines Appendix G Environmental Checklist.[3]~~ The 2045 CAP CEQA Streamlining Checklist may be updated to incorporate new GHG emissions reduction techniques or to comply with later amendments to the 2045 CAP or to local, state, or federal law. (Revised Draft 2045 CAP, Appendix F, p. F-3.)

~~[2] CEQA Section 21061.1 defines feasible as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors."~~

~~[3] CEQA Guidelines Appendix G Environmental Checklist Section VII. Greenhouse Gas Emissions states that a project would have a significant adverse environmental impact if it would "b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs." The 2045 CAP represents such an applicable plan adopted to reduce GHG emissions.~~

Step 3: Demonstrate ~~Consistency with~~ Compliance with the 2045 CAP ~~GHG Emissions Reduction Measures and Actions~~ CEQA Streamlining Requirements. *Table F-1 identifies the ~~2045 CAP's consistency~~ CEQA streamlining requirements for projects. Projects must demonstrate ~~consistency~~ compliance with the 2045 CAP CEQA streamlining requirements listed in Table F-1 or document why the requirements are not applicable or are infeasible.* (Revised Draft 2045 CAP, Appendix F, p. F-10.)

~~As discussed above, a~~A comprehensive project-specific analysis of GHG emissions must be prepared for any project that elects not to use the Checklist for CEQA streamlining by completing Table F-1 and (if applicable) Table F-2. Such an analysis shall quantify existing and projected GHG emissions and evaluate potential impacts pursuant to the CEQA Guidelines (including the CEQA Guidelines Appendix G Environmental Checklist). It is encouraged that ~~T~~the project ~~shall~~ incorporate all the ~~measures~~ CEQA streamlining requirements in the 2045 CAP CEQA Streamlining Checklist ~~to the extent feasible~~, though this is not required. ~~Projects that do not implement all feasible applicable checklist measures or alternative project emissions reduction measures may have significant GHG impacts because they could conflict with an applicable GHG reduction plan per CEQA Guidelines Appendix G, Section VII.~~ (Revised Draft 2045 CAP, Appendix F, p. F-16.)

All future projects that would require a General Plan amendment cannot use the Revised Draft 2045 CAP to streamline its GHG impact analysis under CEQA. Such projects would have to undergo their own project-level CEQA analyses of GHG impacts. The Revised Draft 2045 CAP has been revised to remove Measure ES5.3 (Evaluate a program for reducing GHG emissions for new developments that require General Plan amendments). (Revised Draft 2045 CAP, p. 3-25.) All new development projects requiring a General Plan amendment must prepare their own GHG impact analysis under CEQA.

Checklist Requirements for Streamlining

Certain comments (for example, O5a-3 and O5b-3) claim that the Checklist's requirements are overly burdensome and prescriptive for new development projects attempting to streamline their

GHG impacts analysis under CEQA. These comments claim that complying with the Checklist is either impossible or infeasible.

These comments fail to recognize the difference between the Revised Draft 2045 CAP performance goals (as identified in the Revised Draft 2045 CAP strategies, measures, and actions) and the Checklist's requirements for new discretionary projects intending to streamline their CEQA GHG impact analysis. First, the performance goals in the Revised Draft 2045 CAP are *Countywide goals*, not requirements or mandates for individual projects. All project-level requirements for CEQA streamlining are identified in the Checklist itself. There are no additional streamlining requirements for new projects that are not included in the Checklist.

Second, as explained in the Checklist instructions (Appendix F, p. F-6 to F-8), the Checklist is clear about what is required of projects that choose to streamline their CEQA GHG impact analysis. The Checklist provides a list of "Tier 1" measures, which are required for all discretionary projects in order to use CEQA streamlining for GHG impacts, and "Tier 2" measures, which are strongly encouraged for all discretionary projects. Nothing beyond the Tier 1 measures is required for project applicants to streamline their CEQA GHG impacts analysis. These two levels are defined as follows:

- **Tier 1:** Required for all discretionary projects in order to use CEQA streamlining for GHG impacts.
- **Tier 2:** Encouraged for all discretionary projects. Although these measures are not required, projects are strongly encouraged to implement these.

To streamline a project's GHG impact evaluation under CEQA by using the Checklist, only Tier 1 items must be included. If a Tier 1 item is not feasible, the project applicant must include an alternative GHG emissions reduction measure as a replacement to achieve the same or greater level of GHG emissions reduction as the item with which the project does not comply. If a Tier 1 item is not applicable to a project, the applicant must provide a description of why the consistency requirement is not applicable to the proposed project.

Tier 2 items are identified as supporting actions but are not deemed essential for the overall success of the Revised Draft 2045 CAP. These items are not required of new discretionary projects to complete the Checklist.

For example, several comments (such as O6-18 and O15-18) claim that all future projects must meet a job density of 300 jobs per acre, that this requirement is impossible for many or most projects, and that projects that do not achieve this standard would have significant and unavoidable GHG impacts, triggering the need for an EIR. A job density of 300 jobs per acre is *not* a requirement of the Checklist or the Revised Draft 2045 CAP for new projects. Revised Draft 2045 CAP Measure T2 (Develop Land Use Plans Addressing Jobs-Housing Balance and Increase Mixed Use) includes a *Countywide* performance goal of 300 jobs per acre by 2030; this is a goal for the entire County to meet by 2030 and represents an average value for Countywide job density. This is not a mandate for every individual new discretionary project. For projects that wish to streamline their GHG impacts evaluation under CEQA, the Checklist requires nothing in the way

of job density for new projects. Checklist item #12, *TIER 2: Achieve a High Jobs/Housing Balance*, is a voluntary Tier 2 item that encourages projects with nonresidential development to "*support* the County's goal to achieve a job density of 300 jobs per acre" (emphasis added). A project that could not meet this metric could still use the Checklist to streamline its GHG impact evaluation under CEQA, as compliance with Tier 2 measures is strongly encouraged rather than mandatory. And, as discussed above, the use of the Checklist is entirely voluntary for project applicants wishing to use CEQA streamlining.

As another example, comments (such as O6-16) claim that all future projects must meet a requirement that no more than 10 percent of a project's water supply will come from water imported into the County. These comments state that this requirement is technologically and legally infeasible. Contrary to the commenters' claims, future development projects are not required to ensure that 90 percent of their water demand is met by alternative water sources. 2045 CAP Measure E5 includes a performance goal that 90 percent of *total Countywide* water demand is met by recycled water graywater, or potable reuse by the year 2045 (25 percent by 2030 and 50 percent by 2035) (Revised Draft 2045 CAP Chapter 3, p. 3-54). This is *not* a project-level mandate. For projects that wish to streamline their GHG impacts evaluation under CEQA, the Checklist requires nothing regarding water source types. Checklist item #21, *TIER 2: Use Recycled Water and Graywater for Non-potable Uses and Include Rainfall Capture*, is a voluntary Tier 2 item that encourages projects to implement water reuse strategies on-site through certain design elements such as using reclaimed water for outdoor uses and installing residential graywater systems. A project that could not meet this metric could still use the Checklist to streamline its GHG impact evaluation under CEQA because compliance with Tier 2 measures is strongly encouraged rather than mandatory. And, as discussed above, the use of the Checklist is entirely voluntary for project applicants wishing to use CEQA streamlining.

To document the proposed change in use of the Checklist and provide further clarity regarding Tier 1 and Tier 2 items, the County has revised sections of the Revised Draft 2045 CAP in the following ways:

> *The 2045 CEQA CAP ~~consistency~~ streamlining requirements are listed as either "Tier 1" or "Tier 2." These two levels are defined as follows:*
>
> > ***Tier 1**: Required for all discretionary projects in order to use CEQA streamlining for GHG impacts ~~demonstrate consistency with the 2045 CAP~~.*
> >
> > ***Tier 2:** Encouraged for all discretionary projects ~~to the maximum extent feasible~~. Although these measures are not required, projects are strongly encouraged to implement ~~as many of~~ these ~~as feasible~~. In Table F.1 below, these voluntary items are colored with gray shading.* (Revised Draft 2045 CAP, Appendix F, p. F-11.)

Several comments, including O6-29 to O6-32, raise issues relating to constitutional provisions of nexus and proportionality expressed in the Supreme Court cases *Nollan v. California Coastal Comm'n* (1987) 483 U.S. 825, *Dolan v. City of Tigard* (1994) 512 U.S. 374, and *Koontz v. St. Johns River Water Management Dist*. (2013) 270 U.S. 595. Those comments indicated that complying with the Checklist would "constitute unduly burdensome impositions and conditions of approval." The Revised Draft 2045 CAP is a legislative enactment and does not

implicate the doctrine of "unconstitutional conditions" because the Revised Draft 2045 CAP does not demand the conveyance of protected property interests. The Revised Draft 2045 CAP neither restricts the use of property nor requires future project applicants to dedicate any portion of its property to the public or to pay any money to the public.

The commenters do not explain why the Tier 1 streamlining requirements in the Checklist violate constitutional provisions of nexus and proportionality, or which specific Tier 1 items do so. Regarding what is required of projects and what is encouraged, please see General Response 2 and the discussion above. As noted therein, use of the Checklist has been revised to be only a tool for CEQA streamlining, and demonstrating compliance with the Checklist is not a requirement for all projects seeking approval from the County. The Checklist is based on implementing selected Revised Draft 2045 CAP measures and actions at the project-level, pursuant to CEQA Guidelines sections 15183.5(b), 15064(h)(3), and 15130(d).

Additionally, the commenters misunderstand the Revised Draft 2045 CAP's measures and what the Checklist requires of projects that pursue the CEQA streamlining route. For example, comment O6-30 claims that if a project cannot achieve net zero GHG emissions on-site, it must mitigate GHG emissions off-site to achieve net zero GHG. This is incorrect. There are no requirements in the Revised Draft 2045 CAP or the Checklist for project-level net zero GHG emissions. As explained in the Checklist, a project that can achieve zero GHG emissions for project operations is exempt from complying with all the Checklist's streamlining requirements. This is a *screening* option, not a requirement (Revised Draft 2045 CAP, Appendix F, p. F-8 and F-17). Comments such as O6-31 claim that the Checklist's provisions are "expensive, time-consuming and ultimately risky CEQA processes," yet provides no specific examples nor any evidence to support this claim for any specific Checklist requirement.

Future Requirements in the Checklist and Their Feasibility

A few comments, such as O6-12 and O6-14, raise issues relating to the Checklist's relationship with future regulations and ordinances that have not yet been developed along with issues relating to infeasibility and deferral.

The commenters are correct that the Checklist includes several streamlining requirements that point to future regulations and ordinances. For example, streamlining Checklist item #8 requires compliance with any provisions and requirements in the forthcoming Zero Emission Vehicle Master Plan and streamlining Checklist item #15 requires compliance with all applicable Building Performance Standards. As stated in Checklist Table F.1, although the County has not yet developed either the Zero Emission Vehicle Master Plan or building performance standards, the County will develop the Zero Emission Vehicle Master Plan 2030 pursuant to Implementing Action T6.1 in the 2045 CAP and building performance standards before 2030 pursuant to Implementing Action E1.1 in the Revised Draft 2045 CAP. Projects need not comply with such regulations and ordinances until they have been developed and adopted by the County. Therefore, in these instances, projects using the Checklist must comply only with currently adopted ordinances and requirements at the time of project approval. As such, there is no deferral.

Alternative Project Emissions Reduction Measures and Additional GHG Reductions

Several comments express concern that the Checklist does not provide a quantitative pathway for alternative project emissions reduction measures (Step 4 and Table F.2 of the Checklist). These comments state that because the Revised Draft 2045 CAP does not quantify every streamlining requirement in the Checklist or provide guidance for how to quantify such measures at the project level, project applicants cannot feasibly employ alternative GHG emissions reduction measures to serve as replacements for any Checklist streamlining requirement not feasible to implement.

The County understands these concerns and has added a new subsection in Draft 2045 CAP Appendix F in Section F.2 under Step 4 titled, "Guidance for Quantifying GHG Reductions from Alternative Measures" to help project applicants choose this pathway. This section provides guidance for how applicants can quantify the GHG reduction benefits of a Checklist streamlining requirement for an individual project to determine the amount of GHG emissions reduction that an alternative project emissions reduction measure must achieve. See Revised Draft 2045 CAP Appendix F, pages F-13 to F-15 for more detail.

In general, this approach includes the following three steps:

1. Prepare a detailed quantified GHG emissions inventory for the project, taking into consideration all GHG-reducing project features and Checklist items included as part of the project (including proposed mitigation measures, project design features, strategies being implemented, and other County requirements).
2. For each Tier 1 Checklist streamlining requirement that the project will not meet, perform a quantified calculation of the additional GHG emission reductions that would have occurred had the project implemented the Tier 1 Checklist streamlining requirement.
3. Develop a quantified strategy for achieving a GHG emissions reduction equivalent to the GHG emissions reduction that would have resulted from complying with the Tier 1 Checklist streamlining requirement.

There are several resources available to project applicants to conduct these calculations. Examples include the California Air Pollution Control Officers Association (CAPCOA) California Emissions Estimator Model (CalEEMod),[7] the California Air Resources Board's (CARB's) EMission FACtor model (EMFAC),[8] and the CAPCOA *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*.[9] These emission calculations are standard for CEQA analyses and would align with commonly accepted GHG emissions modeling standards and protocols for CEQA review.

[7] California Air Pollution Control Officers Association. 2023. *California Emissions Estimator Model*. Version 2022.1.1.14. Available: https://www.caleemod.com/. Accessed June 2023.

[8] California Air Resources Board. 2022. EMFAC2021 Model. Version v1.0.2. Available: https://arb.ca.gov/emfac/. Accessed June 2023.

[9] California Air Pollution Control Officers Association. 2022. *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*. Available: https://www.airquality.org/residents/climate-change/ghg-handbook-caleemod. Accessed June 2023.

2.2.4 General Response 4: GHG Offsets

The County has received multiple comments questioning why the Revised Draft 2045 CAP does not incorporate the use of voluntary GHG offset credits (GHG offsets) as a strategy for achieving the County's GHG reduction targets, and expressing concern that the Revised Draft 2045 CAP does not create a feasible pathway for new development projects to achieve "net zero" emissions because it forbids the use of GHG offsets credits as an alternative GHG emissions reduction measure Checklist.[10] Comments point to the use of GHG offsets for recent CARB-approved development projects in unincorporated Los Angeles County and allege that the Revised Draft 2045 CAP rejects a similar pathway for future projects to demonstrate carbon neutrality.

Some comments regarding offsets expressed concern about the Revised Draft 2045 CAP's lack of information regarding the cost, feasibility, schedule, or scale of a future Offsite GHG Reduction Program as proposed by Revised Draft 2045 CAP Action ES5.4. This General Response 4 clarifies questions raised about the use of GHG Offsets in the Revised Draft 2045 CAP and the Checklist. More discussion of the requirements of the Checklist is included in General Response 3. For responses to comments about the Offsite GHG Reduction Program, please see General Response 6. Singular, more focused comments are addressed by Individual Responses in Section 2.3 of this document.

The Use of GHG Offsets as an Alternative GHG Reduction Measure in the Checklist

GHG offsets from CARB-approved registries have been used successfully as project-specific CEQA mitigation and the use of GHG offsets is a viable path for demonstrating a less-than-significant GHG impact under CEQA. CARB's 2022 Scoping Plan cites sample projects that have developed mitigation programs to achieve net-zero GHG emissions for large and complex residential development projects through their combination of on-site measures and the purchase and retirement of voluntary GHG offset credits from CARB-approved registries.[11]

The Revised Draft 2045 CAP does not preclude a project from using GHG offsets to demonstrate net zero emissions (or carbon neutrality) or to attain any other CEQA significance threshold. In other words, a project can undergo its own CEQA review of GHG impacts and determine such impacts would be less than significant based on substantial evidence and valid CEQA mitigation, which (as previous projects have demonstrated) may include the use of voluntary GHG offset credits. The Revised Draft 2045 CAP does not prohibit this approach. See Revised Draft 2045 CAP Appendix F, page F-13 for more discussion.

However, for projects intending to use the Revised Draft 2045 CAP CEQA Streamlining Checklist to streamline CEQA review of their GHG impacts, the use of GHG offsets is not an option. The purpose of the Checklist is to document the Revised Draft 2045 CAP measures that are applicable to a proposed project and how the project is consistent with the Revised Draft 2045

[10] The terms "GHG offset" and "carbon offset" are often used interchangeably.

[11] California Air Resources Board. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. Appendix D, "Local Actions." November 16, 2022. Pages 25-26. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in June 2023.

CAP CEQA streamlining requirements. The Revised Draft 2045 CAP itself does not include GHG offsets as a quantified measure for achieving the County's GHG reduction targets (see Appendix B, Emissions Forecasting and Reduction Methods). Instead, the Revised Draft 2045 CAP requires actual and direct GHG reductions to occur within the County itself. The County may in the future develop a GHG offsets/credits program in conjunction with the Revised Draft 2045 CAP and an updated Checklist.

The Revised Draft 2045 CAP's GHG reduction targets are as follows (see Revised Draft 2045 CAP page 2-10):

- By 2030, reduce GHG emissions by 40 percent below 2015 levels in unincorporated Los Angeles County.
- By 2035, reduce GHG emissions by 50 percent below 2015 levels in unincorporated Los Angeles County.
- By 2045, reduce GHG emissions by 83 percent below 2015 levels in unincorporated Los Angeles County.

As defined, these targets represent *direct emission reduction targets within the boundaries of unincorporated Los Angeles County*. The specification that the reductions occur within the County aligns the County's targets with the statewide targets established by Senate Bill (SB) 32 for 2030 and AB 1279 for 2045. As such, the use of GHG offsets occurring outside of County boundaries would not contribute toward the Revised Draft 2045 CAP's reduction targets.

Chapter 2 (p. 2-10) of the Revised Draft 2045 CAP states that the County has a long-term aspirational goal of carbon neutrality by 2045 and acknowledges that implementation of the Revised Draft 2045 CAP will not be enough to achieve that goal. As explained in Chapter 3, GHG offsets may be needed for the County to achieve its carbon neutrality goal. Further, CARB acknowledges in the 2022 Scoping Plan that "there is no path to carbon neutrality without carbon removal and sequestration" (p. 84). It is important to emphasize that the Revised Draft 2045 CAP includes measures for achieving GHG emissions reductions that are consistent with the state's direct emissions reduction targets and guidance represented by AB 1279 and CARB's 2022 Scoping Plan, but the Revised Draft 2045 CAP does not demonstrate how carbon neutrality would be achieved, which would require the additional reduction of approximately 850,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) Countywide by 2045. As stated on page 3-12 of the Revised Draft 2045 CAP, "[i]f the residual emissions, shown in Figure 3-1, cannot be eliminated through new regulations or technologies, the County will consider future implementation of carbon removal strategies (such as carbon capture and sequestration and direct air capture), along with future implementation of a carbon offsets/credits program, following completion of a feasibility study, to achieve carbon neutrality by 2045."

Several comments, such as O6-26 and O15-32, state that the Revised Draft 2045 CAP should allow the use of GHG offsets for new development projects, as a component of the Checklist, because that would be consistent with the 2022 Scoping Plan, which supports the use of GHG offset credits for achieving net zero GHG emissions or mitigating project emissions to less-than-significant levels, provided that such GHG offset credits meet CEQA's requirements for mitigation

and provided that the project has adopted all feasible on-site and local GHG mitigation options. In the 2022 Scoping Plan, Appendix D, CARB says, "[i]f a project needs further GHG reductions after adoption of all feasible local, off-site mitigation options, applicants should next consider non-local, off-site mitigation" and "[i]f implementation of all feasible on-site GHG reduction measures and all feasible off-site GHG reduction measures are insufficient to reduce a project's impact to a less-than-significant level, then the lead agency or project applicant should consider purchasing and retiring carbon offset credits."[12]

As discussed above, the Revised Draft 2045 CAP does not prohibit projects from using GHG offset credits to mitigate their GHG impacts pursuant to CEQA's requirements and CARB's recommendations. This approach may be used by any project applicant who opts to conduct a project-level GHG impact analysis pursuant to CEQA. However, if a project applicant wants to streamline environmental review of their project's GHG impacts using the Revised Draft 2045 CAP's PEIR pursuant to CEQA Guidelines Section 15183.5(b), the project applicant must use the Checklist, and the Checklist does not permit the use of voluntary GHG offset credits. As explained above, this is because the use of voluntary GHG offset credits would not contribute toward the Revised Draft 2045 CAP's GHG emission reduction targets, which apply to direct, in-county GHG emissions.

Other comments, such as O10-3, request that the County "grandfather" development projects that have already demonstrated through the CEQA process that they can achieve net-zero GHG emissions via programs approved by CARB that include voluntary GHG offset credits, and that such projects be exempt from using the Checklist. No project that has already undergone CEQA review is obligated to use the Checklist. Similarly, future phases of projects that have already demonstrated achievement of net-zero GHG emissions via offsets but require further CEQA review are not obligated to use the Checklist. As discussed above, projects are still permitted to prepare their own project-level CEQA analysis of GHG impacts independent of the Checklist; such projects may use voluntary GHG offset credits to mitigate GHG impacts if warranted. The Checklist is now only a tool for streamlining GHG impacts analyses. It is not a requirement.

Measure ES5 in the Revised Draft 2045 CAP, *Establish GHG Requirements for New Development*, calls for the County to assess the feasibility of developing a GHG offsets/credits program that would help enable the County to achieve its 2045 carbon neutrality goal if the strategies and measures in the Revised Draft 2045 CAP prove to be insufficient in attaining that goal. As described on page 4-12, for any future GHG offsets/credits program developed by the County, the County would prioritize implementation of offsets generated within or close to Los Angeles County, which is consistent with CARB guidance in the 2022 Scoping Plan.

Recirculated Draft PEIR Carbon Offset Alternative

The Recirculated Draft PEIR for the Revised Draft 2045 CAP includes an analysis of Alternative 1: Carbon Offset Alternative (see Recirculated Draft PEIR, Chapter 4, *Alternatives*). As explained in the Recirculated Draft PEIR, under Alternative 1, in addition to implementing the measures

[12] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in June 2023.

and actions called for by the Revised Draft 2045 CAP, the County would reduce GHG emissions by purchasing carbon offsets. To achieve the greatest environmental co-benefits to the County, priority would be given, from highest to lowest, to offsets purchased from local projects (within Los Angeles County), regional projects (from within Southern California), projects within California, projects outside of California but within the Pacific Southwest (within Arizona, Hawaii, Utah, or Nevada), and projects elsewhere in the United States.

In addition, as discussed in the Revised Draft 2045 CAP, Measure ES5 calls for assessing the feasibility of developing a GHG offsets/credits program that would help enable the County to achieve its long-term aspirational goal of carbon neutrality by 2045, in the event that the strategies and measures in the 2045 CAP are insufficient to attain the County's carbon neutrality goal (Revised Draft 2045 CAP, p. 4-12). As such, the County may consider using carbon offsets in future updates of the 2045 CAP to achieve the County's long-term GHG reduction targets.

Table 4-6, *Summary of Impacts of the Project and Alternatives* (Recirculated Draft PEIR pp. 4-23 to 4-48), summarizes the significant environmental impacts of each Project alternative, including Alternative 1, and provides a fact-based comparison of each alternative's impacts with the Project's impacts.

2.2.5 General Response 5: Quantification in the Revised Draft 2045 CAP and Relationship between the Revised Draft 2045 CAP Measures and CEQA Mitigation

The County has received several comments regarding the quantification of the GHG reduction measures identified within the Revised Draft 2045 CAP. Commenters question the number of measures that have been quantified, the basis for their quantification, and whether they have been analyzed within the Recirculated Draft PEIR. Commenters generally fault the Revised Draft 2045 CAP and Recirculated Draft PEIR for not quantifying more measures for GHG reductions, and state that this is a critical failing of both the Revised Draft 2045 CAP and the Recirculated Draft PEIR. Commenters also express concern with the technical underpinnings of the Revised Draft 2045 CAP.

General Response 5 clarifies the requirements of CEQA Guidelines Section 15183.5(b) for a CAP with regard to quantification, thereby allowing future projects to streamline their GHG impacts evaluation pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b)(2). General Response 5 also explains the relationship between GHG emissions reduction measures in the Revised Draft 2045 CAP and CEQA mitigation measures. Further, it addresses how the quantitative analysis within the Revised Draft 2045 CAP is substantiated. Comment concerns are addressed in the following two subsections: Qualified Revised Draft 2045 CAP Reduction Measures Compared to CEQA Mitigation Measures (2.2.5.1) and Quantitative Basis for the Revised Draft 2045 CAP (2.2.5.2). Singular, more focused questions are addressed by Individual Responses in Section 2.3 of this document.

Several of the comments that questioned adequate quantification of the Revised Draft 2045 CAP also expressed concern that future project applicants using the Checklist to streamline CEQA

review of the projects' GHG impacts will be unable to provide substantial evidence that alternative measures would achieve reductions equal to or greater than those of the Revised Draft 2045 CAP requirement that they replace. The County understands these concerns and has addressed them, as discussed in General Response 3.

Qualified Revised Draft 2045 CAP Reduction Measures Compared to CEQA Mitigation Measure Requirements

Certain comments (e.g., O6-13 and O15-56) raise concerns that GHG emission reductions were not estimated for all the implementing actions identified in the Revised Draft 2045 CAP. Some comments claim that the Revised Draft 2045 CAP does not adequately analyze GHG reductions and allege that the County inappropriately takes GHG emissions reduction credit for programs that have not yet been implemented, quantitatively analyzed, or evaluated under CEQA. These comments do not accurately reflect the CEQA process and requirements related to plans for the reduction of GHG emissions pursuant to CEQA Guidelines section 15183.5(b).

Per CEQA Guidelines, a GHG reduction plan should "establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable" (CEQA Guidelines, § 15183.5(b)(1)(B)) and "identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area" (CEQA Guidelines, § 15183.5(b)(1)(C)). These criteria are met through the quantitative modeling of eighteen (18) quantified measures, which, cumulatively, would allow the County to meet the GHG reduction targets identified in the Revised Draft 2045 CAP. The Revised Draft 2045 CAP and Recirculated Draft PEIR demonstrate, with substantial evidence, that the Revised Draft 2045 CAP meets the requirements of CEQA Guidelines section 15183.5(b), thereby allowing future projects to streamline their GHG impacts evaluation pursuant to CEQA Guidelines sections 15183.5(b)(2), 15064(h)(3) and 15064.4 (Revised Draft 2045 CAP pp. 1-4 to 1-5; Recirculated Draft PEIR pp. 2-9 to 2-12 and pp. 2-17 to 2-18.).

CEQA does not obligate lead agencies to quantify every single measure and action within a CAP to allow for future streamlining. CEQA requires that CAPs identify only measures that can achieve the CAP's targets and that CAPs should "specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level." (CEQA Guidelines, § 15183.5(b)(1)(D).) The Revised Draft 2045 CAP does this by quantifying GHG emission reductions associated with eighteen (18) different measures and by including project-specific requirements in the Checklist. The Revised Draft 2045 CAP includes a preponderance of mandatory (versus voluntary) measures and actions, measures that address the largest GHG emissions sources (such as building energy use and transportation), a focus on five core measures that are likely to reduce large amounts of emissions, transparency in methods of quantification (see Appendix B of the Revised Draft 2045 CAP), and no reliance on voluntary carbon offsets (Recirculated Draft PEIR pp. 2-11).

Further, there are technical and practical limitations that make reliably quantifying every single measure and action infeasible. Data availability, modeling methods, and risk of double counting emission reductions limit the number of reduction measures that can be quantitatively analyzed.

Some comments, such as O5a-6 and O5b-15, state that the Revised Draft 2045 CAP does not estimate the costs and sources of funding for most of the GHG reduction measures. In Chapter 3 of the Revised Draft 2045 CAP, the County has estimated up-front capital costs for every single measure and action by using "$" symbols that range from "$: Less than 500,000 U.S. Dollars" to "$$$$$: More than 150 Million USD" (Revised Draft 2045 CAP p. 3-13). This is also included Revised Draft 2045 CAP Appendix E for every single measure and action in the column titled "COST." Also in Chapter 3 of the Revised Draft 2045 CAP, the County has included potential funding sources for all quantified core measures in Table 3-3 (Revised Draft 2045 CAP pp. 3-6 to 3-9). Further, Appendix G of the Revised Draft 2045 CAP provides a list of potential funding sources for implementing the Revised Draft 2045 CAP's measures and actions.

In addition, because the Revised Draft 2045 CAP is an implementation program of the Air Quality Element of the General Plan, the County has a policy commitment to implement the Revised Draft 2045 CAP's measures and actions (Air Quality Element Policy AQ 3.1 states that the County must "Facilitate the implementation and maintenance of the Climate Action Plan to ensure that the County reaches its climate action and greenhouse gas emission reduction goals"). For example, the U.S. EPA's new Climate Pollution Reduction Grants (CPRG) program will provide grants to states, local governments, tribes, and territories to develop and implement plans for reducing greenhouse gas emissions and other harmful air pollution. Section 60114 of the Inflation Reduction Act provides an investment of $5 billion to support efforts by states, municipalities, air pollution control agencies, tribes, and groups thereof to develop and implement strong, local greenhouse gas reduction strategies. This two-phase grant program provides funding of $250 million for noncompetitive planning grants, and $4.6 billion for competitive implementation grants. Los Angeles County is currently participating in the CPRG program. As another example, the Infrastructure LA program provides funding for climate strategies within the LA region. The objective of this program is to maximize the County's share of federal infrastructure spending available through the Bipartisan Infrastructure Law for both regional and unincorporated areas, with an emphasis on projects that advance equity, sustainability, and climate resilience goals.

A comment also claims that the Revised Draft 2045 CAP will "impose prohibitively high costs on employers and residents of new housing." The commenter provides no evidence to support this claim or any examples of which measures will impose high costs and for what reasons, such that a specific response cannot be provided. These comments do not address the adequacy or accuracy of the Recirculated Draft PEIR or any environmental effects of the proposed Project, and CEQA does not require the financial details of a proposed project to be addressed in an EIR. (CEQA Guidelines, § 15131).

Comments such as O5b-47 and O6-14 express concern that the Revised Draft 2045 CAP relies on future ordinances or plans that have not yet been developed to achieve its GHG reduction targets, and therefore cannot be approved under CEQA. The Revised Draft 2045 CAP does quantify

GHG emission reductions for Countywide performance goals that will be achieved through adoption and implementation of future plans and ordinances, but the Revised Draft 2045 CAP does not quantify specific GHG reductions for each individual future plan or ordinance. For example, Measure T6 quantifies the GHG reductions likely to occur by increasing the fleetwide percentage of light-duty vehicles in unincorporated Los Angeles County that are zero emissions vehicles to 30 percent by 2030; 50 percent by 2035; and 90 percent by 2045. To achieve these goals, a myriad of plans and ordinances are likely needed. Revised Draft 2045 CAP Appendix F presents seven implementing actions needed to achieve these performance goals, including developing a Zero Emissions Vehicle (ZEV) Master Plan (Action T6.1) and requiring all new development to install electric vehicle charging stations (EVCSs) through a condition of approval/ordinance (Action T6.3).

Such future plans and ordinances identified in the Revised Draft 2045 CAP are not relied on as CEQA mitigation measures for a project or plan. The Revised Draft 2045 CAP is a policy-level document and an implementation program of the Air Quality Element of the County's General Plan. As such, CAP measures and actions are not required to meet CEQA standards for mitigation measures. In addition, many of the future plans and ordinances will be developed to align the County's planning and infrastructure priorities with those of the state, including CARB. For example, the ZEV Master Plan required by Measure T6 is needed to support CARB's statewide light-duty fleet projections under the Advanced Clean Cars II Regulation, which is that 89 percent of all light-duty vehicles in California are battery electric or hydrogen fuel cell vehicles.[13,14] As another example, Measure ES2 requires that unincorporated Los Angeles County's power demand is met entirely with zero-carbon electricity through enrollment in CPA's Green Power option. This transition already began in October 2022 (Revised Draft 2045 CAP p. 3-17), and CPA already has plans to meet this demand through 2035.[15] Further, SB 100 requires 100 percent of retail electricity sales in California to be from carbon-free sources by 2045.[16]

Regarding the feasibility of such future plans and ordinances, CEQA defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors" (CEQA Guidelines, § 21061.1). The future plans and ordinances identified in the Revised Draft 2045 CAP meet this definition for several reasons. First, the County is committing to develop these implementation mechanisms over a reasonable period of time as indicated in Appendix E of the Revised Draft 2045 CAP, which is an implementation program of the Air Quality Element of the County's General Plan. Second, The County has identified implementation leads, agency partners, performance objectives, tracking metrics, cost estimates, and funding sources for all measures and actions in the Revised Draft 2045 CAP, including those plans and ordinances that have yet to

13 California Air Resources Board, 2023. *Advanced Clean Cars II*. Available at https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii. Accessed August 2023.

14 California Air Resources Board and Energy+Environment Economics, 2022. *California PATHWAYS Model Outputs*. November 14, 2022. Available at https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents. Accessed August 2023.

15 Clean Power Alliance, 2022. 2022 Integrated Resource Plan. November 1. Page 18. Available at https://cleanpoweralliance.org/wp-content/uploads/2022/11/cpasc_narrative_public.pdf. Accessed August 2023

16 California Energy Commission, 2022. *SB 100 Joint Agency Report*. Available at https://www.energy.ca.gov/sb100. Accessed August 2023.

be developed. Third, the County is required to actively monitor the CAP and track its progress in reducing GHG emissions, provide annual implementation reports to the public, and update the GHG emissions inventory and the CAP every five years (Revised Draft 2045 CAP pp. 4-1 to 4-8). For these and other reasons, the Revised Draft 2045 CAP's measures and actions are considered feasible.

To meet the requirements of CEQA Guidelines section 15183.5(b), a CAP must only analyze GHG reductions "resulting from specific actions *or categories of actions anticipated* within the geographic area" (emphasis added). There is no CEQA requirement that a CAP include only actions that have already been implemented, adopted, or approved by a lead agency. Also, please see General Response 3, which addresses project-level requirements for CEQA streamlining as identified in the Checklist.

Further, there is a difference between a GHG reduction measure, strategy, or action identified in a CAP and a project requirement as identified in a CEQA Streamlining Checklist. Project applicants choosing to use the Revised Draft 2045 CAP to streamline their CEQA review process are not required to implement all performance goals (i.e., measures, strategies, and actions) identified in the Revised Draft 2045 CAP. Rather, applicants must show consistency with the Revised Draft 2045 CAP through use of the Checklist, which was written in accordance with CEQA Guidelines section 15183.5(b)(1)(D). Comments regarding the ability to achieve equivalent reductions using alternative measures in place of the Checklist requirements have been addressed in General Response 3, which also includes revisions to the Checklist and Draft 2045 CAP Appendix F to address the concerns raised by those comments.

See also General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan.

Quantitative Basis for the Revised Draft 2045 CAP

Some comments (e.g., O6-13 and O15-54) express concern regarding the quantitative analysis of the Revised Draft 2045 CAP, alleging that there is no technical substantiation for the projected GHG reductions and that the Revised Draft 2045 CAP does not quantify the reductions associated with the proposed measures. As mentioned above, the County conducted quantitative GHG modeling for eighteen (18) of the twenty-five (25) measures included in the Revised Draft 2045 CAP. The estimated reductions associated with each of these measures can be found in Chapter 3.3, *Strategies, Measures, and Actions*, of the Revised Draft 2045 CAP. The technical substantiation for these measures, i.e., full detail on data sources and calculation methods for estimating GHG emission reductions, can be found in Appendix B, *Emissions Forecasting and Reduction Methods*.

Comments (e.g., O15-71) also state that reduction measures should be quantified separately from the projected impact that statewide laws and mandates will have on the County's GHG emissions. The projected impact of preexisting federal, state, and County regulations is referred to as the Adjusted Business-as-Usual (BAU) Forecast. The Adjusted BAU Forecast is quantified prior to the modeling of all local GHG reduction measures and actions identified in the Revised Draft 2045 CAP so the County can determine the amount of reduction necessary to achieve Revised

Draft 2045 CAP targets after accounting for reductions that would be achieved by preexisting regulations. Commenters can refer to Chapter 2.2, *Emissions Forecasts*, for an explanation and visual representation of the Adjusted BAU Forecast. Further detail on the modeling approach and data sources underlying the Adjusted BAU Forecast can be found in Appendix B, *Emissions Forecasting and Reduction Methods.*

2.2.6 General Response 6: Offsite GHG Emissions Reduction Program Framework

The County has received several comments expressing concern that the Revised Draft 2045 CAP's proposed Offsite GHG Reduction Program Framework (hereafter referred to as the "Offsite Program Framework") is not well defined and may not provide the GHG reductions that are needed from future development to demonstrate compliance with the Revised Draft 2045 CAP CEQA streamlining requirements using Step 4 of the Checklist (Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions). Commentors express concern that the Offsite Program Framework is flawed in that it does not adhere to the 2022 Scoping Plan's tiered approach to GHG mitigation that allows GHG offset credits or reductions generated from non-local measures after prioritizing on-site and local measures. Additionally, commentors are concerned about the GHG Reduction Program Framework's lack of information regarding the cost, feasibility, schedule, or scale of a future Offsite GHG Reduction Program.

More discussion of the requirements of the Checklist is included in General Response 3. Singular, more focused questions are addressed by Individual Responses in Section 2.3 of this document.

Draft 2045 CAP Action ES5.4 calls for developing an Offsite GHG Reduction Program, which future development projects could then use as an alternative GHG emissions reduction measure to one or several Revised Draft 2045 CAP CEQA streamlining requirements. Section F.4 of the Checklist describes the Offsite GHG Reduction Program Framework, including key concepts and principles that will ensure the program supports the ability of the County to achieve its 2045 GHG reduction targets. These include the following:

- All offsite projects must be located within the jurisdictional boundaries of unincorporated Los Angeles County so that the emissions reductions achieved by such projects will be accounted for in future GHG inventory updates and will contribute toward the County's emissions reduction targets. (See General Response 4 for a discussion of GHG offset credits).
- All offsite projects must achieve widely accepted standards to ensure that the GHG reductions produced by offsite projects are environmentally sound; namely that the GHG reductions be real, permanent, quantifiable, verifiable, enforceable, and additional, as defined starting on page F-34 of Appendix F in the Revised Draft 2045 CAP.

- For further clarification regarding additionality, the offsite project must not otherwise be required by law or regulation and would not have occurred "but for the requirement to mitigate a project's GHG impacts."[17]

These principles are consistent with CARB guidance in Appendix D of the 2022 Scoping Plan. As written on page 30 of Appendix D, CARB states that "[i]f implementation of all feasible on-site GHG reduction measures is insufficient to reduce a project's impact to a less-than-significant level, the State recommends that the lead agency next explore options to fund or implement ***local***, off-site direct GHG reduction strategies."[18] (See Revised Draft 2045 CAP Appendix F, p. F-34.) CARB also suggests that jurisdictions develop local mitigation banks which could enable "project applicants to fund such projects in exchange for being credited with the resulting GHG reductions in their CEQA analyses" and presents several example project types, such as local urban forestry programs, local building retrofit programs, off-site EV chargers, and public transit subsidies. The Offsite GHG Reduction Program could include a mitigation bank that enables project applicants to fund such projects like this, and these project types are consistent with those already identified in the Checklist. (See Appendix F, p. F-37 et seq..)

Note that Section F.4 of the Checklist merely presents a *framework* for the Offsite GHG Reduction Program and does not represent the program itself. As stated on page F-35, the actual program will be developed after the Revised Draft 2045 CAP is adopted.

The Offsite GHG Reduction Program itself is not a Revised Draft 2045 CAP measure that is quantified for GHG reductions and it is not relied upon to achieve the Revised Draft 2045 CAP's GHG emission reduction targets. Use of the Offsite GHG Reduction Program is not mandatory for project applicants wishing to streamline environmental review of their project's GHG impacts using the Revised Draft 2045 CAP's PEIR pursuant to CEQA Guidelines Section 15183.5(b). It is a proposed alternative pathway that could be used, once the program is developed by the County, toward complying with the Checklist for purposes of CEQA streamlining. As such, there is no obligation for the Revised Draft 2045 CAP to provide information on the cost, timing, scale, or other characteristics of the Offsite GHG Reduction Program or the GHG emissions reduction projects that could be developed in the future to comply with the Offsite GHG Reduction Program's requirements. Until the Offsite GHG Reduction Program is developed, it cannot be used as an alternative pathway for complying with the Checklist for purposes of CEQA streamlining.

Some comments, such as O5b-22, claim that the Offsite GHG Reduction Program is the County's own "registry" of GHG offset credits. This is not the case. As explained on page F-35, the Offsite GHG Reduction Program, once developed, would allow project applicants to implement local projects that reduce GHG emissions in unincorporated Los Angeles County. It would be an option that would provide flexibility for project applicants to demonstrate compliance with the Revised Draft 2045 CAP CEQA streamlining requirements.

[17] California Air Resources Board. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in June 2023.

[18] Ibid., emphasis added.

Other comments, such as O5a-5, claim that such an Offsite GHG Reduction Program would be infeasible, expensive, and/or difficult to implement. Comment O5a-5 states, "Recent precedent demonstrates that very few local GHG reduction programs are viable at scale" and that "[e]ven if available, many local programs are extremely expensive and time consuming to implement—effectively rendering the programs prohibitive for many projects." Comment O5b-25 states, "it will be extremely difficult (and expensive) for project applicants to implement GHG reduction programs within the County." Neither comment provides evidence supporting these claims that the Offsite GHG Reduction Program would be prohibitively expensive or unusually difficult to implement, and thus a specific response cannot be provided. The County has not yet developed the Offsite GHG Reduction Program, as explained in Appendix F. It would therefore be speculative to estimate the cost, timing, scale, or other specific characteristics of the Offsite GHG Reduction Program.

Further, the 2022 Scoping Plan supports the use of local, off-site GHG emission reduction projects as CEQA mitigation: "If implementation of all feasible on-site GHG reduction measures is insufficient to reduce a project's impact to a less-than-significant level, the State recommends that the lead agency next explore options to fund or implement local, off-site direct GHG reduction strategies." The 2022 Scoping Plan also encourages lead agencies to develop a program for local off-site GHG reduction projects: "To help remove barriers to employing these types of mitigation, lead agencies may wish to consider developing a local mitigation bank[82] that enables project applicants to fund such projects in exchange for being credited with the resulting GHG reductions in their CEQA analyses." The Offsite GHG Reduction Program aims to serve this purpose, as explained in Appendix F.

There are several existing offsite mitigation programs that are being used in a CEQA context by other agencies to mitigate the direct impacts of a project on air quality or climate change, and several that are under development. A few example programs are listed below. These programs are provided for informational purposes only.

- **Central Coast Climate Collaborative Program.** San Luis Obispo County Air Pollution Control District, County of Santa Barbara, County of Ventura, City of Santa Barbara, City of San Luis Obispo, and Community Environmental Council formed a tactical Regional GHG Collaborative Group to understand and identify opportunities for local carbon sequestration and GHG reduction projects. See https://www.centralcoastclimate.org/.
- **California Carbon Sequestration and Climate Resiliency Project Registry (SB 27).** Starting in 2023, this registry will be maintained by the California Natural Resources Agency for the purposes of identifying and listing projects in the state that drive climate action on the state's natural and working lands. The Registry is seeking funding from State agencies and private entities and may provide additional options for offsite carbon reduction projects. See https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220SB27.
- **San Joaquin Valley Air Pollution Control District Emission Reduction Credit Program**. Emission Reduction Credits (ERCs) are granted to permitted sources for voluntary emissions reductions when facilities control emissions to levels beyond current or future regulatory requirements. ERCs approved by the District are then available for use to offset a subsequent permitted emissions increase by surrendering the ERC, whether used at the same location of

the emissions decrease, or at another location, generally after the sale of the ERC to a third party. See https://ww2.valleyair.org/permitting/emission-reduction-credits-erc/.

- **Sacramento Metropolitan Air Quality Management District Off-Site Construction Mitigation Fees.** When a project cannot fully mitigate construction criteria pollutant emissions by implementing off-road and on-road measures, a fee may be assessed to achieve the remaining mitigation. See https://www.airquality.org/LandUseTransportation/Documents/Ch3Off-SiteMitigationFeesFinal4-2019.pdf.
- **Bay Area Air Quality Management District Emissions Banking Program.** The Emissions Banking Program allows for the deposit of air pollutant ERCs. Companies can receive credits by introducing new emissions controls, such as upgrading or replacing old equipment, shutting down equipment, upgrading processes and materials, adopting stricter operating guidelines and adding control equipment to existing sources. These new controls must go beyond the requirements of current regulations and must be real, permanent, quantifiable, and enforceable. Banked credits are permanent and can be used to offset emissions increases from new, permitted projects and traded or sold to other companies for their use. See https://www.baaqmd.gov/permits/emissions-banking.

Some comments, such as O5b-23, state that the examples off-site project types listed in Appendix F are already required by current state or County regulations or by the Revised Draft 2045 CAP itself. The comment points to the local building solar program example in Appendix F, claiming that programs of this type are already required by the Revised Draft 2045 CAP, and therefore would not be additional to the Revised Draft 2045 CAP. To be a valid offsite project, a local solar project must not already be required by law or regulation, County building performance standard, or reach code requirement. Such a project would either accelerate measures, actions, and/or programs that are already identified in the Revised Draft 2045 CAP by providing additional funding to that program or would provide additional GHG reductions beyond those of the Revised Draft 2045 CAP measures and actions. An offsite project activity would be additional if it can be demonstrated that the activity would result in emissions reductions or removals exceeding what would be achieved in the absence of the incentive provided by the proposed project and the Checklist. The commenter states that the Revised Draft 2045 CAP already requires 100 percent zero-carbon electricity on-site and the Title 24 2022 Building Energy Efficiency Standards already contain mandatory requirements for solar readiness. However, both of these requirements are applicable only to *new* development, not *existing* development. The example local building solar program is for installing solar on existing buildings, as stated on page F-38: "Programs that target *existing* residential and commercial buildings in the project's vicinity for rooftop solar photovoltaic installations…." (emphasis added). Further explanation regarding the program's adherence to the standard of "additionality" is included on page F-37 under the "Additional" bullet.

To address comments stating that the Offsite Program Framework may not provide the GHG reductions that are needed from future development to demonstrate compliance with the Revised Draft 2045 CAP CEQA streamlining requirements using the Checklist (such as comment O5b-23), the Offsite Program Framework is not needed to meet the Revised Draft 2045 CAP's targets. Consequently, the Offsite Program Framework is not a required component of the Revised Draft 2045 CAP as a qualified GHG reduction plan under CEQA Guidelines section

15183.5, and the Offsite Program is not mandated for new development to show compliance with the Revised Draft 2045 CAP for CEQA streamlining purposes. The Revised Draft 2045 CAP demonstrates how the County, through implementation of the Revised Draft 2045 CAP strategies, measures, and actions, can feasibly achieve the Countywide GHG emissions reductions targets that are consistent with the state's GHG emissions reduction targets and guidance represented by AB 1279 and the 2022 Scoping Plan. This includes a long-term target to reduce direct Countywide emissions to 83 percent below 2015 levels by 2045. Consistent with Appendix D of the 2022 Scoping Plan, the Revised Draft 2045 CAP and Checklist emphasize three priority areas for new development projects that address the state's largest sources of emissions over which the County has authority or influence over: transportation electrification, vehicle miles traveled (VMT) reduction, and building decarbonization. For the County to achieve its reduction targets, the Revised Draft 2045 CAP demonstrates that new development must employ these strategies related to the priority areas, which is why they are the focus of the Tier 1 measures included in the Checklist.

The Revised Draft 2045 CAP also has an aspirational goal of achieving carbon neutrality and acknowledges that implementation of the Revised Draft 2045 CAP will not be enough to achieve that goal: it would require the additional reduction of approximately 850,000 $MTCO_2e$ Countywide by 2045. As stated on page 3-12 of the Revised Draft 2045 CAP, "[i]f the residual emissions, shown in Figure 3-1, cannot be eliminated through new regulations or technologies, the County will consider future implementation of carbon removal strategies (such as carbon capture and sequestration and direct air capture), along with future implementation of a carbon offsets/credits program, following completion of a feasibility study, to achieve carbon neutrality by 2045."

In short, the Revised Draft 2045 CAP demonstrates a feasible path for the County to achieve its GHG reduction targets through the year 2045 without the use of carbon removal technologies, carbon offsets, or carbon removal projects but acknowledges that these mechanisms may be needed to achieve its aspirational goal of carbon neutrality.

Meanwhile, the County recognizes that some Revised Draft 2045 CAP CEQA streamlining requirements for new development (as presented in Table F-1 of the Checklist) may be infeasible for certain projects to implement and provides an alternative pathway so that project applicants can employ alternative GHG reduction measures within the County that would achieve the same or greater level of GHG emissions reductions as the Revised Draft 2045 CAP CEQA streamlining requirements they replace.

The County acknowledges the concerns that the Offsite GHG Reduction Program is not yet developed, and that once developed, it may not be suitable for every project to consider. However, the Checklist is only a tool to allow project applicants to streamline environmental review of their project's GHG impacts using the Revised Draft 2045 CAP's PEIR pursuant to CEQA Guidelines section 15183.5(b) (see General Response 3). As explained in General Response 4, the Revised Draft 2045 CAP does not preclude any project from choosing not to use the Checklist and conducting a project-level CEQA review of GHG impacts.

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2.3 Individual Responses

Comment letters are organized with public agency and tribes' letters first, followed by comments received from organizations second, and followed by comments received from individuals third. Within each grouping, letters are further organized chronologically by date and, within dates, alphabetically by last name. Where multiple letters were received from a single commenter, the letters are grouped such that all the comments from and responses to that commenter are provided together as of the date of the first communication.

Each comment letter has been assigned a corresponding alphabet letter designation, as well as a unique number. Letters from agencies are designated with a capital "A," letters from organizations are designated with a capital "O," and individual members of the public are designated "P." Individual comments within letters are marked sequentially with numbers, such as A1-1, A1-2, etc. For example, the County received the first agency letter from the from the California Air Resources Board (CARB), dated May 15, 2023. It is identified as letter A1; individual comments within the letter are signified as Comment A1-1, A1-2, and so forth.

2.3.1 Responses to Comments from Agencies and Tribes

CALIFORNIA
AIR RESOURCES BOARD

Gavin Newsom, Governor
Yana Garcia, CalEPA Secretary
Liane M. Randolph, Chair

May 15, 2023

Ms.Thuy Hua, AICP
Supervising Regional Planner
County of Los Angeles Department of Regional Planning
320 W. Temple
Los Angeles, CA 90012
THua@planning.lacounty.gov

Dear Ms. Hua:

On behalf of the California Air Resources Board (CARB) staff, I am writing to provide comments on the County of Los Angeles' 2045 Climate Action Plan (CAP) and its associated Recirculated Draft Program Environmental Impact Report (PEIR). As part of the 2022 Scoping Plan for Achieving Carbon Neutrality (Scoping Plan), CARB has included recommendations to help jurisdictions across the state ensure their CAPs are consistent with applicable greenhouse gas (GHG) goals and requirements,[1] because the entire state benefits from ensuring that CAPs stay in step with applicable GHG reduction goals and requirements. This consistency is especially important if the jurisdiction adopting the CAP intends to rely on the CAP for streamlining the GHG emissions analyses in the CEQA documents for new projects. As noted in Appendix D of the Scoping Plan, "[l]ocal government efforts to reduce [GHG] emissions within their jurisdiction are critical to achieving the State's long-term climate goals." As discussed below, CARB notes that there are several changes that could be made to the CAP to more fully align it with the recommendations in the Scoping Plan. These changes would make the CAP even more robust and would add legal defensibility if future residential and mixed-use developments intend to rely on the CAP for CEQA streamlining of GHG analyses. A1-1

One strategy recommended in Appendix D that lead agencies can use to determine whether a project is consistent with the Scoping Plan and may be able to streamline its GHG analysis is to include a set of attributes included in Table 3—"Key Residential and Mixed-Use Project Attributes that Reduce GHGs." The attributes in Table 3 of Appendix D have been shown by empirical research to reduce operational GHG emissions and allow for growth from residential and mixed-use development in a manner consistent with the state's climate and equity goals, including those in Senate Bill (SB) 32 (2016). Moreover, Appendix D notes that tiering projects from a CEQA-qualified CAP is another approach to determining consistency with the Scoping Plan and enabling the streamlining of GHG analysis. CARB commends LA County for utilizing both of these approaches by including a checklist of project attributes in Appendix F of the proposed CAP and allowing for projects to tier their GHG analysis off of this document. Below, CARB suggests some modifications to the LA County CAP to better align its CEQA streamlining provisions with the recommendations in the Scoping Plan. A1-2

[1] *https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents*

Appendix F of Los Angeles County's CAP describes a process for determining whether a project is consistent with the CAP for purposes of streamlining CEQA review. To be eligible for CEQA GHG streamlining, the CAP requires new discretionary projects subject to CEQA to demonstrate consistency with the County's General Plan. If General Plan consistency can be demonstrated, projects proceed to the Climate Action Plan Consistency Review Checklist (CAP Checklist). Projects that demonstrate consistency with the checklist are considered by the County to be consistent with the CAP and therefore eligible for streamlining of the GHG emissions analysis portion of the applicable CEQA document. CARB commends the County for developing this checklist approach to assist future land-use projects in assessing their consistency with the CAP. A1-3

After reviewing the consistency process in Appendix F of Los Angeles County's CAP, CARB notes that it would encourage residential and mixed-use projects to include many project attributes consistent with the priority GHG reduction strategies found in Appendix D of the 2022 Scoping Plan. One example of this is building decarbonization. Appendix D of the Scoping Plan identifies the adoption of all-electric new construction reach codes for residential and commercial uses as an appropriate strategy for enacting building decarbonization. This strategy is clearly addressed in the CAP Checklist's CAP Consistency Requirement #16 – "Electrify New Buildings." A1-4

However, some of the other strategies in the CAP Checklist's requirements are less stringent than those recommended in Appendix D of the Scoping Plan. CARB notes that use of the CAP Checklist could allow for residential and mixed-use projects that do not include all of the attributes recommended in Table 3 to qualitatively demonstrate consistency with the Scoping Plan. For instance, a key project attribute for new development is to provide "EV charging infrastructure that, at minimum, meets the most ambitious voluntary standard in the California Green Building Standards Code at the time of project approval." The CAP consistency checklist, however, only requires that projects "Comply with any CALGreen Code requirement, County ordinance, building code, or condition of approval that requires a certain amount of electric vehicle (EV) charging infrastructure (EVCSs) and readiness." A1-5

Likewise, Table 3 of Appendix D includes several key project attributes to help projects achieve reductions in vehicle miles traveled (VMT). Some of these attributes are not specifically addressed in LA County's CAP consistency checklist, but are instead addressed in the County's General Plan. As an example, one of the Scoping Plan's key project attributes to achieve VMT reductions is that new development be "located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer)." The County's General Plan includes several policies that are related to infill development. However, these policies merely encourage infill and do not require this type of development. An example of this is the General Plan's **Policy LU 4.1,** which reads**:** "Encourage infill development in urban and suburban areas on vacant, underutilized, and/or brownfield sites." CARB notes that this could potentially lead to situations where new projects endeavor to streamline their CEQA GHG analysis while not being located in infill areas and therefore not clearly demonstrating consistency with the Scoping Plan. A1-6

Appendix D of the Scoping Plan notes that new development can align with State GHG reduction goals while simultaneously demonstrating consistency with State equity goals and advancing fair housing. Table 3 of Appendix D lists key project attributes related to affordable housing. One of these key project attributes is that "[a]t least 20 percent of units included are affordable to lower-income residents." This would apply to all new residential and mixed-use development. The CAP's consistency checklist does not address affordable housing, but does require that projects are consistent with the land use and housing elements of the General Plan. The County's housing element includes Policy 3.4 "Require future Development Agreements and project-based specific plans to include an affordable housing implementation plan that exceeds the requirements in the County's Inclusionary Housing Ordinance." The County's Inclusionary Housing Ordinance requires a 20 percent affordable housing set-aside on certain parcels, but not all. A1-7

Conclusion

CARB appreciates the opportunity to review and comment on Los Angeles County's 2045 Climate Action Plan and its associated PEIR. CARB believes that the CAP includes many elements that are consistent with the 2022 Scoping Plan's recommendations for CAPs. However, as explained above, there are also opportunities for the County to demonstrate an even more robust relationship between the CAP's recommendations for new residential and mixed-use development and the recommended key project attributes identified in Appendix D of the Scoping Plan. Strengthening the CAP to take advantage of these opportunities will allow for increased legal defensibility when the CAP is used for the purposes of CEQA streamlining of residential and mixed-use development. If you have any questions, please feel free to contact Pedro Peterson at (279) 208-7367 or by email at *pedro.peterson@arb.ca.gov*. A1-8

Sincerely,

Jennifer Gress

Jennifer Gress, Chief
Sustainable Transportation and Communities Division
California Air Resources Board
jennifer.gress@arb.ca.gov

cc: See next page.

cc: Annalisa Schilla, Assistant Division Chief, Sustainable Transportation and Communities Division
annalisa.schilla@arb.ca.gov

Pedro Peterson, Manager, Local Planning Section, Sustainable Transportation and Communities Division
pedro.peterson@arb.ca.gov

Matt Jones, Sustainable Transportation and Communities Division
matthew.jones@arb.ca.gov

2.3.1.1 Letter A1: California Air Resources Board

A1-1 The County appreciates comments from the California Air Resources Board (CARB) related to the Revised Draft 2045 Climate Action Plan's (CAP's) consistency with CARB's 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) and agrees that maximizing the Revised Draft 2045 CAP's consistency with the 2022 Scoping Plan is critical, given that local action is a core component of the state's ability to meet its greenhouse gas (GHG) reduction targets. The County appreciates CARB's recommendations to align the Revised Draft 2045 CAP more fully with the recommendations within the 2022 Scoping Plan. Please see responses to individual comments below for detailed discussion regarding these specific recommendations.

A1-2 The County appreciates CARB's support for the Revised Draft 2045 CAP CEQA Streamlining Checklist (Checklist) approach that can be used by project applicants to streamline their GHG impact analyses under CEQA (see Revised Draft 2045 CAP, Appendix F). For responses to CARB's specific recommendations for the Revised Draft 2045 CAP and Checklist, see responses below.

A1-3 The Checklist includes many of the project attributes consistent with the priority GHG reduction strategies included in Appendix D, Table 3, of the 2022 Scoping Plan. Please refer to Revised Draft 2045 CAP Appendix H, *2022 Scoping Plan Recommendations Consistency*, for a comprehensive review of all project attributes listed in the 2022 Scoping Plan.

A1-4 Action ES5.1 directs the identification of new requirements for new development, including reach codes, ordinances, and conditions of approval to reduce GHG emissions from energy use, transportation, waste, water, and other sources. This is consistent with Appendix D of the Scoping Plan which identifies the adoption of all-electric new construction reach codes for residential and commercial uses as an appropriate strategy for enacting building decarbonization. Checklist Action #16, *Decarbonize New Buildings*, is a Tier 2 item that recommends that new projects achieve zero GHG emission buildings by 2030 and zero net energy beyond 2030. The Checklist will be updated administratively to incorporate new GHG emissions reduction techniques or to comply with later amendments such as reach codes, which may include a forthcoming building decarbonization ordinance.

A1-5 CARB is correct that a project could successfully complete the Checklist without including all the project-specific attributes identified in 2022 Scoping Plan Appendix D, Table 3. The 2022 Scoping Plan Appendix D states that residential and mix-used projects should contain key project attributes in Table 3 (of Appendix D of the Scoping Plan) "*absent* consistency with an adequate, geographically specific GHG reduction plan such as a CEQA-qualified CAP" (emphasis added).[1] The Revised Draft 2045 CAP serves as a CEQA-qualified CAP upon adoption and, as such, is not

[1] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Pages 23 and 24. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed October 2023.

required to mimic all attributes of Table 3. This is true of the electric vehicle (EV) charging infrastructure (e.g., electric vehicle charging stations [EVCSs]) built into the project. The Checklist does not require that all projects provide EV charging infrastructure that meets the most ambitious voluntary standard in the California Green Building Standards Code at the time of project approval. Instead, Checklist item #8 requires several things, including compliance with any CALGreen Code requirement, County ordinance, building code, or condition of approval that requires a certain amount of EVCSs and readiness, as well as compliance with any provisions and requirements in the forthcoming Zero Emission Vehicle Master Plan.

The Revised Draft 2045 CAP calls for the development of a Zero Emission Vehicle Master Plan, which may include ordinances for new development regarding EVCS. Without performing complete due diligence for developing such an ordinance, the County does not want to formally adopt an EVCS requirement for new development. A forthcoming EVCS ordinance may require the most ambitious voluntary standard in the California Green Building Standards Code. However, this has not yet been adopted. Furthermore, such a requirement is not needed for the Revised Draft 2045 CAP to achieve its GHG reduction targets for 2030, 2035, and 2045.

The Revised Draft 2045 CAP includes specific EV performance goals, including for Measure T6, Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales. For example, one performance goal is to increase the fleetwide percentage total amount of light-duty vehicles in unincorporated Los Angeles County that are zero emission vehicles (ZEVs) to 30 percent by 2030, 50 percent by 2035, and 90 percent by 2045. Another performance goal is to increase the sales of new light-duty vehicles in unincorporated Los Angeles County that are ZEVs to: 68 percent by 2030 and 100 percent by 2035. Regarding EVCS installation, Measure T6 calls for installing 37,000 total new public and private shared EVCSs by 2030, 74,000 by 2035, and 140,000 by 2045.

In addition, Action T6.3 requires all new development to install EVCSs through a condition of approval/ordinance. Residential development must install EVCSs; nonresidential development must install EVCSs at a percentage of total parking spaces.

Additional Checklist requirements such as Checklist item #18 (Water Use Efficiency and Water Conservation) and item #25 (Tree Plantings) are more stringent than Appendix D of the Scoping Plan given that Appendix D of the Scoping Plan gives less emphasis on these actions. While the Checklist does not, and is not required to, replicate the Scoping Plan Appendix D Table 3 attributes, it demonstrates the ability to meet the overall GHG emission reduction goals.

A1-6 CARB points to the 2022 Scoping Plan's recommendation that to reduce project-specific vehicle miles traveled (VMT), new development should be "located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and

essential public services (e.g., transit, streets, water, sewer)." CARB correctly notes that both the County's General Plan and the Revised Draft 2045 CAP encourage, but do not require, infill development. Further, the Checklist does not mandate that future development projects be transit-oriented or be located in infill sites. Therefore, CARB is also correct that projects could successfully complete the Checklist, thereby streamlining their GHG analysis pursuant to CEQA, without being located in infill areas.

In response to CARB's comment stating that such non-infill projects would be eligible for streamlining while "not clearly demonstrating consistency with the Scoping Plan," the 2022 Scoping Plan states that projects that incorporate all project attributes contained in Appendix D Table 3, such as the infill characteristic, would be "clearly consistent" with the state's climate goals and the 2022 Scoping Plan, and "may result in a less-than-significant GHG impact under CEQA."[2] However, CARB also states that projects that do not achieve every single attribute listed in Table 3 may still be consistent with the 2022 Scoping Plan, provided there is evidence supporting this conclusion. The full text from CARB is below:

> *These project attributes are intended as a guide to help local jurisdictions qualitatively identify those residential and mixed-use projects that are **clearly** consistent with the State's climate goals, since these attributes address the largest sources of operational emissions for residential projects. In general, residential and mixed-use development projects that incorporate **all** of these key project attributes are aligned with the State's priority GHG reduction strategies for local climate action as shown in Table 1 and with the State's climate and housing goals. As such, they are considered to be consistent with the Scoping Plan or other plans, policies, or regulations adopted for the purposes of reducing GHGs; therefore, the GHG emissions associated with such projects may result in a less-than-significant GHG impact under CEQA. Lead agencies may determine, with adequate additional supporting evidence, that projects that incorporate some, but not all, of the key project attributes are consistent with the State's climate goals.*

The Revised Draft 2045 CAP's targets align with CARB's statewide targets for 2030 and 2045, as explained in the Revised Draft 2045 CAP and Recirculated Draft Program Environmental Impact Report (PEIR) (Revised Draft 2045 CAP pp. 2-9 to 2-12; Recirculated Draft PEIR pp. 2-6 to 2-8). These targets represent levels below which GHG emissions would not be cumulatively considerable, pursuant to CEQA Guidelines section 15064.4(b)(3), stating "[i]n determining the significance of impacts, the lead agency may consider a project's consistency with the state's long-term climate goals or strategies". The Revised Draft 2045 CAP shows a quantitative pathway toward achieving these targets through implementation of its numerous strategies, measures, and actions. The Checklist identifies those measures and actions

[2] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Pages 23 and 24. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed July 2023.

that new development projects intending to streamline must implement in order to show consistency with the Revised Draft 2045 CAP and to contribute their fair share to the Revised Draft 2045 CAP's targets. These and other elements demonstrate that the Revised Draft 2045 CAP meets the requirements of CEQA Guidelines section 15183.5(b), thereby allowing future projects to streamline their GHG impacts evaluation pursuant to CEQA Guidelines section 15064.4. For additional discussion of how the Revised Draft 2045 CAP meets the requirements of CEQA Guidelines section 15183.5(b), please refer to Revised Draft 2045 CAP pp. 1-4 to 1-5 and Recirculated Draft PEIR pp. 2-9 to 2-12 and 2-17 to 2-18.

In addition, Senate Bill (SB) 375 requires regional transportation plans (RTPs) prepared by metropolitan planning organizations (MPOs) to incorporate a sustainable communities strategy (SCS) that demonstrates how the region would achieve GHG emission reduction targets set by CARB. Under SB 375, CARB is required, in consultation with the state's MPOs, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035 (Recirculated Draft PEIR p. 3.9-19). This would serve to further reduce VMT from future projects within the County.

Appendix H also explains how the Revised Draft 2045 CAP is consistent with CARB's recommendations for infill land use development. For example, Measure T1: Increase Density Near High-Quality Transit Areas includes Action T1.1: Incentivize residential and community-serving uses to be developed in high-quality transit areas (HQTAs), while ensuring inclusion of vital public amenities, such as parks and active transportation infrastructure (Revised Draft 2045 CAP, p. 3-29). The CEQA Checklist requires that, for projects located within an HQTA, Specific Plan, or Area Plan, the project must achieve a minimum of 20 dwelling units per acre, consistent with the 2021−2029 Revised County of Los Angeles Housing Element Update (Housing Element) rezoning; if the project is not located within an HQTA, it must locate residential and employment centers within 1 mile of an HQTA (Revised Draft 2045 CAP, Appendix F, p. F-20).

Further, as discussed in the Recirculated Draft PEIR and Revised Draft 2045 CAP, the Revised Draft 2045 CAP is a policy document intended to reduce community-wide GHG emissions and would support development allowed under the General Plan. No changes to General Plan land use designations, zoning, land use, or specific projects are proposed as part of the Revised Draft 2045 CAP.

Please refer to Revised Draft 2045 CAP Appendix H for additional discussion of the Revised Draft 2045 CAP's consistency with the 2022 Scoping Plan's recommendations regarding infill development.

The Revised Draft 2045 CAP's CEQA Streamlining Checklist is only one of the tools used to encourage infill housing. More appropriately, the Housing Element's Rezoning Program focuses density increases in areas with existing infrastructure and

outside of known natural hazard and resources areas. As a result, the Rezoning Program focuses the majority of new housing as infill housing in more urban areas of the County.

A1-7 Similar to Comment A1-6 above, CARB notes that the Checklist does not require affordable housing in new development. CARB is correct. CARB is also correct that County General Plan Housing Element Policy 3.4 includes affordable housing requirements, and also that the County's Inclusionary Housing Ordinance requires a range of 5 to 20 percent affordable housing set-aside options on certain parcels depending on the affordability level of the units and project size. The range for the set-aside options is necessary to ensure financial feasibility of projects. The County is also addressing the risk of displacement through Program 43 in the Housing Element, such as developing an anti-displacement mapping tool. Chapter 1 of the Revised Draft 2045 CAP discusses the County's commitment to equitable implementation of the Revised Draft 2045 CAP, including incorporating anti-displacement tools during the implementation of building decarbonization actions (Revised Draft 2045 CAP, p. 1-13 – 1-19).

Revised Draft 2045 CAP Appendix H explains how the Revised Draft 2045 CAP is consistent with CARB's recommendations for affordable housing development. The Revised Draft 2045 CAP prioritizes infill and affordable housing development in a myriad of ways. For example:

- Action ES3.5 states, "Require and incentivize renewable energy for affordable housing developments for both new development and existing buildings." (Revised Draft 2045 CAP p. 3-21.)
- Action ES5.1 calls for requirements for new development, but includes "affordable housing considerations in these requirements, and develop supporting measures (financial support, technical assistance, or other incentives) to defray potential additional first costs in order to maintain housing affordability." (Revised Draft 2045 CAP p. 3-25.)
- Action E1.5 states, "Create a comprehensive fund aggregation program to support energy efficiency, decarbonization and resilience in new and existing affordable housing." (Revised Draft 2045 CAP p. 3-48.)

Regarding the need for all future projects to incorporate every attribute listed in Table 3, including 20 percent affordable housing units, to be consistent with the 2022 Scoping Plan, see response A1-6 above. As discussed, this is not a requirement to demonstrate consistency with the 2022 Scoping Plan. Further, the Revised Draft 2045 CAP meets the requirements of CEQA Guidelines section 15183.5(b), thereby allowing future projects to streamline their GHG impacts evaluation pursuant to CEQA Guidelines section 15064.4.

Please also refer to Revised Draft 2045 CAP Appendix H for additional discussion of the Revised Draft 2045 CAP's consistency with the 2022 Scoping Plan's recommendations regarding affordable housing in new development.

A1-8 The County appreciates comments from CARB related to the Revised Draft 2045 CAP's consistency with the 2022 Scoping Plan. Although it is likely that there are areas where the Revised Draft 2045 CAP could be revised to exactly mimic the 2022 Scoping Plan, the Revised Draft 2045 CAP already clearly aligns with the Scoping Plan, as detailed in Revised Draft 2045 CAP Appendix H. Further, the Revised Draft 2045 CAP and Recirculated Draft PEIR demonstrate, with substantial evidence, that the Revised Draft 2045 CAP meets the requirements of CEQA Guidelines section 15183.5(b), thereby allowing future projects to streamline their GHG impacts evaluation pursuant to CEQA Guidelines sections 15064, 15064.4 and 15183.5. (Revised Draft 2045 CAP pp. 1-4 to 1-5; Recirculated Draft PEIR pp. 2-9 to 2-12 and pp. 2-17 to 2-18.)

From: Ryan Nordness
To: DRP EPS Climate
Subject: DEIR Los Angeles County 2045 Climate Action Plan
Date: Wednesday, April 26, 2023 12:58:17 PM

CAUTION: External Email. Proceed Responsibly.

Hello,

Thank you for inviting San Manuel into the discussion over unincorporated Los Angeles county's management of greenhouse gas emissions. We have no overt concerns concerning the management of the emissions created by community activities, unless however, this plan would include the development of carbon reduction projects within tribal territory. These projects could include community parks, forests/preserves, carbon capture plants, etc.. Additionally, the tribe is interested in any educational, land acknowledgement, or interpretive opportunities that would result in this DEIR. Once again, San Manuel thanks you for this opportunity to comment on the 2045 Climate Action Plan.

A2-1

A2-2

Respectfully,
Ryan Nordness

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2.3.1.2 Letter A2: San Manuel

A2-1 The County acknowledges San Manuel's (i.e., the San Manuel Band of Mission Indians) comment related to development of carbon reduction projects within tribal territory. Section 3.16, *Tribal Cultural Resources*, of the Recirculated Draft PEIR identifies and evaluates whether the Revised Draft 2045 CAP would result in a significant impact on tribal cultural resources. As a program EIR, the Recirculated Draft PEIR did not speculate on the specific environmental impacts of individual projects that could be facilitated by implementation of the Revised Draft 2045 CAP measures and actions. However, the impacts of implementing specific measures and actions were considered as part of the analysis to the degree that specific information about implementation is known. As described in Section 3.16.2.3, renewable energy and related infrastructure projects facilitated by Revised Draft 2045 CAP measures and actions could result in the development of more rural or open lands in areas of the unincorporated County where comparatively minimal ground disturbance has occurred. Future projects facilitated by the Revised Draft 2045 CAP measures and actions could result in significant impacts on sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe qualifying as tribal cultural Resources. As such, the Recirculated Draft PEIR concluded that impacts on tribal cultural resources would be significant. However, implementation of Mitigation Measure 3.16-1 would reduce impacts to a less-than-significant level if specific projects have potentially significant impacts.

A2-2 In response to the comment related to educational, land acknowledgement, or interpretive opportunities that would result in the Recirculated Draft PEIR, Sections 3.6, *Cultural Resources,* and 3.16, *Tribal Cultural Resources*, of the Recirculated Draft PEIR identifies and evaluates whether the Revised Draft 2045 CAP would result in a significant impact on cultural and tribal cultural resources, respectively. Sections 3.6.2.3 and 3.16.2.3 describe impacts to cultural and tribal cultural resources, and include mitigation measures to reduce impacts to a less-than-significant level if specific projects implemented in the future have potentially significant impacts. Mitigation Measures 3.6-4 through 3.6-6 describe specific actions that would be required in the event archaeological resources are encountered during construction of a project, which include treatment of archaeological resources (i.e., avoidance and preservation in place) and curation and disposition of cultural materials (i.e., curation to repositories that are accredited by the American Association of Museums, donate the collection to a local California Native American tribe(s), offer the collection to a public, nonprofit institution with a research interest in the materials, or to a local school or historical society in the area for educational purposes). A land acknowledgement is included at the beginning of the Revised Draft 2045 CAP in recognition of the First Peoples of Los Angeles County.

LOS ANGELES COUNTY SANITATION DISTRICTS
Converting Waste Into Resources

Robert C. Ferrante
Chief Engineer and General Manager

1955 Workman Mill Road, Whittier, CA 90601-1400
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(562) 699-7411 • www.lacsd.org

May 15, 2023

Ref. DOC 6875668

VIA ELECTRONIC MAIL: ***climate@planning.lacounty.gov***

Ms. Thuy Hua
Los Angeles County Department of Regional Planning
320 West Temple Street, 13th Floor
Los Angeles, CA 90012

Dear Ms. Hua:

Los Angeles County Revised Draft 2045 Climate Action Plan – Comment Letter

The Los Angeles County Sanitation Districts (Sanitation Districts) appreciates the opportunity to comment on the LA County Revised Draft 2045 Climate Action Plan (Revised Draft 2045 CAP). We thank you for considering and incorporating our previous comments submitted on July 6, 2022 (copy enclosed). The Sanitation Districts continues to support the Revised Draft 2045 CAP, however, would like to provide the following additional comments below for your consideration:

1. The Revised Draft 2045 CAP contains action measures, specifically Actions E5.2 and E5.3, related to the use of recycled water. The Sanitation Districts has a long history of providing affordable, high-quality recycled water to public and private water suppliers to help meet the water supply needs for more than five million people within the Sanitation Districts' service area. The recycled water is beneficially reused for industrial, commercial, and recreational applications; groundwater replenishment; agriculture; and the irrigation of parks, schools, golf courses, roadways, and nurseries. In addition to existing recycled water uses, the Sanitation Districts has partnered with the Metropolitan Water District of Southern California to explore the potential of a water purification project called Pure Water Southern California (formerly known as the Regional Recycled Water Program) at the Joint Water Pollution Control Plant, located in the City of Carson. At project completion, up to 150 million gallons per day (mgd) of water would be produced to recharge various regional groundwater basins and/or supplement regional water supply sources. We would appreciate if the Revised Draft 2045 CAP recognized these efforts. A3-1

2. The Sanitation Districts request that the County consider public agency projects covered by their own CAPs as in compliance with the Revised Draft 2045 CAP. A3-2 Further, we request that a public agency be able to submit their own CAP in lieu of the checklist. A3-3

We again appreciate your leadership and your team's dedication to help update the Los Angeles County's 2045 CAP. Please contact me at (562) 908-4288, extension 2701, or rtremblay@lacsd.org, if the Sanitation Districts can be of any assistance as you work toward implementation of the Revised Draft 2045 CAP.

Very truly yours,

Raymond L. Tremblay

Raymond L. Tremblay
Department Head
Facilities Planning

RT:JL:MNH:pb

Enclosure

DOC 6920020

A Century of Service

LOS ANGELES COUNTY SANITATION DISTRICTS
Converting Waste Into Resources

Robert C. Ferrante
Chief Engineer and General Manager

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July 6, 2022

Ms. Thuy Hua
Los Angeles County Department of Regional Planning
320 W. Temple Street, 13th Floor
Los Angeles, California 90012

Dear Ms. Hua,

LA County Draft 2045 Climate Action Plan – Comment Letter

On behalf of the Los Angeles County Sanitation Districts (Sanitation Districts) we are pleased to support the LA County Draft 2045 Climate Action Plan (Draft 2045 CAP) and would like to provide the comments below for your consideration. The Sanitation Districts serve the wastewater and solid waste management needs of approximately 5.6 million residents in the Los Angeles Basin, Santa Clarita Valley, and Antelope Valley. We operate eleven water reclamation plants, two sanitary landfills, three materials recovery/transfer facilities, and two facilities that convert landfill gas into renewable energy. An important part of our mission is to convert waste into resources such as recycled water, energy, and recycled materials. A3-4

As stated in the Draft 2045 CAP, now, more than ever, climate change has become a real, urgent, and significant threat, with impacts being felt today in Los Angeles County and around the globe. The Draft 2045 CAP adapts Los Angeles County programs and services to reduce the unincorporated County areas' greenhouse gas (GHG) emissions and help limit global temperature increases. Further, the Draft 2045 sets forth Los Angeles County's path toward meeting the goals of the Paris Agreement and achieving carbon neutrality for unincorporated areas of the County. The document is comprehensive, thoughtful and reflects the diversity and complexity of Los Angeles County.

As mentioned above, the Sanitation Districts support the vision of the Draft 2045 CAP, however, we offer the following two comments for your consideration:

1) Many Sanitation Districts' facilities are included in the Draft 2045 CAP. To ensure potential emission reductions can be achieved and to avoid double-counting emissions or proposed reductions, an inventory boundary should be determined, and each individual agency should account for and report their own GHG activities within their organization's responsibilities and sphere of control. Similarly, emission estimation methods should reflect the same inventory boundary and rely on the best available information. The Sanitation Districts have performed such an inventory using site-specific data rather than population-based estimates as assumed in the Draft 2045 CAP. While both methods are acceptable, the publication of conflicting emission estimates can be confusing to the public and decision-makers. Due to these differences, we recommend that the Draft 2045 CAP include references to the Sanitation Districts' inventory and to state that Los Angeles County and the Sanitation Districts will work cooperatively to achieve carbon neutrality. A copy of our recently completed "2021 Greenhouse Gas Inventory Report" and a third-party verification of the report titled "Positive Verification Opinion for Greenhouse Gas Emissions and

Reductions for Emissions Year 2021" are attached. We would be happy to provide supporting data and information for our analysis, upon request.

2) The Draft 2045 CAP contains an action to capture all fugitive wastewater treatment process emissions and convert them to fuel. The Sanitation Districts would like to clarify whether Regional Planning meant to state that methane emissions from wastewater treatment processes should be captured and used as a vehicle fuel. GHG emission protocols assume nitrous oxide emissions are emitted from the wastewater treatment process and effluent discharge. If process nitrous oxide emissions cause Sanitation Districts' facilities to become carbon positive, control technologies or process enhancements would be assessed. Regarding nitrous oxide emissions from wastewater effluent, it's unlikely such a source could be controlled after being discharged from a treatment plant. In addition, fugitive emissions are defined by the EPA as "those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening," so it's unclear whether such a specific statement should be made about fugitive emissions. Therefore, we recommend this action be changed to reflect that methane produced during the wastewater treatment process is collected and converted into renewable energy or fuel. Please see our website (www.lacsd.org) under "Solid Waste Programs – Food Waste Recycling" and "JWPCP CNG Fueling Facility – Alternative Fuels" for further information about our activities to utilize digester gas from wastewater treatment from diverted processed organic waste to produce renewable natural gas that is available for use as a renewable low carbon vehicle fuel.

A3-4 (cont.)

We know that updating Los Angeles County's CAP was a significant undertaking and appreciate your leadership and all the people who have brought their dedication to help guide this effort. Please contact me at rtremblay@lacsd.org or at (562) 908-4288, extension 2701 if the Sanitation Districts can be of any assistance as you work toward implementation of the 2045 CAP.

Very truly yours,

Ray Tremblay

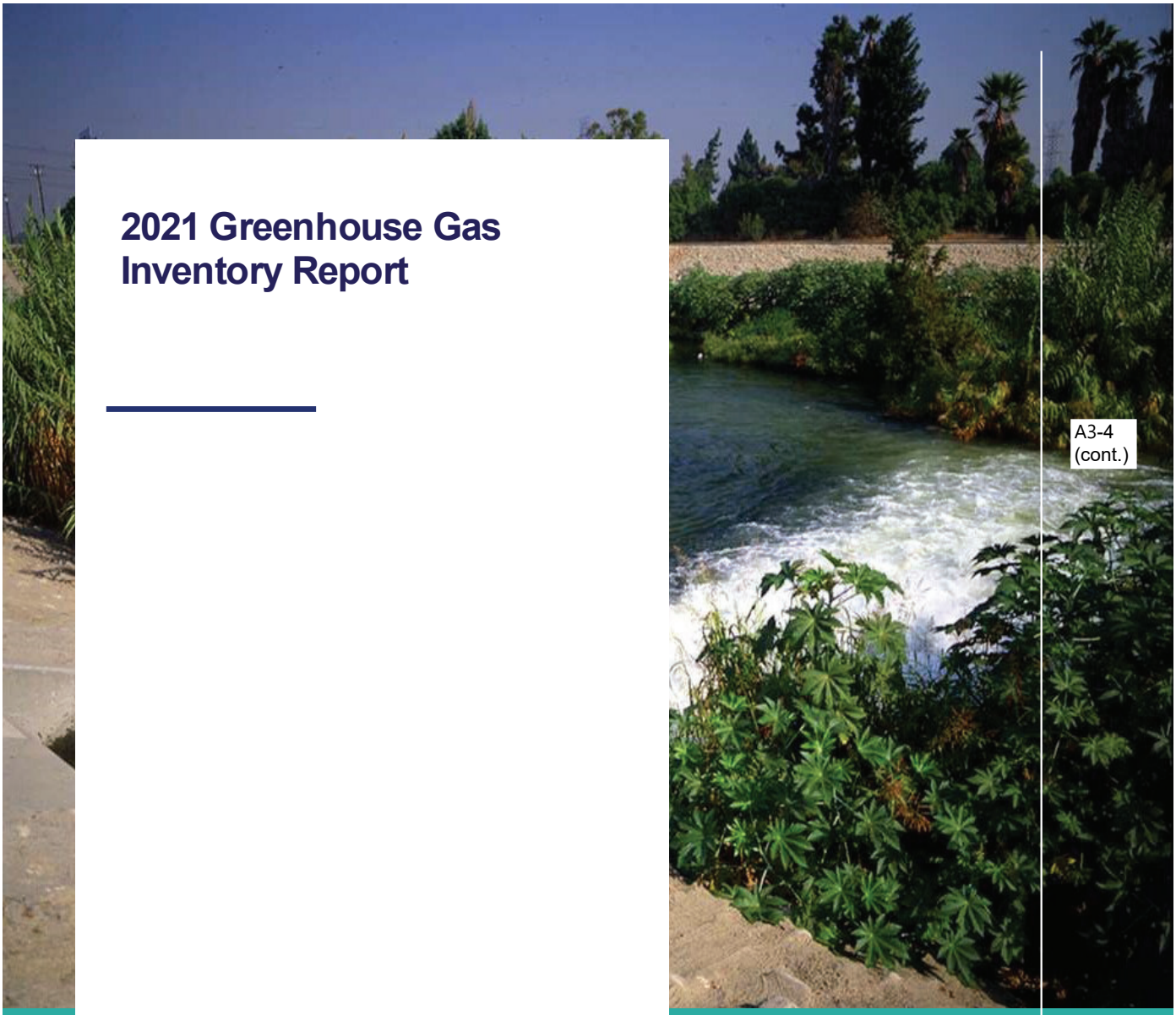
Raymond L. Tremblay
Department Head
Facilities Planning

RT:pb

Attachments

cc: climate@planning.lacounty.gov

DOC 6618568



2021 Greenhouse Gas Inventory Report

A3-4 (cont.)

LOS ANGELES COUNTY
SAN|TAT|ON D|STR|CTS
Converting Waste into Resources

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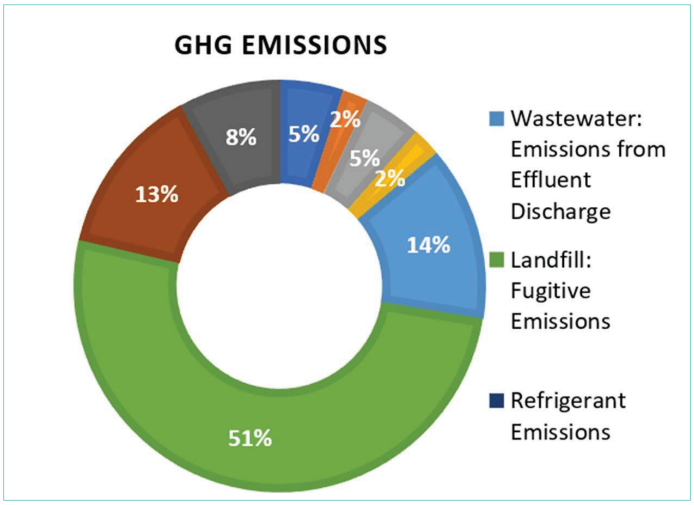
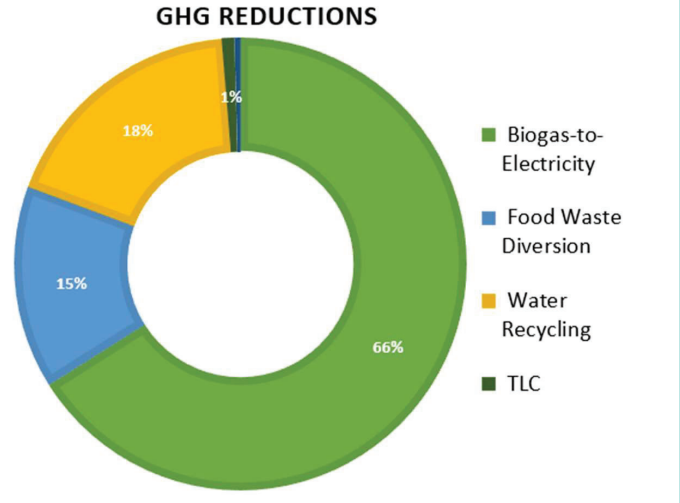
Executive Summary

This report compiles results from the 2021 greenhouse gas (GHG) inventory evaluation conducted by the Air Quality Engineering Section that encompasses all aspects of the Districts' operations. The evaluation provides information on the GHG quantities that the Districts emitted and reduced from operations, renewable energy projects, and waste diversion projects.

Of the emissions sources, fugitive landfill emissions made up 51% of the CO_2e produced. The following largest sources were emissions from wastewater effluent discharge (14%) and purchased electricity (13%).



As reported above, Districts' facilities reduced more GHG emissions than were produced. Reductions were led by biogas-to-electricity (66%), followed by water recycling (18%) and food waste diversion (15%).



It is important to remember that consultants apply a wide variety of assumptions when estimating GHG emissions and reductions. The information contained herein includes assumptions Air Quality Engineering believes are defendable. Specific information pertaining to these calculations are contained in the report below.

Background and Methodology

Emissions

The GHG emission calculations were primarily based on the current Local Government Operations Protocol (LGOP) Version 1.1, except as noted below. The LGOP categorized GHG emissions calculations into three scopes, as follows:

Scope 1	Direct emissions include emissions directly resulting from stationary and mobile combustions, process emissions from wastewater treatment processes, and fugitive emissions from landfills.
Scope 2	Indirect emissions include emissions from purchased electricity and natural gas.
Scope 3	Other emissions include emissions from employee commuting, employee business travel, and waste disposed of outside the organization boundary. [*This scope was not included in the evaluation because the Districts do not have financial or operational control over this emissions category*].

The LGOP draws a distinction between biogenic and anthropogenic emissions by excluding CO_2 from biogenic combustions. By way of review, biogenic emissions (which can only be CO_2) are considered part of the natural carbon cycle, thus typically not included in GHG inventories. Anthropogenic emissions are fossil in origin, thus adding to the existing GHG emissions inventory. For our industry, anthropogenic emissions can be fossil-based CO_2, CH_4, and N_2O. Therefore, they are included in the protocol and this evaluation as direct emissions.

Estimates of GHG Reduction

The standard protocols cited above do not estimate reductions; therefore, other calculations were used to estimate the GHG reductions. Below is the summary of methods used to evaluate the GHG reductions:

1. Biogas-to-Energy: The 2018 EPA's Avoided Emissions and Generation Tool (AVERT) emission factor was used to calculate avoided emissions from electricity produced by biogas-to-energy projects.
2. Water Recycling: The GHG reductions from water recycling were determined by comparing the energy intensity of importing water from the State Water Project (SWP) to the energy intensity of recycled water.
3. Food Waste Diversion: The EPA's Waste Reduction Model (WARM) was used to determine the GHG reduction from the food waste diversion program.
4. Tulare Lake Compost (TLC): The Biosolids Emissions Assessment Model (BEAM) was used to estimate the GHG reduction from the offset of fertilizer that would otherwise be used on the land.
5. Biogas-to-Vehicle Fuel: Carbon intensities comparison was used to estimate GHG reduction from this project.

Results

For consistency, all emission and reduction results use the standard reporting format, metric tons of CO_2 equivalent ($MTCO_2e$). CH_4 and N_2O emissions were converted to CO_2 equivalent using global warming potentials (GWP^1). Based on the evaluation, in 2021, the Districts emitted 234,851 $MTCO_2e$ and reduced 287,449 $MTCO_2e$ of GHGs. Thus, net emissions of GHG are a negative 52,598 $MTCO_2e$ (see Tables 1.1 and 1.2).

[1] GWPs for CH_4 and N_2O are 28 and 265, respectively. Source: Intergovernmental Panel on Climate Change Fifth Assessment Report, 2014.

5

Table 1.1 GHG Emissions	
Stationary Emissions	12,222
Mobile Emissions	4,951
Wastewater: Emissions from Stationary Combustion	11,008
Wastewater: Emissions from Nitrification/Denitrification Process	5,478
Wastewater: Emissions from Effluent Discharge	33,665
Landfill: Fugitive Emissions	124,558
Refrigerant Emissions	126
Purchased Electricity	32,574
Natural Gas	19,626
Total	**244,207**

Table 1.2 GHG Reductions	
Biogas-to-Electricity	189,716
Food Waste Diversion	41,944
Water Recycling	52,214
TLC	2,439
Biogas-to-Vehicle Fuel	1,136
Total	**287,449**

A. Emissions

The LGOP categorized emission calculations into three scopes: direct emissions, indirect emissions, and other emissions. This evaluation includes direct and indirect emissions but excludes other emissions because the Districts do not have financial or operational control over this category. Below is the summary of 2021 direct emissions and indirect emissions.

Table A GHG Emissions		
Direct Emissions	Stationary Emissions	12,222
	Mobile Emissions	4,950
	Wastewater: Emissions from Stationary Combustion	11,008
	Wastewater: Emissions from Nitrification/Denitrification Process	5,478
	Wastewater: Emissions from Effluent Discharge	33,665
	Landfill: Fugitive Emissions	124,558
	Refrigerant Emissions	126
Indirect Emissions	Purchased Electricity	32,574
	Natural Gas	19,626
Other emissions include emissions from employee commuting, employee business travel, and waste disposed of outside the organization boundary.		Not Included
	Total	244,207

A.1 Direct Emissions

Below is the summary of direct GHG emissions:

Table A.1 - Direct Emissions	
Category	MTCO2e
Stationary Emissions	12,222
Mobile Emissions	4.950
Wastewater: Emissions from Wastewater Stationary Combustion	11,008
Wastewater: Emissions from Nitrification/Denitrification Process	5,478
Wastewater: Emissions from Effluent Discharge	33,665
Landfill Fugitive Emissions	124,558
Refrigerant Emissions	126
Total Direct Emissions	192,007

A.1.1. Emissions from Stationary Combustion

This section of the evaluation includes emissions from stationary source combustion that use diesel, renewable diesel, and gasoline. Emissions from permitted portable engines are also included in this section. Emission factors were obtained from the Emission Factors for GHG Inventories included in Appendix A. Equations 6.2, 6.3, and 6.5 of the LGOP were used for these calculations.

Equation 6.2	CO_2 Emissions from Stationary Combustion (gallons)
Fuel CO_2 Emissions (metric tons) = Fuel Consumed (gallons) × Emission Factor (kg CO_2/gallon) ÷ 1,000 (kg/metric ton)	

Equation 6.3	CH_4 Emissions from Stationary Combustion (MMBtu)
CH_4 Emissions (metric tons) = Fuel Use (MMBtu) × Emission Factor (kg CH_4/MMBtu) ÷ 1,000 (kg/metric ton)	

Equation 6.5	N_2O Emissions from Stationary Combustion (MMBtu)
N_2O Emissions (metric tons) = Fuel Use (MMBtu) × Emission Factor (kg N_2O /MMBtu) ÷ 1,000 (kg/metric ton)	

Table A.1.1 - Emissions from Stationary Combustion

Global Warming Potential			1	28	265	
Fuel Type	Gallon	Emission Factors (kg CO_2e/Gallon)	CO_2 Emission Factor (kg CO_2/Gallon)	CH_4 Emission Factor (g CH_4/Gallon)	N_2O Emission Factor (g N_2O/Gallon)	$MTCO_2e$ Total
Renewable Diesel	25,293	5.02[1]	Combined in CO_2 Equivalent			127
Diesel	6,907		10.96	0.44	0.09	76
Gasoline	11,675		8.78	0.38	0.08	103
					Sub Total	306
Natural Gas	MMBTU		kg CO_2 /MMBTU	g CH_4 /MMBTU	g N_2O /MMBTU	$MTCO_2e$ Total
JAO	11,704		53.06	1.000	0.100	622
JWPCP	210,289		53.06	1.000	0.100	11,169
Palmdale	334		53.06	1.000	0.100	18
Valencia	1,078		53.06	1.000	0.100	57
					Subtotal	11,866
Propane	SCF		kg CO_2/SCF	g CH_4/SCF	g N_2O/SCF	$MTCO_2e$ Total
All Facilities	319,865		0.15463	0.007548	0.00151	50
					Sub Total	50
					Total	12,222

The entire volume of natural gas usage was included for facilities with natural gas combustion because combustion accounts for most of the usage in those facilities.

[1]The emission factor for renewable diesel is included in Appendix B.

A.1.2. Emissions from Mobile Combustion

This section of the evaluation includes emissions from mobile sources such as passenger cars, vans, trucks, and heavy equipment. Equations 7.2, 7.6, and 7.7 of the LGOP were used for these calculations. Emission factors were obtained from the Emission Factors for GHG Inventories included in Appendix B.

Equation 7.2	CO_2 Emissions from Mobile Combustion
Fuel CO_2 Emissions (metric tons) = Fuel Consumed (gallons) × Emission Factor (kg CO_2/gallon) ÷ 1,000 (kg/metric ton)	

Equation 7.6	CH_4 Emissions from Mobile Combustion
CH_4 Emissions (metric tons) = Annual Distance (miles) × Emission Factor (g CH_4/mile) ÷ 1,000,000 (g/metric ton)	

Equation 7.7	N_2O Emissions from Mobile Combustion
N_2O Emissions (metric tons) = Annual Distance (miles) × Emission Factor (g N_2O/mile) ÷ 1,000,000 (g/metric ton)	

The table below summarizes the input units used in calculations based on the fuel and mobile unit types.

Fuel	Mobile Type	CO_2e	CO_2	CH_4	N_2O
		Input Unit	Input Unit	Input Unit	Input Unit
Renewable Diesel	On-Road Vehicle	Gallon	Not applicable because the emission factor provided by the vendor has already been converted to Carbon Dioxide Equivalent (CO_2e)		
	Non-Road Heavy Equipment	Gallon			
Diesel	On-Road Vehicle	Not Applicable	Gallon	Mileage	Mileage
	Non-Road Heavy Equipment	Not Applicable	Gallon	Gallon	Gallon
Gasoline	On-Road Vehicle	Not Applicable	Gallon	Mileage	Mileage
Compressed Natural Gas (CNG)	On-Road Vehicle	Not Applicable	Cubic Foot	Mileage	Mileage

Table A.1.2 - Emissions from Mobile Combustion							
Global Warming Potential			1	28	265		
Fuel Type	Gallon or SCF	Mile	CO_2 Emission Factor (kg CO_2/Gallon or scf)	CH_4 Emission Factor (g CH_4/mile)	N_2O Emission Factor (g N_2O/mile)	Emission Factors (kg CO_2e/Gallon)	$MTCO_2e$ Total
Renewable Diesel	326,110	N/A	Combined in CO2 Equivalent			5.02[1]	1,637
Diesel (Heavy/Medium) 1995-2005	10,353	62,117	10.21	0.0051	0.0048		106
Diesel (Heavy/Medium) 2007-2021	34,596	207,574	10.21	0.0095	0.0491		356
Gasoline (total)	289,208		8.78				2,539
Passenger Car (2009 -2014)		227,715		0.0071	0.0046		0.32
Passenger Car (2015)		59,919		0.0068	0.0042		0.08
Passenger Car (2016)		1,785		0.0065	0.0038		0.00
Passenger Car (2017)		55,294		0.0054	0.0018		0.03
Passenger Car (2018 & after)		197,939		0.0052	0.0016		0.11
Trucks (1999)		2,317		0.0333	0.0618		0.04
Trucks (2003)		24,727		0.0221	0.0373		0.26
Trucks (2004)		41,617		0.0115	0.0088		0.11
Trucks (2005)		21,155		0.0105	0.0064		0.04
Trucks (2006)		99,765		0.0108	0.0080		0.24
Trucks (2007)		36,429		0.0103	0.0061		0.07
Trucks (2008)		234,326		0.0095	0.0036		0.29
Trucks (2009)		144,057		0.0095	0.0036		0.18
Trucks (2010)		46,221		0.0095	0.0035		0.06
Trucks (2011)		542,791		0.0096	0.0034		0.63
Trucks (2012)		291,187		0.0096	0.0033		0.33
Trucks (2013)		271,531		0.0095	0.0033		0.31
Trucks (2014)		194,467		0.0095	0.0033		0.22
Trucks (2015)		462,302		0.0094	0.0031		0.50
Trucks (2016)		308,598		0.0091	0.0029		0.32
Trucks (2017)		348,451		0.0084	0.0018		0.25
Trucks (2018 and after)		1,390,754		0.0081	0.0015		0.87

Heavy Duty Trucks (1987)		460		0.0322	0.0015		0.00
Heavy Duty Trucks (2008 & after)		23,306		0.0333	0.0134		0.10
CNG	5,399,401		0.054				294
CNG Light-Duty Cars		86,779		0.0820	0.0060		0.34
CNG Light-Duty Trucks		368,395		0.1230	0.0110		2.34
CNG Heavy-Duty Trucks		96,806		3.7000	0.0010		10.05
						Total	4,950

[1]The emission factor for renewable diesel is included in Appendix B.

A.1.3 Wastewater Treatment Plants Direct Emissions

The table below summarizes GHG types and sources that are directly emitted from wastewater treatment processes to the environment according to the LGOP. The first column was added to identify processes that apply to the Districts' operations.

Summary of Wastewater Treatment Process and Fugitive Emission Sources				
Scope	GHG type	GHG source	Data Available	Equation
A.1.3.a	Stationary CH_4 emissions	Incomplete combustion of digester gas at a centralized WWTP with anaerobic digestion of biosolids	Digester gas (ft^3/day) Fraction of CH_4 in biogas	Equation 10.1
			Population served	Equation 10.2
Not Applicable	Process CH_4 emissions	Anaerobic and facultative treatment lagoons	BOD_5 load (kg BOD_5/day) Fraction of overall BOD_5 removal performance	Equation 10.3
			Population served	Equation 10.4
Not Applicable	Fugitive CH_4 emissions	Septic systems	BOD_5 load (kg BOD_5/person/day)	Equation 10.5
			Population served	Equation 10.6
A.1.3.b	Process N_2O emissions	Centralized WWTP with nitrification/denitrification	Population served	Equation 10.7
Not Applicable	Process N_2O emissions	Centralized WWTP without nitrification/denitrification	Population served	Equation 10.8
A.1.3.c	Process N_2O emissions	Effluent discharge to receiving aquatic environments	N load (kg N/day)	Equation 10.9
			Population served	Equation 10.10

Below is the summary of GHG emissions for these LGOP Scope sources that are directly emitted from wastewater treatment processes to the environment:

Table A.1.3 - Wastewater Treatment Plants Direct Emissions	
CATEGORY	TOTAL ($MTCO_2e$)
STATIONARY EMISSIONS	11,008
PROCESS N_2O EMISSION FROM NITRIFICATION/DENITRIFICATION	5,478
PROCESS N_2O EMISSIONS FROM EFFLUENT	33,665
TOTAL WASTEWATER DIRECT EMISSION	50,152

A.1.3.a Emissions from Wastewater Stationary Combustion

This section includes the calculations of annual CH_4 emissions from the inherent inefficiency of combustion equipment. Equation 10.1 of the LGOP was used to calculate the CH_4 emissions from the incomplete combustion of digester gas.

Equation 10.1	Stationary CH_4 from Incomplete Combustion of Digester Gas (site-specific digester gas data)
Annual CH4 emissions (metric tons CO_2e) = (Digester Gas x F_{CH4} x $\rho(CH_4)$ x (1-DE) x 0.0283 x 365.25 x 10^{-6}) x GWP	

Where:

Term	Description	Value
Digester Gas	Measured total standard cubic feet of digester gas combusted	user input
F CH_4	measured fraction of CH_4 in biogas	user input
ρ (CH_4)	density of methane at standard conditions [g/m^3]	662.00
DE	CH_4 Destruction Efficiency	.99
0.0283	conversion from ft^3 to m^3 [m^3/ft^3]	0.0283
365.25	conversion factor [day/year]	365.25
10^{-6}	conversion from g to metric ton [metric ton/g]	10^{-6}
GWP	Global Warming Potential	28

Source: EPA *Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2007*, Chapter 8, 8-13 (2009).

Below is the summary of the results of annual CH_4 emissions from the incomplete combustion of digester gas:

Table A.1.3.a Emissions from Wastewater Stationary Combustion

	Combusted Gas (SCF)	CH_4 Fraction	$p(CH_4)$	DE	GWP	$MTCO_2e$ Total (MTCO2e)
JWPCP	3,141,590,585	0.61	662	0.99	28	10,097
Lancaster	92,279,508	0.61	662	0.99	28	297
Palmdale	54,687,225	0.61	662	0.99	28	176
Valencia WRP	136,549,000	0.61	662	0.99	28	439
					Total	11,008

A.1.3.b Emissions from Nitrification/Denitrification Process

This section includes the calculations of annual N_2O emissions from the nitrification and denitrification process used in wastewater treatment. Except for the industrial/commercial factor ($F_{ind-com}$), this GHG evaluation utilized values specified in the LGOP. The $F_{ind-com}$ factors used in this evaluation were obtained from the 2020 Pretreatment Program Annual Report. Equation 10.7 of the LGOP was used to calculate N_2O emissions from the wastewater treatment processes.

Equation 10.7 Process N_2O Emissions from WWTP with Nitrification/Denitrification
Annual N_2O emissions (metric tons CO_2e) = ((P total x Find-com) x EF nit/den x 10^{-6}) x GWP

Where:

Term	Description	Value
P total	the total population that is served by the centralized WWTP adjusted for industrial discharge, if applicable [person]	User input
$F_{ind-com}$	the factor for industrial and commercial co-discharge waste into the sewer system	Varies, used value from the 2020 Pretreatment Report
EF nit/den	emission factor for a WWTP with nitrification/denitrification [g N2O/person/year]	7
10^6	conversion from g to metric ton [metric ton/g]	10^6
GWP	N2O Global Warming Potential	265
Source: EPA *Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2007*, Chapter 8, 8-13 (2009).		

The results of N_2O emissions from the nitrification and denitrification are included in Table A.1.3.a below:

Table A.1.3.b Emissions from Nitrification/Denitrification Process

Facility	Population Served	F Industrial Factor	EF Emission Factor	Conversion Factor	GWP	MTCO2e Total
Long Beach WRP	226,811	1.05	7.00	1.00E-06	265	442
Los Coyotes WRP	359,001	1.13	7.00	1.00E-06	265	753
Whittier Narrows WRP	406,051	1.11	7.00	1.00E-06	265	836
San Jose Creek WRP	1,069,856	1.07	7.00	1.00E-06	265	2,124
Pomona WRP	79,262	1.04	7.00	1.00E-06	265	153
Saugus WRP	74,351	1.01	7.00	1.00E-06	265	139
Lancaster WRP	128,204	1.06	7.00	1.00E-06	265	252
Palmdale WRP	196,826	1.01	7.00	1.00E-06	265	369
Valencia WRP	201,619	1.10	7.00	1.00E-06	265	411
					Total	5,478

A.1.3.c Emissions from Effluent Discharge

This section includes the calculations of annual N_2O emissions from effluent discharged into rivers and estuaries. This GHG evaluation utilized all values that are specified in the LGOP. It should be noted that the LGOP does not include an emission factor for ocean discharge; therefore, the JWPCP results may be overestimated because there is less biological conversion of nitrogen to N_2O in the ocean.

Equation 10.9	Process N_2O Emissions from Effluent Discharge (site-specific N load data)
Annual N_2O emissions (metric tons CO_2e) = (N Load x EF effluent x 365.25 x 10-3 x 44/28) x GWP	

Where:

Term	Description	Value
N Load	= measured average total nitrogen discharged [kg N/day]	user input
EF effluent	= emission factor [kg N_2O-N/kg sewage-N produced]	0.005
365.25	= conversion factor [day/year]	365.25
10^{-3}	= conversion from kg to metric ton [metric ton/kg]	10^{-3}
44/28	= molecular weight ratio of N_2O to N_2	1.57
GWP	= Global Warming Potential	265
Source: EPA *Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2007*, Chapter 8, 8-13 (2009).		

Below is the summary of the results of annual N_2O emissions from effluent that discharged into rivers and estuaries, apart from JWPCP which discharges to the Pacific Ocean:

Table A.1.3.c.1 Emissions from Effluent Discharge

Facility	Average Total Nitrogen	Average Effluent* (MGD)	N load (kg N/day)	N_2O to N_2 Conversion	GWP	Annual N_2O Emissions ($MTCO_2e$)
JWPCP	43.93	242.28	40,232	1.57	265	30,569
Long Beach WRP	9.87	12.67	473	1.57	265	359
Los Coyotes WRP	8.11	17.52	537	1.57	265	408
San Jose Creek East WRP	7.05	35.71	952	1.57	265	723
San Jose Creek West WRP	7.09	26.9	721	1.57	265	548
Pomona WRP	10.10	5.45	208	1.57	265	158
Saugus WRP	6.61	4.85	121	1.57	265	92
Valencia WRP	6.34	13.55	325	1.57	265	247
Lancaster WRP	5.45	13.9	286	1.57	265	218
Palmdale WRP	6.40	8.33	202	1.57	265	153
La Canada WRP	17.95	0.066	4	1.57	265	3
Whittier Narrows WRP	7.90	8.27	247	1.57	265	188
					Total	33,665

* Annual flows are still under review and subject to change.

A.1.4. Landfill Fugitive Emissions

The LGOP specified equation 9.1 to calculate the direct emissions from landfills with comprehensive landfill gas collection systems. Except for the collection efficiency (CE) factor, this GHG evaluation utilized values specified in the LGOP. Actual CE factors, based on research performed by the Districts, were used in place of the 0.75 CE factor specified in the LGOP. Since the actual CE factors are based upon emissions above the soil cover, the oxidation factor (OX) was omitted from these calculations. Collection efficiency factors used in this section are included in Appendix C.

Equation 9.1	Landfills with Comprehensive LFG Collection Systems
CH_4 emitted (metric tons CO_2e) = LFG collected x CH_4% x {(1 - DE) + [((1 – CE) / CE) x (1 – OX)]} x unit conversion x GWP	

Where:

Term	Description	Value
LFG collected	= Annual LFG collected by the collection system (MMSCF)	user input
CH_4%	= Fraction of CH_4 in LFG	0.5, if no facility-specific value is available
DE	= CH_4 Destruction Efficiency, based on the type of combustion/flare system.	.991
CE	= Collection Efficiency	Varies, used actual CE factors
OX	= Oxidation Factor	LGOP specify 0.10 but omitted in this evaluation
Unit conversion	= Convert million standard cubic feet of CH_4 to metric tons of CH_4 (volume units to mass units)	19.125
GWP	= Global Warming Potential to convert metric tons of methane into metric tons of CO_2 equivalents (CO_2e).	28

Table A.1.4: CH_4 Emissions from Landfill

Facility	Collected Landfill Gas (MMSCF)	CH_4%	DE	CE	OX	Unit Conversion	GWP	Landfill Direct Emission ($MTCO_2e$)
Puente Hills Landfill	7,459	28.29	0.99	0.950	0	19.125	28	70,775
Calabasas Landfill	1,967	27.53	0.99	0.918	0	19.125	28	28,800
Scholl Canyon Landfill	3,135	33.99	0.99	0.989	0	19.125	28	12,051
Spadra Landfill	1,690	22.69	0.99	0.972	0	19.125	28	7,969
Palos Verdes Landfill	2,323	6.88	0.99	0.957	0	19.125	28	4,699
Mission Canyon Landfill	41	11.67	0.99	0.915	0	19.125	28	264
							Total	124,558

A.1.5 Refrigerant Emissions

Per the refrigerant leak checks performed in 2021, below are the emissions from refrigerant leaks. The refrigerant leak testing results are included in Appendix D.

Table A.1.5 - Refrigerant Emissions

Facility	Refrigerant Blend	Quantity (lb)	GWP*	Emission (MTCO2e)
Tulare Lake Compost	R-410B	27	2,229	27.30
Palmdale WRP	R-410A	23.5	2,088	22.26
Lancaster WRP	R-410A	80.5	2,088	76.24
			Total	125.80

*From 100-year GWPs from IPCC Fourth Assessment Report (AR4), 2007.

A.2 Indirect Emissions

According to the LGOP, indirect emissions are emissions from purchased energy. Only two indirect emissions sources apply to the Districts' operations: purchased electricity and natural gas for heating. Calculations for GHG emissions and emission factors are included in Appendix E. The following equations were used to determine the indirect emissions from purchased electricity and natural gas:

A.2.1 Electricity

Equation 6.10	Indirect Emissions from Electricity Use (mt)
CO_2 Emissions = Electricity Use (MWh) × Emission Factor (lbs. CO_2/MWh) ÷ 2,204.62 (lbs./mt)	
CH_4 Emissions = Electricity Use (MWh) × Emission Factor (lbs. CH_4/MWh) ÷ 2,204.62 (lbs./mt)	
N_2O Emissions = Electricity Use (MWh) × Emission Factor (lbs. N_2O /MWh) ÷ 2,204.62 (lbs./mt)	

A.2.2 Natural Gas

Equation 6.16	Converting Steam or Heat Consumption from Therms to MMBtu
Energy Consumption (MMBtu) = Energy Consumption (Therms) x 0.1 (MMBtu/Therm)	

Equation 6.20	Emissions from Imported Steam or Heat (mt)
Total CO_2 Emissions = Energy Consumed (MMBtu) x Emission Factor (kg CO_2 / MMBtu) ÷ 1,000 (kg/mt)	
Total CH_4 Emissions = Energy Consumed (MMBtu) x Emission Factor (kg CH_4 / MMBtu) ÷ 1,000 (kg/mt)	
Total N_2O Emissions = Energy Consumed (MMBtu) x Emission Factor (kg N_2O / MMBtu) ÷ 1,000 (kg/mt)	

Below is the summary of the 2021 indirect emissions:

Table A.2 Indirect Emissions				
Global Warming	1	28	265	
Emission Factors	496.50	0.0340	0.0040	
Purchased Electricity	$MTCO_2$	$MTCH_4$ as CO_2e	MTN_20 as CO2e	$MTCO_2e$ Total
144,056	32,443	62.21	69.26	32,574
Emission Factors	53.06	0.0010	0.0001	
Purchased Natural Gas	$MTCO_2$	$MTCH_4$ as CO2e	MTN_20 as CO_2e	$MTCO_2e$ Total
369,867	19,625	0.55	0.000015	19,626
			Total	52,200

B. 2021 GHG Reductions

This section of the report includes results of GHG reductions from programs operated by the Districts. Table 1 displays a summary of the GHG reductions achieved by each program.

Table B – GHG Reductions and Equivalent Units	
Programs	Reduction $MTCO_2e$
Biogas-to-Electricity	189,716
Food Waste Diversion	41,944
Water Recycling	52,214
Tulare Lake Compost	2,439
Biogas-to-Vehicle Fuel	1,136
2021 Total Reduction	287,449

B.1 Biogas-to-Electricity

The Districts operate three biogas-to-electricity facilities: the Calabasas Landfill Gas-to-Energy (CALF), the Puente Hills Gas-to-Energy Facility (PERG), and the JWPCP Total Energy Facility (TEF). The calculations shown in the table below were based on the EPA's GHG Equivalency Calculator. The emission factor used in this section was obtained from the EPA's 2019 Avoided Emissions and Generation Tool (AVERT) included in Appendix F. The quantity of net electricity generated at each facility was used to determine the amount of GHG reduction resulting from these renewable energy facilities.

Table B.1 – Gas-to-Electricity			
Program	Electricity Generated (MW)	AVERT Emission Factor (lb/MWh)	Offset of Carbon Dioxide ($MTCO_2E$)
JWPCP	20	1,061	84,318
Puente Hills Energy Recovery from Gas Facility	21	1,061	88,534
Calabasas Turbine Facility	4	1,061	16,864
		GHG Benefit	189,716

B.2 Food Waste Diversion

The Districts divert food waste from landfills and direct this resource to the Joint Water Pollution Control Plant (JWPCP) for anaerobic digestion. Food waste enters the Districts' anaerobic digestion stream either directly from waste haulers or through the diversion process at the Puente Hills Materials Recovery Facility (PHMRF). The EPA's Waste Reduction Model (WARM) was used to evaluate the GHG reductions from food waste diversion. The table below shows the results from the WARM evaluation. The WARM worksheet and reference pages are included in Appendix G.

Table B.2 Food Waste Management	
Food Waste (Ton)	GHG Benefit ($MTCO_2e$)
77,794	41,944

B.3 Water Recycling

This portion of the evaluation included the GHG reduction from the beneficial use of recycled water. The GHG reductions are shown in the table below and were determined by comparing the energy intensity of imported water to the energy intensity of recycled water. The GHG calculations used in this section were based on the method used in the Role of Recycled Water in Energy Efficiency and Greenhouse Gas Reduction (2008) published by the California Sustainability Alliance. The energy intensity includes the energy needed for pumping, treatment, and water delivery. Reference pages for the calculations are included in Appendix H.

Table B.3 - GHG Reductions from Water Recycling

	Water Volume (AFY)	Estimated Energy Usage (kWh/AF) *	Emission Factor (MTCO2e /MWH)**	GHG Emission (MTCO2e)
Recycled Water	112,700	600	0.226	15,282
			Total Emission	15,282
Colorado River Aqueduct Imported Water (Baseline)	56,350	2,000	0.226	25,470
State Water Project Imported Water (Baseline)	56,350	3,300	0.226	42,026
Total Baseline				67,496
			GHG Benefit	52,214

*Estimated energy usages are from the Role of Recycled Water in Energy Efficiency and Greenhouse Gas Reduction Study and the updated Estimation of Greenhouse Gas Production from Advanced Treatment and Pumping of JWPCP Effluent memo.

**The emission factor presented in this column was based on the emission rating of 498.7 lb of CO2e per MWh, which equals 0.226 metric tons of CO2e per MWh. The emission rating was obtained from the 2018 eGRID summary published by the EPA. The emission rating used in this calculation was selected because it represents the average emission output in California. The conversion factor from the Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources published by the EPA was not selected because it represents the highest nationwide emission rating rather than the regional average emission rating.

B.4 Tulare Lake Compost (TLC)

This portion of the evaluation examined the GHG reductions from biosolids management at TLC. Biosolids generated by the Districts were managed through Aerated Static Pile (ASP) composting. The Biosolids Emissions Assessment Model (BEAM) was used to estimate the GHG reduction from the process. BEAM was prepared by SYLVIS for the Canadian Council of Ministers of the Environment. The GHG reduction was from the offset of fertilizer that would otherwise be used on the land. The GHG reduction is shown below, and the BEAM worksheets are included in Appendix I.

Table B.4 Biosolids Management

Facility	Quantity (Ton)	GHG Emission ($MTCO_2e$)
TLC	40,613	2,439

B.5 Biogas-to-Vehicle Fuel

This portion of the evaluation included the GHG reduction from the Biogas-to-Vehicle Fuel project. The GHG reductions are shown in the table below and were determined by comparing the carbon intensity of renewable natural gas (RNG) produced by the project with that of traditional diesel. Carbon intensities used in this evaluation are included in Appendix J.

Table B.5 Biogas-to-Vehicle Fuel Project			
Fuel Type	GGE or Gallon	Carbon Intensity (kg CO_2e/Gallon)	$MTCO_2e$ Total
RNG	102,172	2.59	265
Diesel (Baseline)	102,172	13.72	1,401
		GHG Reduction	1,136

Appendix A: Stationary Emissions

Emission Factors for Greenhouse Gas Inventories

Last Modified: 1 April 2021

Red text indicates an update from the 2020 version of this document.

Typically, greenhouse gas emissions are reported in units of carbon dioxide equivalent (CO_2e). Gases are converted to CO_2e by multiplying by their global warming potential (GWP). The emission factors listed in this document have not been converted to CO_2e. To do so, multiply the emissions by the corresponding GWP listed in the table below.

Gas	100-Year GWP
CH_4	25
N_2O	298

Source: Intergovernmental Panel on Climate Change (IPCC), Fourth Assessment Report (AR4), 2007. See the source note to Table 11 for further explanation.

Table 1 Stationary Combustion

Fuel Type	Heat Content (HHV)	CO_2 Factor	CH_4 Factor	N_2O Factor	CO_2 Factor	CH_4 Factor	N_2O Factor
	mmBtu per short ton	kg CO_2 per mmBtu	g CH_4 per mmBtu	g N_2O per mmBtu	kg CO_2 per short ton	g CH_4 per short ton	g N_2O per short ton
Coal and Coke							
Anthracite Coal	25.09	103.69	11	1.6	2,602	276	40
Bituminous Coal	24.93	93.28	11	1.6	2,325	274	40
Sub-bituminous Coal	17.25	97.17	11	1.6	1,676	190	28
Lignite Coal	14.21	97.72	11	1.6	1,389	156	23
Mixed (Commercial Sector)	21.39	94.27	11	1.6	2,016	235	34
Mixed (Electric Power Sector)	19.73	95.52	11	1.6	1,885	217	32
Mixed (Industrial Coking)	26.28	93.90	11	1.6	2,468	289	42
Mixed (Industrial Sector)	22.35	94.67	11	1.6	2,116	246	36
Coal Coke	24.80	113.67	11	1.6	2,819	273	40
Other Fuels - Solid							
Municipal Solid Waste	9.95	90.70	32	4.2	902	318	42
Petroleum Coke (Solid)	30.00	102.41	32	4.2	3,072	960	126
Plastics	38.00	75.00	32	4.2	2,850	1,216	160
Tires	28.00	85.97	32	4.2	2,407	896	118
Biomass Fuels - Solid							
Agricultural Byproducts	8.25	118.17	32	4.2	975	264	35
Peat	8.00	111.84	32	4.2	895	256	34
Solid Byproducts	10.39	105.51	32	4.2	1,096	332	44
Wood and Wood Residuals	17.48	93.80	7.2	3.6	1,640	126	63
	mmBtu per scf	kg CO_2 per mmBtu	g CH_4 per mmBtu	g N_2O per mmBtu	kg CO_2 per scf	g CH_4 per scf	g N_2O per scf
Natural Gas							
Natural Gas	0.001026	53.06	1.0	0.10	0.05444	0.00103	0.00010
Other Fuels - Gaseous							
Blast Furnace Gas	0.000092	274.32	0.022	0.10	0.02524	0.000002	0.000009
Coke Oven Gas	0.000599	46.85	0.48	0.10	0.02806	0.000288	0.000060
Fuel Gas	0.001388	59.00	3.0	0.60	0.08189	0.004164	0.000833
Propane Gas	0.002516	61.46	3.0	0.60	0.15463	0.007548	0.001510
Biomass Fuels - Gaseous							
Landfill Gas	0.000485	52.07	3.2	0.63	0.025254	0.001552	0.000306
Other Biomass Gases	0.000655	52.07	3.2	0.63	0.034106	0.002096	0.000413
	mmBtu per gallon	kg CO_2 per mmBtu	g CH_4 per mmBtu	g N_2O per mmBtu	kg CO_2 per gallon	g CH_4 per gallon	g N_2O per gallon
Petroleum Products							
Asphalt and Road Oil	0.158	75.36	3.0	0.60	11.91	0.47	0.09
Aviation Gasoline	0.120	69.25	3.0	0.60	8.31	0.36	0.07
Butane	0.103	64.77	3.0	0.60	6.67	0.31	0.06
Butylene	0.105	68.72	3.0	0.60	7.22	0.32	0.06
Crude Oil	0.138	74.54	3.0	0.60	10.29	0.41	0.08
Distillate Fuel Oil No. 1	0.139	73.25	3.0	0.60	10.18	0.42	0.08
Distillate Fuel Oil No. 2	0.138	73.96	3.0	0.60	10.21	0.41	0.08
Distillate Fuel Oil No. 4	0.146	75.04	3.0	0.60	10.96	0.44	0.09
Ethane	0.068	59.60	3.0	0.60	4.05	0.20	0.04
Ethylene	0.058	65.96	3.0	0.60	3.83	0.17	0.03
Heavy Gas Oils	0.148	74.92	3.0	0.60	11.09	0.44	0.09
Isobutane	0.099	64.94	3.0	0.60	6.43	0.30	0.06
Isobutylene	0.103	68.86	3.0	0.60	7.09	0.31	0.06
Kerosene	0.135	75.20	3.0	0.60	10.15	0.41	0.08
Kerosene-Type Jet Fuel	0.135	72.22	3.0	0.60	9.75	0.41	0.08
Liquefied Petroleum Gases (LPG)	0.092	61.71	3.0	0.60	5.68	0.28	0.06
Lubricants	0.144	74.27	3.0	0.60	10.69	0.43	0.09
Motor Gasoline	0.125	70.22	3.0	0.60	8.78	0.38	0.08
Naphtha (<401 deg F)	0.125	68.02	3.0	0.60	8.50	0.38	0.08
Natural Gasoline	0.110	66.88	3.0	0.60	7.36	0.33	0.07
Other Oil (>401 deg F)	0.139	76.22	3.0	0.60	10.59	0.42	0.08
Pentanes Plus	0.110	70.02	3.0	0.60	7.70	0.33	0.07
Petrochemical Feedstocks	0.125	71.02	3.0	0.60	8.88	0.38	0.08
Propane	0.091	62.87	3.0	0.60	5.72	0.27	0.05
Propylene	0.091	67.77	3.0	0.60	6.17	0.27	0.05
Residual Fuel Oil No. 5	0.140	72.93	3.0	0.60	10.21	0.42	0.08
Residual Fuel Oil No. 6	0.150	75.10	3.0	0.60	11.27	0.45	0.09
Special Naphtha	0.125	72.34	3.0	0.60	9.04	0.38	0.08
Unfinished Oils	0.139	74.54	3.0	0.60	10.36	0.42	0.08
Used Oil	0.138	74.00	3.0	0.60	10.21	0.41	0.08
Biomass Fuels - Liquid							
Biodiesel (100%)	0.128	73.84	1.1	0.11	9.45	0.14	0.01
Ethanol (100%)	0.084	68.44	1.1	0.11	5.75	0.09	0.01
Rendered Animal Fat	0.125	71.06	1.1	0.11	8.88	0.14	0.01
Vegetable Oil	0.120	81.55	1.1	0.11	9.79	0.13	0.01
Biomass Fuels - Kraft Pulping Liquor, by Wood Furnish							
North American Softwood		94.4	1.9	0.42			
North American Hardwood		93.7	1.9	0.42			
Bagasse		95.5	1.9	0.42			
Bamboo		93.7	1.9	0.42			
Straw		95.1	1.9	0.42			

Source:
Federal Register EPA; 40 CFR Part 98; e-CFR, (see link below). Table C-1, Table C-2 (as amended at 81 FR 89252, Dec. 9, 2016), Table AA-1 (78 FR 71965, Nov. 29, 2013).
https://www.ecfr.gov/cgi-bin/text-idx?SID=ae265d7d6f98ec86fcd8640b9793a3f6&mc=true&node=pt40.23.98&rgn=div5#ap40.23.98_19.1
Note: Emission factors are per unit of heat content using higher heating values (HHV). If heat content is available from the fuel supplier, it is preferable to use that value. If not, default heat contents are provided.

Appendix B: Mobile Emissions

T2N-1290

Deemed Complete:	December 14, 2018	Staff Summary
Posted for Comment:	December 31, 2018	Tier 2 Method 2B Pathway
Certified and Posted:	January 16, 2019	AltAir Paramount LLC, Paramount, California
CI Effective:	October 1, 2018	North American Tallow to Renewable Diesel Pathway
Fuel Pathway Code:	RDT209	

Pathway Summary

AltAir Paramount (AltAir) LLC operates a Renewable Diesel (RD) plant in Paramount, California. This plant produces RD and renewable naphtha (RN) using a mixture of animal tallow and small quantities of other non-edible vegetable oils. The feedstocks are processed in AltAir's hydro-treating unit to produce RD and RN with renewable jet fuel and renewable propane as co-products. The renewable propane is used on-site as process fuel and small amounts are used in a process burner.

Because AltAir does not have access to a hydrogen plant to pipe in gaseous hydrogen, AltAir purchases liquefied hydrogen which is then transported by truck to their facility. AltAir has applied for a provisional Tier 2 Method 2B RD pathway using North American tallow as feedstock.

Carbon Intensity of Tallow to RD Pathway

The following table lists the proposed CI for this pathway.

Proposed Pathway CI

Fuel	Pathway FPC	Pathway Description	Carbon Intensity (gCO_2e/MJ)		
			Direct Emissions	Indirect Land Use	Total
Renewable Diesel from Tallow	RDT209	Tier 2 Method 2B Pathway: Renewable Diesel produced from North American Tallow. Fuel produced in Paramount, California (Provisional)	38.75	0	38.75

Operating Conditions

Operations at the plant will be subject to the following conditions designed to ensure that the CI of the RD produced at the AltAir plant will remain at or below the value appearing in the above table for all volumes of RD produced using this feedstock and sold in California:

1. Except for periods of abnormal operations, such as planned maintenance or unpredictable, unavoidable, and uncontrollable force majeure events, the CI value specified in the application shall not be exceeded.
2. The commingled feedstock accounting method will be used to determine the CIs of the mixed feedstock. Producers and regulated parties should use this approach to calculate the volumes based on weighted averages of renewable diesel associated with each feedstock present in the finished fuel storage tank at any given time. Producers should be able to provide records that unequivocally associate specific quantities of feedstock with specific volumes of fuel produced. As volumes are added to and withdrawn from the tank, the volume of each feedstock-related CI will be adjusted to account for those additions and withdrawals. Commingled feedstock CI accounts for mixed-feedstocks must be directly determined over an accounting period of no more than a calendar quarter. That is, all volumes of fuel produced must be associated with a specific feedstock within a calendar quarter. Gallons will be associated with feedstock based on the accepted yields for each fuel.
3. Because this pathway is classified as provisional, AltAir must submit two years of quarterly operating data for this plant that is indicative of long-term stable operation. The data must be

submitted every quarter until CARB receives two full years of operating data. Adjustments related to provisional CIs are subject to section 94888(d)(2).

Staff Analysis and Recommendations

Staff has reviewed the AltAir application for certification of Renewable Diesel produced from tallow and finds the following:

- Staff has replicated using the modified version of the CA-GREET 2.0 Tier 2 model with reasonable accuracy the carbon intensity calculations provided by the applicant. Staff has made this determination based upon the material and energy use information, design considerations, process yields, and other input parameters furnished by the applicant.

- On the basis of these findings, CARB staff recommends that the AltAir application for Method 2B LCFS pathway stated in above table be certified, subject to the operating conditions set forth in this document.

U.S. Department of Energy - Energy Efficiency and Renewable Energy
Alternative Fuels Data Center

Alternative Fuel Tax

The excise tax imposed on compressed natural gas (CNG), liquefied natural gas (LNG), and propane used to operate a vehicle can be paid through an annual flat rate sticker tax based on the following vehicle weights:

(mailto:technicalresponse@icf.com?subject=Laws and Incentives Inquiry: Alternative Fuel Tax&body=Note: The Technical Response Service (TRS) representatives are seasoned experts who can help you find answers to technical questions about alternative fuels, fuel economy improvements, idle-reduction measures, and advanced vehicles. The TRS can answer questions about laws and incentives but is not involved with enacting or passing any federal or state laws or incentives.)

Something Missing?

Email the Technical Response Service (mailto:technicalresponse@icf.com?body=Note%3A%20The%20Technical%20Response%20Se reduction%20measures%2C%20and%20advanced%20vehi or call 800-254-6735 (tel:8002546735).

Unladen Weight	Fee
All passenger cars and other vehicles 4,000 pounds (lbs.) or less	$36
More than 4,000 lbs. but less than 8,001 lbs.	$72
More than 8,000 lbs. but less than 12,001 lbs.	$120
12,001 lbs. or more	$168

Alternatively, owners and operators may pay an excise tax on CNG of $0.0887 per gasoline gallon equivalent (GGE) measured at standard pressure and temperature, $0.1017 for each diesel gallon equivalent (DGE) of LNG, and $0.06 per gallon of propane. One GGE is equal to 126.67 cubic feet or 5.66 lbs. of CNG and one DGE is equal to 6.06 lbs. of LNG. The excise tax on ethanol and methanol fuel blends containing up to 15% gasoline or diesel fuel is one-half the tax on gasoline and diesel prescribed by California Revenue and Taxation Code (https://leginfo.legislature.ca.gov/faces/home.xhtml) section 8651.

(Reference California Revenue and Taxation Code (https://leginfo.legislature.ca.gov/faces/home.xhtml) 8651-8651.8, and California Business and Professions Code (https://leginfo.legislature.ca.gov/faces/home.xhtml) 13404 and 13470)

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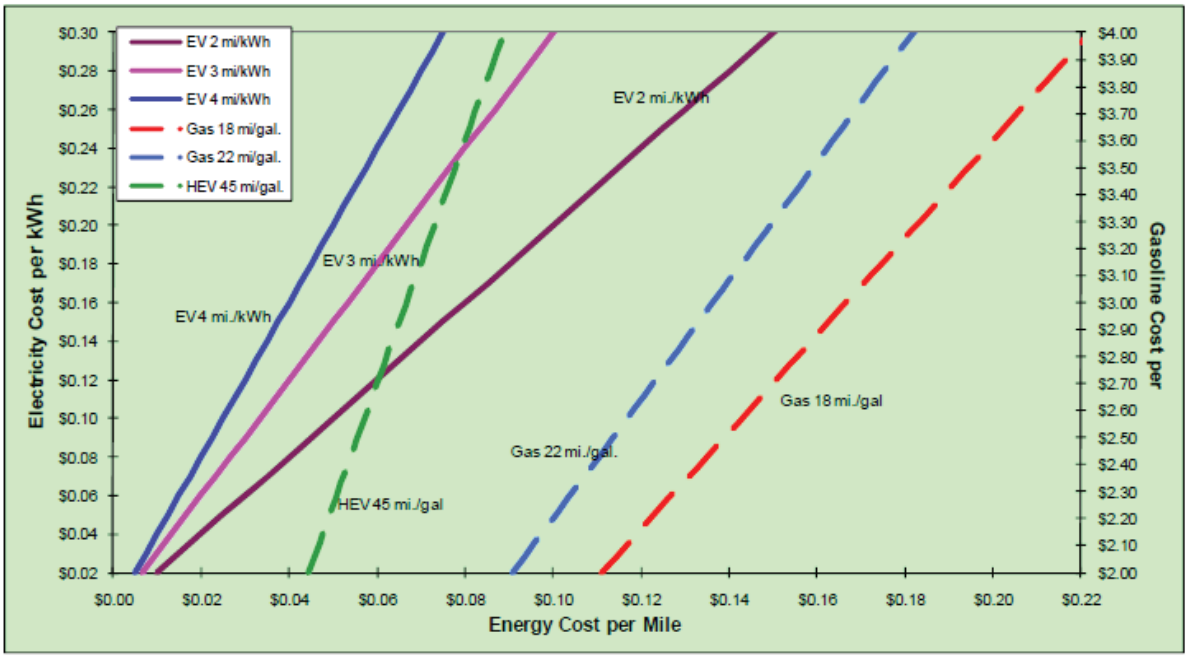
Comparing Energy Costs per Mile for Electric and Gasoline-Fueled Vehicles

The fuel cost of driving an electric vehicle depends on the cost of electricity per kilowatt-hour (kWh) and the energy efficiency of the vehicle. For example, to determine the energy cost per mile of an electric vehicle, select the location on the left axis (Electricity Cost per kWh) at 10 cents in the graph below. Draw a horizontal line to the right until you bisect the EV 3 mi/kWh line. Now draw a vertical line down until you bisect the bottom axis (Energy Cost per Mile). This tells you that the fuel for an electric vehicle with an energy efficiency of 3 miles per kWh costs about 3.3 cents per mile when electricity costs 10 cents per kWh.



The national average cost for electricity in the U.S. is about 10 cents per kWh, while the average residential rate is about 11.7 cents per kWh. Some electric utilities have historically had electric vehicle charging rates that vary by time of use, day, and season. In the past, these rates have ranged from 3 cents to as high as 50 cents per kWh. Older electric vehicles have energy efficiencies of about 2 miles per kWh. Some electric vehicles, such as the EV1 from General Motors, had energy efficiencies of over 6 miles per kWh under some testing.

To determine the energy cost per mile of a gasoline vehicle, pick the location on the right axis (Gasoline Cost per gallon) at $3.50. Draw a horizontal line to the left until you bisect the Gas 22 mi/gal line. Now draw a vertical line down until you bisect the bottom axis (Energy Cost per Mile). This tells you that the fuel for a gasoline vehicle with an energy efficiency of 22 miles per gallon costs about 15.9 cents per mile when gasoline costs $3.50 per gallon. The mileage for commercial fleet vehicles such as light-duty pickups ranges from below 17 miles per gallon to generally about 22 miles per gallon.

The energy cost per mile is also included for a hybrid electric vehicle (HEV) with an energy efficiency of 45 miles per gallon, as these types of vehicles are increasingly being used. If $3.50 per gallon of gasoline is also assumed for the HEV that gets 45 mpg, the energy cost per mile would be 7.8 cents per mile.

Red text indicates an update
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Emission Factors for Greenhouse Gas Inventories
Last Modified: 26 March 2020

Table 2 Mobile Combustion CO_2

Fuel Type	kg CO_2 per unit	Unit
Aviation Gasoline	8.31	gallon
Biodiesel (100%)	9.45	gallon
Compressed Natural Gas (CNG)	0.05444	scf
Diesel Fuel	10.21	gallon
Ethanol (100%)	5.75	gallon
Kerosene-Type Jet Fuel	9.75	gallon
Liquefied Natural Gas (LNG)	4.50	gallon
Liquefied Petroleum Gases (LPG)	5.68	gallon
Motor Gasoline	8.78	gallon
Residual Fuel Oil	11.27	gallon

Source:
Federal Register EPA; 40 CFR Part 98; e-CFR, June 13, 2017 (see link below). Table C-1.
https://www.ecfr.gov/cgi-bin/text-idx?SID=ae265d7d6f98ec86fcd8640b9793a3f6&mc=true&node=pt40.23.98&rgn=div5#ap40.23.98_19.1
LNG: The factor was developed based on the CO_2 factor for Natural Gas factor and LNG fuel density from GREET1_2017.xlsx Model, Argonne National Laboratory. This represents a methodology change from previous versions.

Table 3 Mobile Combustion CH_4 and N_2O for On-Road Gasoline Vehicles

Vehicle Type	Year	CH_4 Factor (g / mile)	N_2O Factor (g / mile)
Gasoline Passenger Cars	1973-74	0.1696	0.0197
	1975	0.1423	0.0443
	1976-77	0.1406	0.0458
	1978-79	0.1389	0.0473
	1980	0.1326	0.0499
	1981	0.0802	0.0626
	1982	0.0795	0.0627
	1983	0.0782	0.0630
	1984-93	0.0704	0.0647
	1994	0.0617	0.0603
	1995	0.0531	0.0560
	1996	0.0434	0.0503
	1997	0.0337	0.0446
	1998	0.0240	0.0389
	1999	0.0215	0.0355
	2000	0.0175	0.0304
	2001	0.0105	0.0212
	2002	0.0102	0.0207
	2003	0.0095	0.0181
	2004	0.0078	0.0085
	2005	0.0075	0.0067
	2006	0.0076	0.0075
	2007	0.0072	0.0052
	2008	0.0072	0.0049
	2009	0.0071	0.0048
	2010	0.0071	0.0048
	2011	0.0071	0.0048
	2012	0.0071	0.0048
	2013	0.0071	0.0048
	2014	0.0071	0.0048
	2015	0.0068	0.0042
	2016	0.0065	0.0036
	2017	0.0054	0.0018
	2018	0.0052	0.0018
Gasoline Light-Duty Trucks (Vans, Pickup Trucks, SUVs)	1973-74	0.1908	0.0218
	1975	0.1634	0.0513
	1976	0.1594	0.0555
	1977-78	0.1614	0.0534
	1979-80	0.1594	0.0555
	1981	0.1479	0.0660
	1982	0.1442	0.0681
	1983	0.1368	0.0722
	1984	0.1294	0.0764
	1985	0.1220	0.0806
	1986	0.1146	0.0848
	1987-93	0.0813	0.1035
	1994	0.0646	0.0982
	1995	0.0517	0.0908
	1996	0.0452	0.0871
	1997	0.0452	0.0871
	1998	0.0412	0.0787
	1999	0.0333	0.0618
	2000	0.0340	0.0631
	2001	0.0221	0.0379
	2002	0.0242	0.0424
	2003	0.0221	0.0373
	2004	0.0115	0.0089
	2005	0.0105	0.0064
	2006	0.0108	0.0080
	2007	0.0103	0.0061
	2008	0.0095	0.0036
	2009	0.0095	0.0036
	2010	0.0095	0.0035
	2011	0.0096	0.0034
	2012	0.0098	0.0033
	2013	0.0095	0.0033
	2014	0.0095	0.0033
	2015	0.0094	0.0031
	2016	0.0091	0.0029
	2017	0.0084	0.0018
	2018	0.0081	0.0018
Gasoline Heavy-Duty Vehicles	<1981	0.4604	0.0497
	1982-84	0.4492	0.0538
	1985-86	0.4090	0.0515
	1987	0.3675	0.0849
	1988-1989	0.3492	0.0933
	1990-1995	0.3246	0.1142
	1996	0.1278	0.1680
	1997	0.0924	0.1726
	1998	0.0655	0.1750
	1999	0.0648	0.1724
	2000	0.0630	0.1660
	2001	0.0577	0.1468
	2002	0.0634	0.1673
	2003	0.0602	0.1553
	2004	0.0298	0.0164
	2005	0.0297	0.0083
	2006	0.0299	0.0241
	2007	0.0322	0.0015
	2008	0.0340	0.0015
	2009	0.0339	0.0015
	2010	0.0320	0.0015
	2011	0.0304	0.0015
	2012	0.0313	0.0015
	2013	0.0313	0.0015
	2014	0.0315	0.0015
	2015	0.0332	0.0021
	2016	0.0321	0.0061
	2017	0.0329	0.0084
	2018	0.0326	0.0082
Gasoline Motorcycles	1960-1995	0.0899	0.0087
	1996-2018	0.0672	0.0069

Source: EPA (2020) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018. All values are calculated from Tables A-107 through A-111.

Red text indicates an update from the 2018 version of this document.

Table 4 Mobile Combustion CH_4 and N_2O for On-Road Diesel and Alternative Fuel Vehicles

Vehicle Type	Fuel Type	Vehicle Year	CH_4 Factor (g / mile)	N_2O Factor (g / mile)
Passenger Cars	Diesel	1960-1982	0.0006	0.0012
		1983-1995	0.0005	0.0010
		1996-2006	0.0005	0.0010
		2007-2018	0.0302	0.0192
Light-Duty Trucks	Diesel	1960-1982	0.0011	0.0017
		1983-1995	0.0009	0.0014
		1996-2006	0.0010	0.0015
		2007-2018	0.0290	0.0214
Medium- and Heavy-Duty Vehicles	Diesel	1960-2006	0.0051	0.0048
		2007-2018	0.0095	0.0431
Light-Duty Cars	Methanol		0.0080	0.0060
	Ethanol		0.0080	0.0060
	CNG		0.0820	0.0060
	LPG		0.0080	0.0060
	Biodiesel		0.0300	0.0190
Light-Duty Trucks	Ethanol		0.0120	0.0110
	CNG		0.1230	0.0110
	LPG		0.0120	0.0130
	LNG		0.1230	0.0110
	Biodiesel		0.0290	0.0210
Medium-Duty Trucks	CNG		4.2000	0.0010
	LPG		0.0140	0.0340
	LNG		4.2000	0.0430
	Biodiesel		0.0090	0.0010
Heavy-Duty Trucks	Methanol		0.0750	0.0280
	Ethanol		0.0750	0.0280
	CNG		3.7000	0.0010
	LPG		0.0130	0.0260
	LNG		3.7000	0.0010
	Biodiesel		0.0090	0.0430
Buses	Methanol		0.0220	0.0320
	Ethanol		0.0220	0.0320
	CNG		10.0000	0.0010
	LPG		0.0340	0.0170
	LNG		10.0000	0.0010
	Biodiesel		0.0090	0.0430

Source: EPA (2020) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018. All values are calculated from Tables A-110 through A-113.

Table 5 Mobile Combustion CH_4 and N_2O for Non-Road Vehicles

Vehicle Type	Fuel Type	CH_4 Factor (g / gallon)	N_2O Factor (g / gallon)
Ships and Boats	Residual Fuel Oil	0.55	0.55
	Gasoline (2 stroke)	9.54	0.06
	Gasoline (4 stroke)	4.88	0.23
	Diesel	0.31	0.50
Locomotives	Diesel	0.80	0.26
Aircraft	Jet Fuel	0	0.30
	Aviation Gasoline	7.06	0.11
Agricultural Equipment[A]	Gasoline (2 stroke)	12.96	0.06
	Gasoline (4 stroke)	7.24	0.21
	Diesel	0.28	0.49
	LPG	2.19	0.39
Agricultural Offroad Trucks	Gasoline	7.24	0.21
	Diesel	0.13	0.49
Construction/Mining Equipment[B]	Gasoline (2 stroke)	12.42	0.07
	Gasoline (4 stroke)	5.58	0.20
	Diesel	0.20	0.47
	LPG	1.05	0.41
Construction/Mining Offroad Trucks	Gasoline	5.58	0.20
	Diesel	0.13	0.49
Lawn and Garden Equipment	Gasoline (2 stroke)	15.57	0.06
	Gasoline (4 stroke)	5.84	0.18
	Diesel	0.33	0.47
	LPG	0.35	0.41
Airport Equipment	Gasoline	2.58	0.25
	Diesel	0.17	0.49
	LPG	0.33	0.41
Industrial/Commercial Equipment	Gasoline (2 stroke)	15.14	0.06
	Gasoline (4 stroke)	5.48	0.20
	Diesel	0.23	0.47
	LPG	0.44	0.41
Logging Equipment	Gasoline (2 stroke)	12.03	0.08
	Gasoline (4 stroke)	6.71	0.18
	Diesel	0.10	0.49
Railroad Equipment	Gasoline	5.78	0.19
	Diesel	0.44	0.42
	LPG	1.20	0.41
Recreational Equipment	Gasoline (2 stroke)	7.81	0.03
	Gasoline (4 stroke)	8.45	0.19
	Diesel	0.41	0.41
	LPG	2.98	0.36

Source: EPA (2020) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018. All values are calculated from Tables A-114 through A-115.

Notes:
[A] Includes equipment, such as tractors and combines, as well as fuel consumption from trucks that are used off-road in agriculture.
[B] Includes equipment, such as cranes, dumpers, and excavators, as well as fuel consumption from trucks that are used off-road in construction.

CALIFORNIA AIR RESOURCES BOARD

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Certified Pathways

Fuel Producer: Los Angeles County Sanitation Districts
Company ID: L375

Facility Name: Biogas Conditioning System Facility
Facility ID: F00308

Application for Tier 1 Pathway

Application # A0385

Pathway Number	Fuel Type	FeedStock	Applied Pathway Description	Applied CI(g/MJ)	Prov. Pathway	Pro. Start Date	Pro. End Date
A038501	Compressed Natural Gas (CNG)	Wastewater Sludge	Fuel Producer: Los Angeles County Sanitation Districts (L375); Facility Name: Biogas Conditioning System (F00308); RNG produced from the mesophillic anaerobic digestion of wastewater sludge at a POTW in Carson, California using grid-based electricity, and delivered to on-site CNG dispensing station.	20.43	Yes	08/20/2021	03/31/2023

Certified FPC	Certified CI (gCO2e/MJ)	FPC Start Date	FPC End Date	Certification Date	Certified Pathway Description	FPC Status	Comments	OP CI	Edit
CNG030A03850100	19.28	04/01/2021	12/31/2030	08/20/2021	Fuel Producer: Los Angeles County Sanitation District (L375); Facility Name: Biogas Conditioning System Facility (F00308); Biomethane produced from the mesophilic anaerobic digestion of wasterwater sludge; grid electricity; finished fuel is compressed and dispensed as CNG transportation fuel onsite. (Provisional)	Active	Certified Provisional	No	

Back

Appendix C: Landfill Fugitive Emissions

Collection Efficiencies of LACSD's LFG Systems

Measuring landfill gas collection efficiency is important for gauging emission control effectiveness and energy recovery opportunities. The Los Angeles County Sanitation Districts (LACSD) had developed a methodology for estimating collection efficiency using readily acquired integrated surface methane (ISM) concentration data and the US EPA's Industrial Source Complex (ISC) air dispersion model. This innovative methodology has been applied previously to estimate collection efficiency at Districts' Palos Verdes landfill (PVLF) (Huitric and Kong, 2006; Huitric, *et al.*, 2007). This approach is used here to estimate collection efficiencies at Districts' all six landfills.

Background:

Air dispersion mechanism, on which the US EPA's ISC model is based, indicated that the gas emission rate from an area source and the resulting surface gas levels are directly linear with one another. This linear relationship allows the usual definition of gas collection efficiency (i.e., the ratio of measured collected gases to an uncertain amount of generated gases) to be restated in terms of surface gas concentrations. Because methane is readily measured within surface gases and because it is proportionate to total gas emissions, it is used here for calculating collection efficiency.

The ISC model can be used to transform the amount of collected methane to an equivalent reduction in surface methane levels achieved by gas collection, ISM_r. Gas generation is then expressed as the sum of the modeled reduction in surface methane due to collection, ISM_r, and the measured surface methane due to emissions, ISM_e. Gas collection efficiency is then calculated by the following equation:

$$E = \frac{ISM_r}{ISM_r + ISM_e} \qquad (1)$$

where ISM_e is measured by the integrated surface methane (ISM) monitoring, and ISM_r is calculated by the ISC model. Details of the procedures of this methodology are presented in Huitric and Kong (2006), and Huitric, *et al.* (2007).

Approach:

There are three approaches that can be applied to estimate collection efficiencies. The first approach is the Grid-by-Grid Analysis, by which the collection efficiency is calculated by equation (1) on a grid by grid basis for each quarterly ISM monitoring for all the monitoring grids of each landfill. The second approach is the Averaged Grid Emission Analysis, by which collection efficiency calculation is based on the site-wide, rather than grid by grid, overall average surface emissions, ISM_e, and average modeled

surface emissions reduction, ISM_r. The third approach is the Weighted Average Analysis, by which a frequency analysis of the site meteorological data is made for hours corresponding to actual ISM monitoring. A frequency table is created using possible wind speed ranges (within which ISM monitoring was taken place) and six meteorological stability categories ("A" through "F"). For each combination of wind speed and stability category, a surface methane concentration reduction due to collection is predicted by the ISC model. The weighted overall average methane reduction due to collection, ISM_r, is calculated based on this frequency table of combinations of wind speed and stability category, as well as the corresponding surface methane reduction under each wind speed and stability category combination. Collection efficiency can then be estimated, according to equation (1), using this weighted average methane reduction, ISM_r, and the average of actual surface methane levels, ISM_e.

Among the three approaches, grid-by-grid analysis is the most accurate and detailed approach. However, extensive analyses of grid-by-grid ISM monitoring and meteorological data are required, and this approach generates exceedingly large model output files, making data analysis a difficult and tedious task. The average grid emission analysis is a simpler approach, with simplified analysis yet still generates large model output files. The weighted average analysis is the simplest approach among the three. It generates much smaller and more manageable ISC output files, enables a much easier analysis. Another significant advantage for this weighted average methodology, is that this approach, unlike the other two approaches, relies only on a fix combination of wind speed and stability category (the frequency table), thus does not require an extensive preprocessing of the meteorological data, that normally requires an outside expert's assistance and extensive upper air meteorological data gathering, for running the ISC model. Thus, as a result, significant time and efforts can be saved.

These three approaches have been previously applied to Districts' Palos Verdes landfill (Huitric and Kong, 2006). Collection efficiencies have been estimated by the three approaches using fiscal year 2001 ISM monitoring and the corresponding weather data. While the most accurate and complete grid-by-grid analysis estimated an average collection efficiency of 93.8% for the urban mode and 96.5% for the rural mode, the simpler averaged grid emission analysis yielded collection efficiencies of 93.2% and 96.4%, for urban and rural modes, respectively, and the simplest weighted average approach resulted in collection efficiencies of 92.8% and 96.1%, for urban and rural modes, respectively. This indicates that the weighted average approach is capable of not only saving time and efforts significantly, but also yielding fairly accurate and more conservative collection efficiency estimations. Therefore, the weighted average approach is used to estimate collection efficiencies at Districts' six landfills in this study.

Collection Efficiency Calculations:

Collection efficiency calculations are conducted for District's Calabasas landfill (CALF), Puente Hills landfill (PHLF), PVLF, Scholl Canyon landfill (SCLF), and Spadra landfill

(SPLF) using the sites' year 2006 ISM monitoring and weather data. Because Districts' Mission Canyon landfill (MCLF) is not required by regulations to conduct integrated surface methane (ISM) monitoring, no ISM monitoring data for year 2006 are available for MCLF. Alternatively, surface methane monitoring and corresponding weather data obtained during two separate surface methane monitoring events (in which, surface methane concentrations were recorded in a routing fashion covering the entire surface of the site) in June 1998 are used to estimate collection efficiencies for MCLF. Quarterly ISM monitoring, and the corresponding weather data are obtained for the entire year of 2006 for each landfill, except for MCLF, for which data from two monitoring events in June 1998 are used. To make the data files more manageable, a computer database algorithm has been developed to filter out unnecessary weather data and to retain only those weather data recorded in hours corresponding to times of ISM monitoring. This database algorithm assigns a stability category ("A" through "F") according to the method developed by Pasquill (1961) for each data point based on time and wind speed associated with this monitoring event. At the same time, this algorithm also records the number of occurrences for each combination of wind speed and stability category within each landfill dataset.

As a result, a site-specific frequency table counting percentage of occurrence of each wind speed and stability category combination can then be generated for each landfill. Subsequently, similar tables containing ISC model predicted surface methane reductions due to collection for each of the wind speed and stability category combinations can be generated for urban and rural modes, respectively. These tables of the ISC model results are generated based on results obtained from previous modeling work at PVLF (i.e., Huitric and Kong, 2006). Because the ISC model predicted surface methane reductions due to collection were generated in such manner that they are only corresponding to a given set of wind speed and stability category combinations, thus are independent of site-specific meteorological conditions. Therefore, these tables of ISC model results are applied to all landfill sites, in conjunction with each site-specific meteorological condition. The combination of the ISC results table and the site-specific (weather data) frequency table (in fact, the product of these two tables) yields a weighted average surface methane reduction due to collection for a landfill. This weighted average surface methane reduction value combines with the average actual ISM measurement leads to collection efficiency estimates for the landfill.

The US EPA's population guidance suggests that for a 3-km radius circle out from a facility, if the area is > 50% urban, then run the ISC model in the urban mode. Otherwise it's more appropriate to apply the model in rural mode. However, to get a better understanding of gas collection system's performance, results under both rural and urban modes are presented. Table 1 below shows quarterly collection efficiency estimates, based on year 2006 monitoring data and under rural and urban modes respectively, for Districts' all, but one, landfills. For MCLF, collection efficiency estimates, based on June 1998 monitoring data, are presented.

Table 1. Collection Efficiency Estimates for Districts' Landfills

Landfill	**Collection Efficiency**									
	Q1-2006		Q2-2006		Q3-2006		Q4-2006		***Annual Average***	
	Rural	*Urban*	*Rural*	*Urban*	*Rural*	*Urban*	*Rural*	*Urban*	*Rural*	*Urban*
CALF	96.0%	91.8%	97.9%	95.6%	96.1%	93.9%	92.8%	86.1%	**95.7%**	**91.8%**
PHLF	97.0%	93.7%	97.8%	95.8%	96.9%	95.3%	97.4%	95.3%	**97.3%**	**95.0%**
PVLF	97.3%	94.4%	98.6%	97.3%	98.2%	97.2%	96.9%	94.1%	**97.7%**	**95.7%**
SCLF	98.8%	97.5%	99.7%	99.4%	99.4%	99.0%	99.8%	99.7%	**99.4%**	**98.9%**
SPLF	99.9%	99.9%	100%	100%	98.8%	98.0%	95.1%	90.9%	**98.5%**	**97.2%**
	June 02, 1998		June 18, 1998						***Average***	
MCLF	93.5%	87.8%	97.6%	95.2%					**95.5%**	**91.5%**

Discussions:

Because there is no year 2006 ISM monitoring data available for MCLF, surface methane monitoring and corresponding weather data collected in June 1998 were used to estimate collection efficiency at MCLF. Sample bags and OVA device were used during the June 1998 monitoring events, because the reading for the OVA device is analog rather than digital, as it's the case for more modern methane reading devices, roundup errors could have resulted. And these roundup errors could lead to higher methane readings than their actual levels. Lower collection efficiency values could be estimated as a result.

Collection efficiencies for PVLF had been estimated previously using Q2/2006 monitoring data (Huitric, *et al.*, 2007). In this previous study, a more accurate and detailed averaged grid emission analysis was used, and it estimated +99% collection efficiencies for PVLF under both rural and urban modes. As discussed earlier in this paper, the weighted average approach, used here in this study, tends to predict slightly lower collection efficiencies, thus its collection efficiency estimates tend to be more conservative. This is true not only for PVLF, but also for other landfills discussed in this paper.

At CALF, in order to improve collected gas quality for energy recovery, gas system's applied vacuum had been decreased about 40% from its previous level beginning in October 2006. This lowering applied vacuum level led to higher ISM level (but still much lower than the 50 ppm regulatory limit) for Q4/2006 as compared to those of the preceding quarters of the year. Consequently, lower collection efficiency values are estimated for Q4/2006.

Below background level of ISM has been measured for the second quarter of 2006 at SPLF, this resulted in a virtually 100% collection efficiency for Q2/2006.

Because the rules of Pasquill's in identifying stability categories of the weather data are vague and not straightforward, in developing and implementing the database algorithm to identify stability categories, the algorithm is designed that whenever there is a weather condition under which either one of the two neighboring stability categories (say, A or B) can be assigned, the algorithm will always choose the stability category that tends to be more unstable (in this case, category A). This would result in a smaller ISC model predicted surface methane reduction due to collection (ISM_r), and as a result, lower yet more conservative collection efficiency estimations are calculated.

In summary, applying simpler yet systematic and effective approach, collection efficiencies for Districts' landfills have been estimated. Even the estimates tend to be more on the conservative side, the results of this study indicate that all Districts' six landfills are having high efficiency LFG collection systems in operation.

References:

Huitric, R. and D. Kong (2006) "Measuring landfill gas collection efficiency using surface methane concentrations", Solid Waste Association of North America (SWANA) 29th Landfill Gas Symposium, St. Petersburg, FL.

Huitric, R., D. Kong, L. Scales, S. Maguin, and P. Sullivan (2007) "Field comparison of landfill gas collection efficiency measurements", Solid Waste Association of North America (SWANA) 30th Landfill Gas Symposium, Monterey, CA.

Pasquill, F. (1961) "The estimation of the dispersion of windborne material", The Meteorological Magazine, Vol. 90, No. 1063, pp.33-49.

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Appendix D: Refrigerants

SCAQMD RULE 1415 RECORDKEEPING FORM I

6563 - PM - M1202.03 - County Sanitation District

Facility Name:	County Sanitation District LAC** County Sanitation 24501	**Bldg or area served:**	Cryogenics facility
Address:	24501 S Figueroa St	Carson	CA 90745
Mailing Address:	PO Box 4998	Whittier	CA 90607
Facility Representative:	**Sign:**	**Date:**	03/24/2021
Certified Auditor:	Ryan Hook **Sign:**	**Cert. #:**	926813064630

System Type:	Air Cooled Chiller	**Make:**	Carrier	**Model #:**	30GXN150-TF640NE
Serial #:	0301F57303	**Unit Tag:**	ch #CH29E-01A	**Refrigerant Type:**	

PLEASE REFER TO FORM II IF A REFRIGERATION LEAK OCCURRED

Date	Leak Test Method	Name & Address of contractor who repaired leak & performed test	Date Leak Detected (if any)	Date Leak Repaired (if any)	Total Days to Repair Leak (if any)	Refrigerant Recovered (lbs)	Additional Refrigerant (lbs)
03/24/2021	Electronic leak detector	**Air Conditioning Solutions Inc 2223 El Sol Ave Altadena, CA 91001**					

Determine the annual refrigerant leak: Total Additional Refrigerant =

ANNUAL REFRIGERANT LEAK DETERMINATION = Additional Refrigerant x 100 / Total Charge Capacity

Annual Refrigerant Leak (%): 0.00

Notes:
134A

5C65EC12-1A52-4436-A815-DA8E069CB2BD

SCAQMD RULE 1415 RECORDKEEPING FORM I

6563 - PM - M1202.03 - County Sanitation District

Facility Name:	County Sanitation District LAC** County Sanitation 24501		**Bldg or area served:**	Cryogenics facility	
Address:	24501 S Figueroa St		Carson	CA	90745
Mailing Address:	PO Box 4998		Whittier	CA	90607
Facility Representative:		**Sign:**		**Date:**	03/24/2021
Certified Auditor:	Ryan Hook	**Sign:**		**Cert. #:**	926813064630

System Type:	NAAir Cooled Chiller	**Make:**	Carrier	**Model #:**	30GXN150-TF640NE
Serial #:	0301F57305	**Unit Tag:**	ch # RCH29E-01B	**Refrigerant Type:**	

PLEASE REFER TO FORM II IF A REFRIGERATION LEAK OCCURRED

Date	Leak Test Method	Name & Address of contractor who repaired leak & performed test	Date Leak Detected (if any)	Date Leak Repaired (if any)	Total Days to Repair Leak (if any)	Refrigerant Recovered (lbs)	Additional Refrigerant (lbs)
03/24/2021	Electronic leak detector	**Air Conditioning Solutions Inc 2223 El Sol Ave Altadena, CA 91001**	03/24/2021		0		

Determine the annual refrigerant leak:

Total Additional Refrigerant =

ANNUAL REFRIGERANT LEAK DETERMINATION = Additional Refrigerant x 100 / Total Charge Capacity

Annual Refrigerant leak (%): 0.00

Notes:
134A

Chiller is down and is planned for replacement. Large coil leak circuit A1

5C65EC12-1A52-4436-A815-DA8E069CB2BD

SCAQMD RULE 1415 RECORDKEEPING FORM I

6563 - PM - M1202.03 - County Sanitation District

Facility Name:	County Sanitation District LAC** County Sanitation 24501	**Bldg or area served:**		
Address:	24501 S Figueroa St	Carson	CA	90745
Mailing Address:	PO Box 4998	Whittier	CA	90607
Facility Representative:		**Sign:**	**Date:**	
Certified Auditor:	Ryan Hook	**Sign:**	**Cert. #:**	

System Type:		**Make:**		**Model #:**	
Serial #:		**Unit Tag:**		**Refrigerant Type:**	

PLEASE REFER TO FORM II IF A REFRIGERATION LEAK OCCURRED

Date	Leak Test Method	Name & Address of contractor who repaired leak & performed test	Date Leak Detected (if any)	Date Leak Repaired (if any)	Total Days to Repair leak (if any)	Refrigerant Recovered (lbs)	Additional Refrigerant (lbs)
		Air Conditioning Solutions Inc 2223 El Sol Ave Altadena, CA 91001					

Determine the annual refrigerant leak:

Total Additional Refrigerant:

ANNUAL REFRIGERANT LEAK DETERMINATION = Additional Refrigerant x 100 / Total Charge Capacity

Annual Refrigerant Leak (%):

5C65EC12-1A52-4436-A815-DA8E069CB2BD

SCAQMD RULE 1415 RECORDKEEPING FORM I

6563 - PM - M1202.03 - County Sanitation District

Facility Name:	County Sanitation District LAC** County Sanitation 24501	**Bldg or area served:**		
Address:	24501 S Figueroa St	Carson	CA	90745
Mailing Address:	PO Box 4998	Whittier	CA	90607
Facility Representative:		**Sign:**	**Date:**	
Certified Auditor:	Ryan Hook	**Sign:**	**Cert.#:**	

System Type:		**Make:**		**Model #:**	
Serial #:		**Unit Tag:**		**Refrigerant Type:**	

PLEASE REFER TO FORM II IF A REFRIGERATION LEAK OCCURRED

Date	Leak Test Method	Name & Address of contractor who repaired leak & performed test	Date Leak Detected (if any)	Date Leak Repaired (if any)	Total Days to Repair leak (if any)	Refrigerant Recovered (lbs)	Additional Refrigerant (lbs)
		Air Conditioning Solutions Inc 2223 El Sol Ave Altadena, CA 91001					

Determine the annual refrigerant leak: Total Additional Refrigerant =

ANNUAL REFRIGERANT LEAK DETERMINATION = Additional Refrigerant x 100 / Total Charge Capacity

Annual Refrigerant Leak (%):

5C65EC12-1A52-4436-A815-DA8E069CB2BD

SCAQMD RULE 1415 RECORDKEEPING FORM I

6563 - PM - M1202.03 - County Sanitation District

Facility Name:	County Sanitation District LAC** County Sanitation 24501		**Bldg or area served:**	Roof	
Address:	24501 S Figueroa St		Carson	CA	90745
Mailing Address:	PO Box 4998		Whittier	CA	90607
Facility Representative:		**Sign:**		**Date:**	03/23/2021
Certified Auditor:	Nick Siperly	**Sign:**		**Cert. #:**	926813064630

System Type:	Gas Pack	**Make:**	Carrier	**Model #:**	48AJD030-D-611FF
Serial #:	3706U23227	**Unit Tag:**		**Refrigerant Type:**	

PLEASE REFER TO FORM II IF A REFRIGERATION LEAK OCCURRED

Date	Leak Test Method	Name & Address of contractor who repaired leak & performed test	Date Leak Detected (if any)	Date Leak Repaired (if any)	Total Days to Repair Leak (if any)	Refrigerant Recovered (lbs)	Additional Refrigerant (lbs)
03/23/2021	Electronic leak detector	**Air Conditioning Solutions Inc 2223 El Sol Ave Altadena, CA 91001**					

Determine the annual refrigerant leak: Total Additional Refrigerant =

ANNUAL REFRIGERANT LEAK DETERMINATION = Additional Refrigerant x 100 / Total Charge Capacity

Annual Refrigerant Leak (%): 0.00

Notes:
R-22. No leaks found at this time

A9D73232-0DCC-43E7-9071-03EF15F016CC

SCAQMD RULE 1415 RECORDKEEPING FORM I

6563 - PM - M1202.03 - County Sanitation District

Facility Name:	County Sanitation District LAC** County Sanitation 24501	**Bldg or area served:**		
Address:	24501 S Figueroa St	Carson	CA	90745
Mailing Address:	PO Box 4998	Whittier	CA	90607
Facility Representative:		**Sign:**	**Date:**	
Certified Auditor:	Nick Siperly	**Sign:**	**Cert. #:**	

System Type:		**Make:**		**Model #:**	
Serial #:		**Unit Tag:**		**Refrigerant Type:**	

PLEASE REFER TO FORM II IF A REFRIGERATION LEAK OCCURRED

Date	Leak Test Method	Name & Address of contractor who repaired leak & performed test	Date Leak Detected (if any)	Date Leak Repaired (if any)	Total Days to Repair Leak (if any)	Refrigerant Recovered (lbs)	Additional Refrigerant (lbs)
		Air Conditioning Solutions Inc 2223 El Sol Ave Altadena, CA 91001					

Determine the annual refrigerant leak: Total Additional Refrigerant =

ANNUAL REFRIGERANT LEAK DETERMINATION = Additional Refrigerant x 100 / Total Charge Capacity

Annual Refrigerant leak (%):

A9D73232-0DCC-43E7-9071-03EF15F016CC

SCAQMD RULE 1415 RECORDKEEPING FORM I

6563 - PM - M1202.03 - County Sanitation District

Facility Name:	County Sanitation District LAC** County Sanitation 24501	**Bldg or area served:**		
Address:	24501 S Figueroa St	Carson	CA	90745
Mailing Address:	PO Box 4998	Whittier	CA	90607
Facility Representative:		**Sign:**	**Date:**	
Certified Auditor:	Nick Siperly	**Sign:**	**Cert. #:**	

System Type:		**Make:**		**Model #:**	
Serial #:		**Unit Tag:**		**Refrigerant Type:**	

PLEASE REFER TO FORM II IF A REFRIGERATION LEAK OCCURRED

Date	Leak Test Method	Name & Address of contractor who repaired leak & performed test	Date Leak Detected (if any)	Date Leak Repaired (if any)	Total Days to Repair leak (if any)	Refrigerant Recovered (lbs)	Additional Refrigerant (lbs)
		Air Conditioning Solutions Inc 2223 El Sol Ave Altadena, CA 91001					

Determine the annual refrigerant leak:

Total Additional Refrigerant:

ANNUAL REFRIGERANT LEAK DETERMINATION = Additional Refrigerant x 100 / Total Charge Capacity

Annual Refrigerant Leak (%):

A9D73232-0DCC-43E7-9071-03EF15F016CC

SCAQMD RULE 1415 RECORDKEEPING FORM I

6563 - PM - M1202.03 - County Sanitation District

Facility Name:	County Sanitation District LAC** County Sanitation 24501	**Bldg or area served:**		
Address:	24501 S Figueroa St	Carson	CA	90745
Mailing Address:	PO Box 4998	Whittier	CA	90607
Facility Representative:		**Sign:**		**Date:**
Certified Auditor:	Nick Siperly	**Sign:**		**Cert.#:**

System Type:		**Make:**		**Model #:**	
Serial #:		**Unit Tag:**		**Refrigerant Type:**	

PLEASE REFER TO FORM II IF A REFRIGERATION LEAK OCCURRED

Date	Leak Test Method	Name & Address of contractor who repaired leak & performed test	Date Leak Detected (if any)	Date Leak Repaired (if any)	Total Days to Repair leak (if any)	Refrigerant Recovered (lbs)	Additional Refrigerant (lbs)
		Air Conditioning Solutions Inc 2223 El Sol Ave Altadena, CA 91001					

Determine the annual refrigerant leak: Total Additional Refrigerant =

ANNUAL REFRIGERANT LEAK DETERMINATION = Additional Refrigerant x 100 / Total Charge Capacity

Annual Refrigerant Leak (%):

A9D73232-0DCC-43E7-9071-03EF15F016CC

SOUTH COAST AQMD RULE 1415 RECORDKEEPING FORM I

Name: County Sanitation 24501

: 24501 S Figueroa St, Carson, CA 90745

Address: PO Box 4998, Whittier, CA 90607

Representative: | **Customer Signature:** ~i:52:75~

l Auditor: Nick Siperly | **Cert. #:** 1660809483 | **Signed:**

ype	Chiller - Water Cooled Screw	**Make**	Carrier	**Charge Capacity**	
#	3902Q02027	**Model #**	30HXC246RY	**Refrigerant**	R-

PLEASE REFER TO FORM II IF A REFRIGERATION LEAK OCCURRED

	Leak Test Method	Type of Leak or Malfunction	Date Leak Detected	Date Leak Repaired	Total Days to Repair Leak	Refrigerant Recovered (lbs)	Additional Refrigerant (lbs)	
	Electronic Leak Detector	None						

ine the annual refrigerant leak:

AL REFRIGERANT = Additional Refrigerant X 100
DETERMINATION Total Charge Capacity

Total Additional Refrigerant =

Annual Refrigerant Leak (%) = 0.

an employee or representative of the owner of the system performed all work, then only write "OWNER" in column IV.

SOUTH COAST AQMD RULE 1415 RECORDKEEPING FORM I

Name: County Sanitation 24501

: 24501 S Figueroa St, Carson, CA 90745

Address: PO Box 4998, Whittier, CA 90607

Representative: | **Customer Signature:** ~i:52:75~

l Auditor: Nick Siperly | **Cert. #:** 1660809483 | **Signed:** 7-1-15

ype	Chiller - Water Cooled Screw	**Make**	Carrier	**Charge Capacity**	
#	S2112Q20156	**Model #**	30HXC126PYE671AA-1	**Refrigerant**	R-

PLEASE REFER TO FORM II IF A REFRIGERATION LEAK OCCURRED

	Leak Test Method	Type of Leak or Malfunction	Date Leak Detected	Date Leak Repaired	Total Days to Repair Leak	Refrigerant Recovered (lbs)	Additional Refrigerant (lbs)	
	Electronic Leak Detector	None						

ine the annual refrigerant leak:

AL REFRIGERANT = Additional Refrigerant X 100
DETERMINATION Total Charge Capacity

Total Additional Refrigerant =

Annual Refrigerant Leak (%) = 0.

an employee or representative of the owner of the system performed all work, then only write "OWNER" in column IV.

SCAQMD RULE 1415 REFRIGERANT ANNUAL AUDIT (FORM I)

Facility Name: LAS		**Phone #:** 714-614-1271	
Address: 1955 Workman Mill RD Whittier CA 90601			
Mailing Address:			
Facility Representative: JAIME TALAVERA	385339127930	**Sign:**	**Date:** 7-1-2021
Certified Auditor: Garrett Black	**ID#:** [redacted]14	**Sign:**	**Date of Audit:** 6-28-202

Total Capacity	2550 lbs.	**System Type**	Refrigeration: Serial # _____	A/C System: Serial # 4604Q69713	Refrigerant	R (134)A

Please check here if the system had a refrigerant leak: ☐ **PLEASE REFER TO FORM II IF A REFRIGERANT LEAK OCCURRED**

Date	Leak Test Method	P/O # of Recycler	Name and Address of the CONTRACTOR who repaired leak & performed leak test	Date Leak Detected	Date Leak Repaired	Total Days to Repair Leak	Refrigerant Recovered (lbs)	Additional Refrigerants (lbs)
6/28/2021	Electronic		Carrier Corp 2478 Peck Rd COI, CA 90601					

Determine the annual refrigerant leak by use of this equation below:

ANNUAL REFRIGERANT LEAK DETERMINATION = $\frac{\text{Additional Refrigerant}}{\text{Total Change Capacity}}$ X 100 < 5%

Total Additional Refrigerant = lbs.

Annual Refrigerant Leak % = _____ %

NOTE: If an employee or representative of the owner of the system performed all work, then only write "OWNER" in column IV.

R1415 (FORM I) JB: (4/13/92)	Form Serial #: _____	Triplicate Forms	WHITE - SOURCE YELLOW - AUDITOR PINK - SCAQMD

SCAQMD RULE 1415 REFRIGERANT ANNUAL AUDIT (FORM I)

Facility Name: LAS		**Phone #:** (714) 694-1271	
Address: 1955 Workman Mill Rd Whittier CA 90601			
Mailing Address:			
Facility Representative: JAIME TALAVERA	885339127930	**Sign:**	**Date:** 7-1-2021
Certified Auditor: Garrett Black	**ID#:** [redacted]	**Sign:**	**Date of Audit:** 6-28-2021
Total Capacity 2550 lbs.	**System Type** Refrigeration: Serial # _____	A/C System: Serial # 4604Q69714	**Refrigerant** R (134)A
Please check here if the system had a refrigerant leak:		**PLEASE REFER TO FORM II IF A REFRIGERANT LEAK OCCURRED**	

Date	Leak Test Method	P/O # of Recycler	Name and Address of the CONTRACTOR who repaired leak & performed leak test	Date Leak Detected	Date Leak Repaired	Total Days to Repair Leak	Refrigerant Recovered (lbs)	Additional Refrigerants (lbs)
6/28/2021	Electronic		Carrier Corp 2478 Peck Rd COI CA 90601					

Determine the annual refrigerant leak by use of this equation below:

ANNUAL REFRIGERANT LEAK DETERMINATION = Additional Refrigerant / Total Change Capacity X 100 < 5%

Total Additional Refrigerant = lbs.

Annual Refrigerant Leak % = _____ %

NOTE: If an employee or representative of the owner of the system performed all work, then only write "OWNER" in column IV.

R1415 (FORM I) JB: (4/13/92)	Form Serial #: _____	Triplicate Forms	WHITE - SOURCE YELLOW - AUDITOR PINK - SCAQMD

SCAQMD RULE 1415 REFRIGERANT ANNUAL AUDIT (FORM I)

Facility Name: LAS		**Phone #:** (714) 614-1271	
Address: 1955 Workman Mill Rd Whittier CA 90601			
Mailing Address:			
Facility Representative: JAIME TALAVERA	385339127930	**Sign:**	**Date:** 7-1-2021
Certified Auditor: Garrett Black	**ID#:** [redacted]	**Sign:**	**Date of Audit:** 6-28-2021

Total Capacity	750 lbs.	**System Type**	Refrigeration: Serial # _____	A/C System: Serial # 5298J59060	Refrigerant	R (134) A
Please check here if the system had a refrigerant leak:			**PLEASE REFER TO FORM II IF A REFRIGERANT LEAK OCCURRED**			

Date	Leak Test Method	P/O # of Recycler	Name and Address of the CONTRACTOR who repaired leak & performed leak test	Date Leak Detected	Date Leak Repaired	Total Days to Repair Leak	Refrigerant Recovered (lbs)	Additional Refrigerants (lbs)
6/28/2021	Electronic		Carrier Corp 2478 Pelk Rd Cor, CA 90601					

Determine the annual refrigerant leak by use of this equation below:

ANNUAL REFRIGERANT LEAK DETERMINATION = $\frac{\text{Additional Refrigerant}}{\text{Total Change Capacity}}$ X 100 < 5%

Total Additional Refrigerant = ____ lbs.

Annual Refrigerant Leak % = ____ %

NOTE: If an employee or representative of the owner of the system performed all work, then only write "OWNER" in column IV.

R1415 (FORM I) JB: (4/13/92)	Form Serial #: _____	Triplicate Forms	WHITE - SOURCE YELLOW - AUDITOR PINK - SCAQMD

VIC'S
MECHANICAL SERVICE CONTRACTORS
ESTABLISHED 1951

317 E. 5th Street
Holtville, CA 92250
(760) 356-4018
dispatch@vicsac.com

Invoice

DATE	04/28/2021
INVOICE#	85208
TERMS	Due on completion

BILL TO

County Sanitation Districts of LA cou4477
P.O. Box 4998
Whittier CA 90607
7608805605Michell

SERVICE LOCATION

6330 E Hwy 78 - MESQUITE REG LANDFILL
6330 E Hwy 78
Brawley CA 92227
(760) 880-5605

JOB#	DATE	PO/REF#	DESCRIPTION
6371	03/30/2021		**Completion Notes:** In. 8:30-- AC 10. Worne blower belt. A36, weak 15uf blower motor capacitor. Ac 9 found weak 10uf cfm capacitor. AC 7 found no issues on unit.. scale house window unit, need to be replaced, 2 ton , opening is 26 inches by 18 inches. AC 3 HEATER 2 pole 30 amp 24volt coil contactor is pitted need replacement, and a 10uf blower motor capacitor. AC 3 needs freon, R22. AC14 Found no issues on it. AC15 no issues found. Clock out 1:30 3/31/21 clock in= 8:30. AC5 found overheated 2 pole 30 amp 24volt coil contactor on heat strips. AC4 overheated 2 pole 30amp 24 volt contactor on heat strips. AC6A mini working properly. AC6B Wall pack compressor is shorted needs quote for new unit. Clock out= 10:15. We need to reschedule to finish. 4/27/21 AC 8 found pitted contactor (2pole 40aamp 24volt) . #11 didn't find any issues on unit. Replace blower belt. Unit 12. Found cfm blades dropped from motor, put it back check it, amps were fine. No issues found.

PO#1667294
RECEIVED 5/6/2021
MICHELE OCHS
WORK ORDER No. 0343355-IN

Job Charges	Qty	Rate	Total
Contract - Commercial Commercial contract; includes material, tax and labor	1.00	$2,475.33	$2,475.33
Job Subtotal			**$2,475.33**
7.75% sales tax (2017)		7.75%	$0.00
Job Total			**$2,475.33**

OK TO PAY W/O

PRE-WORK SIGNATURE

Signed By:

POST-WORK SIGNATURE

04/27/2021 01:24 pm

Signed By: Mesquite Regional Landfill CSDLA

EQUIPMENT SERVICED

PACKAGE HEAT PUMP: ICP PHH072H0A00AAA

S/N: G08124051B
SKU:
Installed:
Location: Roof #9

Extended Warranty?: No
Warranty Expires:

Notes:

WALLPACK: BARD WA121-A05XP4XXJ

S/N: 158C072320128-01
SKU:
Installed:
Location: #6-B
Notes:

Extended Warranty?: No
Warranty Expires:

PACKAGE HEAT PUMP: ICP PHH072H0A00AAA

S/N: G081240517
SKU:
Installed:
Location: Roof#8
Notes:

Extended Warranty?: No
Warranty Expires:

PACKAGE HEAT PUMP: ICP PHH036H0A00AAA

S/N: G080220472
SKU:
Installed:
Location: Roof#11
Notes:

Extended Warranty?: No
Warranty Expires:

PACKAGE HEAT PUMP: DAY & NIGHT PHH150H0A000AA

S/N: 0586008522
SKU:
Installed:
Location: Roof#12
Notes:

Extended Warranty?: No
Warranty Expires:

CONDENSER - HP: DAY & NIGHT N4H318GKC100

S/N: E073412561
SKU:
Installed:
Location: Roof#13
Notes:

Extended Warranty?: No
Warranty Expires:

CUSTOMER MESSAGE

Terms: Due upon completion. Thank you for your business.

Invoice Total:	**$2,475.33**
Deposits (-):	**$0.00**
Payments (-):	**$0.00**
Total Due:	**$2,475.33**

2

Invoice

Vic's Air Conditioning & Electrical

P.O. Box 815
Holtville, CA 92250
760-356-4018

Date	Invoice #
8/19/2021	86849

Bill To
County Sanitation Districts of LA cou4477 P.O. Box 4998 Whittier, CA 90607

PO#1667294 - REPAIRS
MESQUITE REGIONAL LANDFILL
RECEIVED 10/25/2021
MICHELE OCHS
WORK ORDER No 0343355-14

P.O. No.	Terms	Project
	Due on completion	6330 E Hwy 78 - MESQUITE...

Quantity	Description	Rate	Amount
	Job# 8247 Assigned Techs: Jorge Teran Completion Notes: AC 10 replace AX36 blower BELT, and 15uf blower capacitor. AC 9 replace 10uf cfm capacitor.. AC 8 Replace a 2 pole 40amp 24volt contactor. AC 3 replace a 2 pole 30amp 24volt coil contactor. AC 5 replace a 2 pole 30amp 24volt coil contactor. AC 4 replace a 2 pole 30amp 24volt coil contactor. AC8 4=16×16×2 FILTERS AC 9 4=16×16×2 FILTERS		
0	GENERIC CONTACTOR * 2 POLE 25 - 30 AMP 24V CONTACTORS ARE SWITCHES THAT USE HIGH VOLTAGE TO HELP COMPONENTS IN YOUR UNIT. SINCE THEY ARE IN CONSTANT USE, THEY DO NEED TO BE REPLACED OCCASIONALLY.	0.00	0.00
1	PR-FR	98.93	98.93
1	L37-120 / GENERIC CONTACTOR * 2 POLE 25 - 30 AMP 24V	33.24	33.24
0	10 MFD RUN CAPACITOR REPLACEMENT SIMILAR TO A BATTERY, CAPACITORS HELP START MOTORS BY STORING CURRENT. A DAMAGED CAPACITOR CAN DAMAGE THE MOTOR IF NOT SERVICED. REGULAR MAINTENANCE IS ENCOURAGED.	0.00	0.00
1	PR-FR	98.93	98.93
1	CR10X440 / 10 MFD RUN CAPACITOR	18.08	18.08
0	GENERIC CONTACTOR * 2 POLE 25 - 30 AMP 24V CONTACTORS ARE SWITCHES THAT USE HIGH VOLTAGE TO HELP COMPONENTS IN YOUR UNIT. SINCE THEY ARE IN CONSTANT USE, THEY DO NEED TO BE REPLACED OCCASIONALLY.	0.00	0.00
1	PR-FR	98.93	98.93
1	L37-120 / GENERIC CONTACTOR * 2 POLE 25 - 30 AMP 24V	33.24	33.24
0	GENERIC CONTACTOR * 2 POLE 25 - 30 AMP 24V CONTACTORS ARE SWITCHES THAT USE HIGH VOLTAGE TO HELP COMPONENTS IN YOUR UNIT. SINCE THEY ARE IN CONSTANT USE, THEY DO NEED TO BE REPLACED OCCASIONALLY.	0.00	0.00
1	PR-FR	98.93	98.93
1	L37-120 / GENERIC CONTACTOR * 2 POLE 25 - 30 AMP 24V	33.24	33.24
0	GENERIC CONTACTOR * 2 POLE 35 - 40 AMP 24V CONTACTORS ARE SWITCHES THAT USE HIGH VOLTAGE TO HELP COMPONENTS IN YOUR UNIT. SINCE THEY ARE IN CONSTANT USE, THEY DO NEED TO BE REPLACED OCCASIONALLY.	0.00	0.00
1	PR-FR	98.93	98.93

	Total

Page 1

Invoice

Vic's Air Conditioning & Electrical

P.O. Box 815
Holtville, CA 92250
760-356-4018

Date	Invoice #
8/19/2021	86849

Bill To
County Sanitation Districts of LA cou4477 P.O. Box 4998 Whittier, CA 90607

P.O. No.	Terms	Project
	Due on completion	6330 E Hwy 78 - MESQUITE...

Quantity	Description	Rate	Amount
1	L36-860 / GENERIC CONTACTOR * 2 POLE 35 - 40 AMP 24V	103.50	103.50
1	MISC.5 / MISCELLANEOUS .50	2.50	2.50
0	10 MFD RUN CAPACITOR REPLACEMENT SIMILAR TO A BATTERY, CAPACITORS HELP START MOTORS BY STORING CURRENT. A DAMAGED CAPACITOR CAN DAMAGE THE MOTOR IF NOT SERVICED. REGULAR MAINTENANCE IS ENCOURAGED.	0.00	0.00
1	PR-FR	98.93	98.93
1	CR10X440 / 10 MFD RUN CAPACITOR	18.08	18.08
0	26.5-56 IN FAN BELT WITHOUT BLOWER REPAIRS IT IS A GOOD MAINTENANCE PRACTICE TO REPLACE A BELT WHEN SERVICING A UNIT IF THE BELT IS CRACKED OR WORN.	0.00	0.00
1	PR-FR	98.93	98.93
1	A56 / 26.5 - 56 IN FAN BELT WITH BLOWER REPAIRS	45.90	45.90
0	15 MFD RUN CAPACITOR REPLACEMENT SIMILAR TO A BATTERY, CAPACITORS HELP START MOTORS BY STORING CURRENT. A DAMAGED CAPACITOR CAN DAMAGE THE MOTOR IF NOT SERVICED. REGULAR MAINTENANCE IS ENCOURAGED.	0.00	0.00
1	PR-FR	98.93	98.93
1	CR15X440 / 15 MFD RUN CAPACITOR	24.92	24.92
	7.75% Sales Tax [2017]	7.75%	0.00
		Total	$1,104.14

OK TO PAY
MKO

Page 2

VIC'S
MECHANICAL SERVICE CONTRACTORS
ESTABLISHED 1951

Vic's Air Conditioning & Electrical
317 E. 5th Street, Holtville, CA 92250
(760) 356-4018
dispatch@vicsac.com

Invoice

DATE	10/07/2021
INVOICE#	87697
TERMS	Due on completion

BILL TO

County Sanitation Districts of LA County
P.O. Box 4998
Whittier CA 90607
7608805605Michell

SERVICE LOCATION

6330 E Hwy 78 - MESQUITE REG LANDFILL
6330 E Hwy 78
Brawley CA 92227
(760) 880-5605

JOB#	DATE	PO/REF#	DESCRIPTION
9695	09/28/2021	PO# 1737578	**Completion Notes:** SCALE HOUSE window unit To replace existing 24,000 BTU window unit.

Job Charges	Qty	Rate	Total
Contract - Commercial INSTALLATION LG window unit 24,000 BTU 203/208v 20a Commercial contract; includes material, tax and labor	1.00	$1,724.55	$1,724.55
Job Subtotal			**$1,724.55**
Job Total			**$1,724.55**

PRE-WORK SIGNATURE

Signed By:

POST-WORK SIGNATURE

Signed By:

CUSTOMER MESSAGE

Terms: Due upon completion. Thank you for your business.

Invoice Total:	**$1,724.55**
Deposits (-):	**$0.00**
Payments (-):	~~**$0.00**~~
Total Due:	**$1,724.55**

OK TO PAY
WKO

PO#1737578
RECEIVED 10/12/21
MICHELE OCHS
WORK ORDER NO 0343355-14

1

Niizawa, Warisa

From: Reece, Jerry
Sent: Tuesday, February 22, 2022 2:44 PM
To: Niizawa, Warisa
Cc: Watson, Mathew; Gonzalez, Jeanine; Vasquez, Alfonso; Chang, Joseph
Subject: FW: REFRIGERANT TOTALS - GW RICHARDSON - LANCASTER / PALMDALE

Good afternoon, Warisa,

Here are the totals that they put in at Palmdale and Lancaster for last year. They did not measure any refrigerant that was removed during the leak checks. When they do the leak checks they remove all refrigerant and fill with nitrogen to check for leaks and then refill after the repairs are made. The totals below reflect how much was put back in after repairs. Not sure if we need to change the way this procedure is done so we get a more accurate account for actual lost refrigerant. If so please let me know and we will make sure that happens.

Thank you,

Jerry Reece
Supervisor of Electrical and Instrumentation Repair | Water Reclamation Plants
562-908-4288 ext. 6703 | c 661-505-3782
jerryreece@lacsd.org

LOS ANGELES COUNTY SANITATION DISTRICTS
Converting Waste Into Resources
Website | Facebook | Twitter | Instagram | YouTube

From: cassiew@gwrichardsonac.com <cassiew@gwrichardsonac.com>
Sent: Tuesday, February 22, 2022 1:22 PM
To: Reece, Jerry <JerryReece@lacsd.org>
Subject: REFRIGERANT TOTALS - GW RICHARDSON - LANCASTER / PALMDALE

CAUTION: EXTERNAL EMAIL.

Hi Jerry

Thank you for your patience.

I have an approximate total of 23.5 lbs of R410a refrigerant at Palmdale and 80.5 lbs at Lancaster site. Please let me know if you need anything else from me.

Thank you again and have a great day Jerry

Cassie Williams
Office Manager / Human Resources Asst.
GW Richardson Heating and Air Conditioning, Inc.
28231 Avenue Crocker, #100

Appendix E: Indirect Emissions

Red text indicates an update from the 2018 version of this document.

Emission Factors for Greenhouse Gas Inventories
Last Modified: 26 March 2020

Table 6 Electricity

eGRID Subregion	Total Output Emission Factors			Non-Baseload Emission Factors		
	CO_2 Factor (lb / MWh)	CH_4 Factor (lb / MWh)	N_2O Factor (lb / MWh)	CO_2 Factor (lb / MWh)	CH_4 Factor (lb / MWh)	N_2O Factor (lb / MWh)
AKGD (ASCC Alaska Grid)	1,039.6	0.082	0.011	1,262.5	0.110	0.015
AKMS (ASCC Miscellaneous)	525.1	0.024	0.004	1,528.3	0.068	0.012
AZNM (WECC Southwest)	1,022.4	0.077	0.011	1,435.3	0.097	0.014
CAMX (WECC California)	496.5	0.034	0.004	929.5	0.047	0.006
ERCT (ERCOT All)	931.7	0.066	0.009	1,261.0	0.083	0.012
FRCC (FRCC All)	931.8	0.066	0.009	1,123.9	0.068	0.009
HIMS (HICC Miscellaneous)	1,110.7	0.118	0.018	1,535.7	0.139	0.022
HIOA (HICC Oahu)	1,669.9	0.180	0.027	1,682.1	0.159	0.025
MROE (MRO East)	1,678.0	0.169	0.025	1,634.3	0.149	0.022
MROW (MRO West)	1,239.8	0.138	0.020	1,764.3	0.192	0.027
NEWE (NPCC New England)	522.3	0.082	0.011	931.0	0.086	0.011
NWPP (WECC Northwest)	639.0	0.064	0.009	1,575.1	0.148	0.021
NYCW (NPCC NYC/Westchester)	596.4	0.022	0.003	1,067.6	0.022	0.002
NYLI (NPCC Long Island)	1,184.2	0.139	0.018	1,320.3	0.040	0.005
NYUP (NPCC Upstate NY)	253.1	0.018	0.002	931.5	0.043	0.005
RFCE (RFC East)	716.0	0.061	0.008	1,242.6	0.091	0.013
RFCM (RFC Michigan)	1,312.6	0.129	0.018	1,748.9	0.171	0.024
RFCW (RFC West)	1,166.1	0.117	0.017	1,828.3	0.179	0.026
RMPA (WECC Rockies)	1,273.6	0.123	0.018	1,542.6	0.120	0.017
SPNO (SPP North)	1,163.2	0.124	0.018	1,945.5	0.201	0.029
SPSO (SPP South)	1,166.6	0.091	0.013	1,603.5	0.118	0.017
SRMV (SERC Mississippi Valley)	854.6	0.055	0.008	1,137.6	0.069	0.010
SRMW (SERC Midwest)	1,664.2	0.185	0.027	1,907.0	0.204	0.030
SRSO (SERC South)	1,027.9	0.081	0.012	1,413.7	0.107	0.015
SRTV (SERC Tennessee Valley)	1,031.5	0.097	0.014	1,644.3	0.149	0.021
SRVC (SERC Virginia/Carolina)	743.3	0.067	0.009	1,422.6	0.128	0.018
US Average	947.2	0.085	0.012	1,432.3	0.117	0.017

Source: EPA eGRID2018, March 2020

Note: Total output emission factors can be used as default factors for estimating GHG emissions from electricity use when developing a carbon footprint or emissions inventory. Annual non-baseload output emission factors should not be used for those purposes, but can be used to estimate GHG emissions reductions from reductions in electricity use.

Map of eGRID Subregions

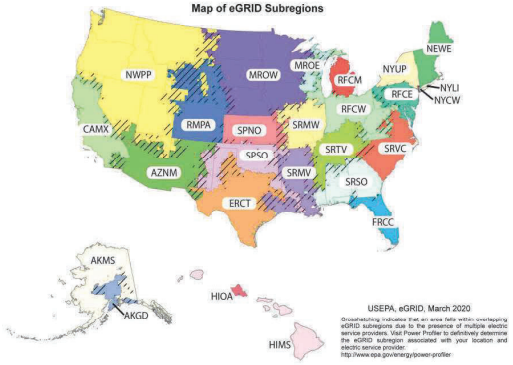

Table 7 Steam and Heat

	CO_2 Factor (kg / mmBtu)	CH_4 Factor (g / mmBtu)	N_2O Factor (g / mmBtu)
Steam and Heat	66.33	1.250	0.125

Note: Emission factors are per mmBtu of steam or heat purchased. These factors assume natural gas fuel is used to generate steam or heat at 80 percent thermal efficiency.

Scope 3 Emission Factors

Scope 3 emission factors provided below are aligned with the Greenhouse Gas Protocol Technical Guidance for Calculating Scope 3 Emissions, version 1.0 (Scope 3 Calculation Guidance). Where applicable, the specific calculation method is referenced. Refer to the Scope 3 Calculation Guidance for more information (http://www.ghgprotocol.org/scope-3-technical-calculation-guidance).

Table 8 Scope 3 Category 4: Upstream Transportation and Distribution and Category 9: Downstream Transportation and Distribution

These factors are intended for use in the distance-based method defined in the Scope 3 Calculation Guidance. If fuel data are available, then the fuel-based method should be used, with factors from Tables 2 through 5.

Vehicle Type	CO_2 Factor (kg / unit)	CH_4 Factor (g / unit)	N_2O Factor (g / unit)	Units
Medium- and Heavy-Duty Truck	1.387	0.013	0.033	vehicle-mile
Passenger Car [A]	0.335	0.009	0.008	vehicle-mile
Light-Duty Truck [B]	0.461	0.012	0.010	vehicle-mile
Medium- and Heavy-Duty Truck	0.207	0.0020	0.0046	ton-mile
Rail	0.021	0.0017	0.0005	ton-mile
Waterborne Craft [C]	0.040	0.0122	0.0017	ton-mile
Aircraft	1.265	0	0.0389	ton-mile

Source:
CO_2, CH_4, and N_2O emissions data for road vehicles are from Table 2-13 of the U.S. Greenhouse Gas Emissions and Sinks: 1990–2018 (Feb. 2020).
Vehicle-miles and passenger-miles data for road vehicles are from Table VM-1 of the Federal Highway Administration Highway Statistics 2018.
CO_2e emissions data for non-road vehicles are based on Table A-124 of the U.S. Greenhouse Gas Emissions and Sinks: 1990–2018, which are distributed into CO_2, CH_4, and N_2O emissions based on fuel/vehicle emission factors.
Freight ton-mile data for non-road vehicles are from Table 1-50 of the Bureau of Transportation Statistics, National Transportation Statistics for 2019 (Data based on 2017).

Notes:
Vehicle-mile factors are appropriate to use when the entire vehicle is dedicated to transporting the reporting company's product. Ton-mile factors are appropriate when the vehicle is shared with products from other companies.
[A] Passenger car: includes passenger cars, minivans, SUVs, and small pickup trucks (vehicles with wheelbase less than 121 inches).
[B] Light-duty truck: includes full-size pickup trucks, full-size vans, and extended-length SUVs (vehicles with wheelbase greater than 121 inches).
[C] Waterborne Craft: updates due to a methodology change.

U.S. Energy Information Administration

Frequently Asked Questions (FAQs)

What are Ccf, Mcf, Btu, and therms? How do I convert natural gas prices in dollars per Ccf or Mcf to dollars per Btu or therm?

Btu—British thermal unit(s)
Ccf—the volume of 100 cubic feet (cf)
M—one thousand (1,000)
MM—one million (1,000,000)
Mcf—the volume of 1,000 cubic feet
MMBtu—1,000,000 British thermal units
Therm—One therm equals 100,000 Btu, or 0.10 MMBtu

In the United States, natural gas can be priced in units of dollars per therm, dollars per MMBtu, or dollars per cubic feet.[1] The heat content of natural gas per physical unit (such as Btu per cubic foot) is needed to convert these prices from one price basis to another. In 2020, the U.S. annual average heat content of natural gas delivered to consumers was about 1,037 Btu per cubic foot. Therefore, 100 cubic feet (Ccf) of natural gas equals 103,700 Btu, or 1.037 therms. One thousand cubic feet (Mcf) of natural gas equals 1.037 MMBtu, or 10.37 therms.

You can convert natural gas prices from one price basis to another with these formulas (assuming a heat content of natural gas of 1,037 Btu per cubic foot):
$ per Ccf divided by 1.037 equals $ per therm
$ per therm multiplied by 1.037 equals $ per Ccf
$ per Mcf divided by 1.037 equals $ per MMBtu
$ per Mcf divided by 10.37 equals $ per therm
$ per MMBtu multiplied by 1.037 equals $ per Mcf
$ per therm multiplied by 10.37 equals $ per Mcf

The heat content of natural gas may vary by location and by type of natural gas consumer, and it may vary over time. Consumers and analysts should contact natural gas distribution companies or natural gas suppliers for information on the heat content of the natural gas they supply to their customers. Some natural gas distribution companies or utilities may provide this information on customers' bills.

[1] The U.S. Energy Information Administration reports natural gas in volumes of cubic feet through 1964 at a pressure base of 14.65 psia (pounds per square inch absolute) at 60° Fahrenheit. Beginning in 1965, the pressure base is 14.73 psia at 60° Fahrenheit.

Learn more:
Average annual and monthly heat content of natural gas consumed by state
Newly released heat content data allow for state-to-state natural gas comparisons
Natural gas conversion calculator

Last updated: June 1, 2021

Other FAQs about Natural Gas

- Does EIA have county-level energy production data?
- Does EIA have forecasts or projections for energy production, consumption, and prices for individual states?
- Does EIA have information on U.S. natural gas and oil pipelines?
- Does EIA have information on unplanned outages or shutdowns of U.S. energy infrastructure?
- Does EIA publish energy consumption and price data for cities, counties, or by zip code?
- Does EIA publish shale gas and coalbed methane production and reserves data?
- How does EIA calculate the year-ago and five-year averages in the Weekly Natural Gas Storage Report?
- How many alternative fuel and hybrid vehicles are there in the United States?
- How much coal, natural gas, or petroleum is used to generate a kilowatthour of electricity?
- How much does it cost to generate electricity with different types of power plants?
- Which states consume and produce the most natural gas?
- Why am I being charged more for heating oil or propane than the price on EIA's website?
- How much natural gas does the United States have, and how long will it last?
- How much natural gas is consumed in the United States?
- How much of U.S. carbon dioxide emissions are associated with electricity generation?
- How much shale gas is produced in the United States?
- What are Ccf, Mcf, Btu, and therms? How do I convert natural gas prices in dollars per Ccf or Mcf to dollars per Btu or therm?
- What are the major factors affecting natural gas prices?
- What can I expect to pay for heating this winter?
- What is U.S. electricity generation by energy source?
- What is the outlook for home heating fuel prices this winter?
- What is the price or cost of natural gas for U.S. electric power producers?
- What is the volume of world natural gas reserves?
- What types and amounts of energy are produced in each state?

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General Energy
Natural Gas
Nuclear
Oil/Petroleum
Prices
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Didn't find the answer to your question?

Ask an energy expert

Emission Factors for Greenhouse Gas Inventories

Last Modified: 26 March 2020

Red text indicates an update from the 2018 version of this document.

Typically, greenhouse gas emissions are reported in units of carbon dioxide equivalent (CO_2e). Gases are converted to CO_2e by multiplying by their global warming potential (GWP). The emission factors listed in this document have not been converted to CO_2e. To do so, multiply the emissions by the corresponding GWP listed in the table below.

Gas	100-Year GWP
CH_4	25
N_2O	298

Source: Intergovernmental Panel on Climate Change (IPCC), Fourth Assessment Report (AR4), 2007. See the source note to Table 11 for further explanation.

Table 1 Stationary Combustion

Fuel Type	Heat Content (HHV)	CO_2 Factor	CH_4 Factor	N_2O Factor	CO_2 Factor	CH_4 Factor	N_2O Factor
	mmBtu per short ton	kg CO_2 per mmBtu	g CH_4 per mmBtu	g N_2O per mmBtu	kg CO_2 per short ton	g CH_4 per short ton	g N_2O per short ton
Coal and Coke							
Anthracite Coal	25.09	103.69	11	1.6	2,602	276	40
Bituminous Coal	24.93	93.28	11	1.6	2,325	274	40
Sub-bituminous Coal	17.25	97.17	11	1.6	1,676	190	28
Lignite Coal	14.21	97.72	11	1.6	1,389	156	23
Mixed (Commercial Sector)	21.39	94.27	11	1.6	2,016	235	34
Mixed (Electric Power Sector)	19.73	95.52	11	1.6	1,885	217	32
Mixed (Industrial Coking)	26.28	93.90	11	1.6	2,468	289	42
Mixed (Industrial Sector)	22.35	94.67	11	1.6	2,116	246	36
Coal Coke	24.80	113.67	11	1.6	2,819	273	40
Other Fuels - Solid							
Municipal Solid Waste	9.95	90.70	32	4.2	902	318	42
Petroleum Coke (Solid)	30.00	102.41	32	4.2	3,072	960	126
Plastics	38.00	75.00	32	4.2	2,850	1,216	160
Tires	28.00	85.97	32	4.2	2,407	896	118
Biomass Fuels - Solid							
Agricultural Byproducts	8.25	118.17	32	4.2	975	264	35
Peat	8.00	111.84	32	4.2	895	256	34
Solid Byproducts	10.39	105.51	32	4.2	1,096	332	44
Wood and Wood Residuals	17.48	93.80	7.2	3.6	1,640	126	63
	mmBtu per scf	kg CO_2 per mmBtu	g CH_4 per mmBtu	g N_2O per mmBtu	kg CO_2 per scf	g CH_4 per scf	g N_2O per scf
Natural Gas							
Natural Gas	0.001026	53.06	1.0	0.10	0.05444	0.00103	0.00010
Other Fuels - Gaseous							
Blast Furnace Gas	0.000092	274.32	0.022	0.10	0.02524	0.000002	0.000009
Coke Oven Gas	0.000599	46.85	0.48	0.10	0.02806	0.000288	0.000060
Fuel Gas	0.001388	59.00	3.0	0.60	0.08189	0.004164	0.000833
Propane Gas	0.002516	61.46	3.0	0.60	0.15463	0.007548	0.001510
Biomass Fuels - Gaseous							
Landfill Gas	0.000485	52.07	3.2	0.63	0.025254	0.001552	0.000306
Other Biomass Gases	0.000655	52.07	3.2	0.63	0.034106	0.002096	0.000413
	mmBtu per gallon	kg CO_2 per mmBtu	g CH_4 per mmBtu	g N_2O per mmBtu	kg CO_2 per gallon	g CH_4 per gallon	g N_2O per gallon
Petroleum Products							
Asphalt and Road Oil	0.158	75.36	3.0	0.60	11.91	0.47	0.09
Aviation Gasoline	0.120	69.25	3.0	0.60	8.31	0.36	0.07
Butane	0.103	64.77	3.0	0.60	6.67	0.31	0.06
Butylene	0.105	68.72	3.0	0.60	7.22	0.32	0.06
Crude Oil	0.138	74.54	3.0	0.60	10.29	0.41	0.08
Distillate Fuel Oil No. 1	0.139	73.25	3.0	0.60	10.18	0.42	0.08
Distillate Fuel Oil No. 2	0.138	73.96	3.0	0.60	10.21	0.41	0.08
Distillate Fuel Oil No. 4	0.146	75.04	3.0	0.60	10.96	0.44	0.09
Ethane	0.068	59.60	3.0	0.60	4.05	0.20	0.04
Ethylene	0.058	65.96	3.0	0.60	3.83	0.17	0.03
Heavy Gas Oils	0.148	74.92	3.0	0.60	11.09	0.44	0.09
Isobutane	0.099	64.94	3.0	0.60	6.43	0.30	0.06
Isobutylene	0.103	68.86	3.0	0.60	7.09	0.31	0.06
Kerosene	0.135	75.20	3.0	0.60	10.15	0.41	0.08
Kerosene-Type Jet Fuel	0.135	72.22	3.0	0.60	9.75	0.41	0.08
Liquefied Petroleum Gases (LPG)	0.092	61.71	3.0	0.60	5.68	0.28	0.06
Lubricants	0.144	74.27	3.0	0.60	10.69	0.43	0.09
Motor Gasoline	0.125	70.22	3.0	0.60	8.78	0.38	0.08
Naphtha (<401 deg F)	0.125	68.02	3.0	0.60	8.50	0.38	0.08
Natural Gasoline	0.110	66.88	3.0	0.60	7.36	0.33	0.07
Other Oil (>401 deg F)	0.139	76.22	3.0	0.60	10.59	0.42	0.08
Pentanes Plus	0.110	70.02	3.0	0.60	7.70	0.33	0.07
Petrochemical Feedstocks	0.125	71.02	3.0	0.60	8.88	0.38	0.08
Petroleum Coke	0.143	102.41	3.0	0.60	14.64	0.43	0.09
Propane	0.091	62.87	3.0	0.60	5.72	0.27	0.05
Propylene	0.091	67.77	3.0	0.60	6.17	0.27	0.05
Residual Fuel Oil No. 5	0.140	72.93	3.0	0.60	10.21	0.42	0.08
Residual Fuel Oil No. 6	0.150	75.10	3.0	0.60	11.27	0.45	0.09
Special Naphtha	0.125	72.34	3.0	0.60	9.04	0.38	0.08
Unfinished Oils	0.139	74.54	3.0	0.60	10.36	0.42	0.08
Used Oil	0.138	74.00	3.0	0.60	10.21	0.41	0.08
Biomass Fuels - Liquid							
Biodiesel (100%)	0.128	73.84	1.1	0.11	9.45	0.14	0.01
Ethanol (100%)	0.084	68.44	1.1	0.11	5.75	0.09	0.01
Rendered Animal Fat	0.125	71.06	1.1	0.11	8.88	0.14	0.01
Vegetable Oil	0.120	81.55	1.1	0.11	9.79	0.13	0.01
Biomass Fuels - Kraft Pulping Liquor, by Wood Furnish							
North American Softwood		94.4	1.9	0.42			
North American Hardwood		93.7	1.9	0.42			
Bagasse		95.5	1.9	0.42			
Bamboo		93.7	1.9	0.42			
Straw		95.1	1.9	0.42			

Source:
Federal Register EPA; 40 CFR Part 98; e-CFR, June 13, 2017 (see link below). Table C-1, Table C-2, Table AA-1.
https://www.ecfr.gov/cgi-bin/text-idx?SID=ae265d7d6f98ec86fcd8640b9793a3f6&mc=true&node=pt40.23.98&rgn=div5#ap40.23.98_19.1

Note: Emission factors are per unit of heat content using higher heating values (HHV). If heat content is available from the fuel supplier, it is preferable to use that value. If not, default heat contents are provided.

Appendix F: Biogas-to-Energy

2019 AVERT Emission Factors

National Emission Factors

National Weighted Averages (lb/MWh)						
	Onshore Wind	*Offshore Wind*	*Utility PV*	*Distributed PV*	*Portfolio EE*	*Uniform EE*
Avoided CO_2 Rate	1,429	1,361	1,456	1,570	1,562	1,550
Avoided NO_x Rate	0.78	0.68	0.84	0.91	0.89	0.85
Avoided SO_2 Rate	0.85	0.76	0.84	0.90	0.91	0.92
Avoided $PM_{2.5}$ Rate	0.10	0.10	0.10	0.11	0.11	0.11

National factors presented here reflect a weighted average of the avoided emission rates of AVERT's 14 regions. Averages are weig

Regional Emission Factors

Avoided CO2 Rate (lb/MWh)						
	Onshore Wind	*Offshore Wind*	*Utility PV*	*Distributed PV*	*Portfolio EE*	*Uniform EE*
California	966	972	980	1,071	1,073	1,061
Carolinas	1,529	1,537	1,562	1,676	1,706	1,664
Central	1,676	-	1,661	1,790	1,785	1,800
Florida	988	-	1,044	1,126	1,112	1,087
Mid-Atlantic	1,420	1,422	1,460	1,576	1,567	1,540
Midwest	1,732	-	1,718	1,850	1,850	1,860
New England	1,022	1,023	1,038	1,120	1,126	1,104
New York	1,005	1,004	1,039	1,121	1,127	1,090
Northwest	1,487	1,487	1,539	1,691	1,631	1,636
Rocky Mountains	1,752	-	1,728	1,886	1,883	1,904
Southeast	1,416	-	1,504	1,619	1,599	1,563
Southwest	1,404	-	1,392	1,519	1,547	1,544
Tennessee	1,348	-	1,419	1,537	1,530	1,479
Texas	1,199	-	1,242	1,315	1,298	1,282

Avoided SO2 Rate (lb/MWh)						
	Onshore Wind	*Offshore Wind*	*Utility PV*	*Distributed PV*	*Portfolio EE*	*Uniform EE*
California	0.05	0.05	0.05	0.06	0.07	0.06
Carolinas	0.58	0.58	0.60	0.64	0.68	0.64
Central	1.30	-	1.19	1.28	1.28	1.36
Florida	0.20	-	0.25	0.27	0.25	0.23
Mid-Atlantic	1.06	1.07	1.12	1.20	1.19	1.18
Midwest	1.58	-	1.49	1.60	1.63	1.67
New England	0.08	0.08	0.11	0.12	0.12	0.09
New York	0.17	0.17	0.17	0.18	0.20	0.17
Northwest	0.69	0.68	0.71	0.78	0.75	0.75
Rocky Mountains	0.54	-	0.52	0.57	0.57	0.58
Southeast	0.31	-	0.33	0.35	0.35	0.34

Appendix G: Food Waste Diversion

Waste Reduction Model (WARM) -- Results

Total GHG Emissions from Baseline MSW Generation and Management ($MTCO_2E$):	38,702.33
Total GHG Emissions from Alternative MSW Generation and Management ($MTCO_2E$):	(3,241.45)
Incremental GHG Emissions ($MTCO_2E$):	(41,943.78)

$MTCO_2E$ = metric tons of carbon dioxide equivalent

Per Ton Estimates of GHG Emissions for Baseline and Alternative Management Scenarios

Material	GHG Emissions per Ton of Material Produced ($MTCO_2E$)	GHG Emissions per Ton of Material Source Reduced ($MTCO_2E$)	GHG Emissions per Ton of Material Recycled ($MTCO_2E$)	GHG Emissions per Ton of Material Landfilled ($MTCO_2E$)	GHG Emissions per Ton of Material Combusted ($MTCO_2E$)	GHG Emissions per Ton of Material Composted ($MTCO_2E$)	GHG Emission per Ton of Material Anaerobically Digested ($MTCO_2E$)
Corrugated Containers	5.58	(5.58)	(3.14)	0.18	(0.49)	NA	NA
Magazines/third-class mail	8.57	(8.57)	(3.07)	(0.43)	(0.35)	NA	NA
Newspaper	4.68	(4.68)	(2.71)	(0.85)	(0.56)	NA	NA
Office Paper	7.95	(7.95)	(2.86)	1.13	(0.47)	NA	NA
Phonebooks	6.17	(6.17)	(2.62)	(0.85)	(0.56)	NA	NA
Textbooks	9.02	(9.02)	(3.10)	1.13	(0.47)	NA	NA
Mixed Paper (general)	6.07	(6.07)	(3.55)	0.07	(0.49)	NA	NA
Mixed Paper (primarily residential)	6.00	(6.00)	(3.55)	0.02	(0.49)	NA	NA
Mixed Paper (primarily from offices)	7.37	(7.37)	(3.58)	0.11	(0.45)	NA	NA
Food Waste	3.66	(3.66)	NA	0.50	(0.13)	(0.12)	(0.04)
Food Waste (non-meat)	0.76	(0.76)	NA	0.50	(0.13)	(0.12)	(0.04)
Food Waste (meat only)	15.10	(15.10)	NA	0.50	(0.13)	(0.12)	(0.04)
Beef	30.09	(30.09)	NA	0.50	(0.13)	(0.12)	(0.04)
Poultry	2.45	(2.45)	NA	0.50	(0.13)	(0.12)	(0.04)
Grains	0.62	(0.62)	NA	0.50	(0.13)	(0.12)	(0.04)
Bread	0.66	(0.66)	NA	0.50	(0.13)	(0.12)	(0.04)
Fruits and Vegetables	0.44	(0.44)	NA	0.50	(0.13)	(0.12)	(0.04)
Dairy Products	1.75	(1.75)	NA	0.50	(0.13)	(0.12)	(0.04)
Yard Trimmings	NA	NA	NA	(0.20)	(0.17)	(0.05)	(0.09)
Grass	NA	NA	NA	0.12	(0.17)	(0.05)	0.00
Leaves	NA	NA	NA	(0.53)	(0.17)	(0.05)	(0.14)
Branches	NA	NA	NA	(0.54)	(0.17)	(0.05)	(0.22)
HDPE	1.42	(1.42)	(0.76)	0.02	1.29	NA	NA
LDPE	1.80	(1.80)	NA	0.02	1.29	NA	NA
PET	2.17	(2.17)	(1.04)	0.02	1.24	NA	NA
LLDPE	1.58	(1.58)	NA	0.02	1.29	NA	NA
PP	1.52	(1.52)	(0.79)	0.02	1.29	NA	NA
PS	2.50	(2.50)	NA	0.02	1.65	NA	NA
PVC	1.93	(1.93)	NA	0.02	0.66	NA	NA
Mixed Plastics	1.87	(1.87)	(0.93)	0.02	1.26	NA	NA
PLA	2.45	(2.45)	NA	(1.64)	(0.63)	(0.09)	NA
Desktop CPUs	20.86	(20.86)	(1.49)	0.02	(0.66)	NA	NA
Portable Electronic Devices	29.83	(29.83)	(1.06)	0.02	0.65	NA	NA
Flat-Panel Displays	24.19	(24.19)	(0.99)	0.02	0.03	NA	NA
CRT Displays	NA	NA	(0.57)	0.02	0.45	NA	NA
Electronic Peripherals	10.32	(10.32)	(0.36)	0.02	2.08	NA	NA
Hard-Copy Devices	7.65	(7.65)	(0.56)	0.02	1.20	NA	NA
Mixed Electronics	NA	NA	(0.79)	0.02	0.39	NA	NA
Aluminum Cans	4.80	(4.80)	(9.13)	0.02	0.03	NA	NA
Aluminum Ingot	7.48	(7.48)	(7.20)	0.02	0.03	NA	NA
Steel Cans	3.03	(3.03)	(1.83)	0.02	(1.59)	NA	NA
Copper Wire	6.72	(6.72)	(4.49)	0.02	0.03	NA	NA
Mixed Metals	3.65	(3.65)	(4.39)	0.02	(1.02)	NA	NA
Glass	0.53	(0.53)	(0.28)	0.02	0.03	NA	NA
Asphalt Concrete	0.11	(0.11)	(0.08)	0.02	NA	NA	NA
Asphalt Shingles	0.19	(0.19)	(0.09)	0.02	(0.35)	NA	NA
Carpet	3.68	(3.68)	(2.38)	0.02	1.10	NA	NA
Clay Bricks	0.27	(0.27)	NA	0.02	NA	NA	NA
Concrete	NA	NA	(0.01)	0.02	NA	NA	NA
Dimensional Lumber	2.13	(2.13)	(2.66)	(0.92)	(0.58)	NA	NA
Drywall	0.22	(0.22)	0.03	(0.06)	NA	NA	NA
Fiberglass Insulation	0.38	(0.38)	NA	0.02	NA	NA	NA
Fly Ash	NA	NA	(0.87)	0.02	NA	NA	NA
Medium-density Fiberboard	2.41	(2.41)	NA	(0.85)	(0.58)	NA	NA
Structural Steel	1.67	(1.67)	(1.93)	0.02	NA	NA	NA
Vinyl Flooring	0.58	(0.58)	NA	0.02	(0.31)	NA	NA
Wood Flooring	4.03	(4.03)	NA	(0.86)	(0.74)	NA	NA
Tires	4.30	(4.30)	(0.38)	0.02	0.50	NA	NA
Mixed Recyclables	NA	NA	(2.85)	0.03	(0.42)	NA	NA
Mixed Organics	NA	NA	NA	0.18	(0.15)	(0.09)	(0.06)
Mixed MSW	NA	NA	NA	0.31	0.01	NA	NA

Analysis Results (MTCO2E)

GHG Emissions from Baseline Management of Municipal Solid Wastes

Material	Baseline Generation of Material (Tons)	Baseline Recycling (Tons)	GHG Emissions from Recycling ($MTCO_2E$)	Baseline Landfilling (Tons)	GHG Emissions from Landfilling ($MTCO_2E$)	Baseline Combustion (Tons)	GHG Emissions from Combustion ($MTCO_2E$)	Baseline Composting (Tons)	GHG Emissions from Composting ($MTCO_2E$)	Baseline Anaerobic Digestion (Tons)	GHG Emissions from Anaerobic Digestion (MTCO2E)	Total GHG Emissions ($MTCO_2E$)
Corrugated Containers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Magazines/third-class mail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Newspaper	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Office Paper	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Phonebooks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Textbooks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Mixed Paper (general)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Mixed Paper (primarily residential)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Mixed Paper (primarily from offices)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Food Waste	77,794.00	NA	NA	77,794.00	38,702.33	0.00	0.00	0.00	0.00	0.00	0.00	38,702.33
Food Waste (non-meat)	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Food Waste (meat only)	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Beef	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Poultry	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grains	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bread	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fruits and Vegetables	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dairy Products	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yard Trimmings	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grass	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leaves	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Branches	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HDPE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
LDPE	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
PET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
LLDPE	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
PP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
PS	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
PVC	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Mixed Plastics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
PLA	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	0.00
Desktop CPUs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Portable Electronic Devices	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Flat-Panel Displays	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
CRT Displays	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Electronic Peripherals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Hard-Copy Devices	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Mixed Electronics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Aluminum Cans	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Aluminum Ingot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Steel Cans	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Copper Wire	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Mixed Metals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Glass	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Asphalt Concrete	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	0.00
Asphalt Shingles	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Carpet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Clay Bricks	0.00	NA	NA	0.00	0.00	NA	NA	NA	NA	NA	NA	0.00
Concrete	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	0.00
Dimensional Lumber	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Drywall	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	0.00
Fiberglass Insulation	0.00	NA	NA	0.00	0.00	NA	NA	NA	NA	NA	NA	0.00
Fly Ash	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	0.00
Medium-density Fiberboard	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Structural Steel	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	0.00
Vinyl Flooring	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Wood Flooring	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Tires	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Mixed Recyclables	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Mixed Organics	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mixed MSW	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Total	77,794.00	0.00	0.00	77,794.00	38,702.33	0.00	0.00	0.00	0.00	0.00	0.00	38,702.33

Analysis Results (MTCO2E)

GHG Emissions from Alternative Management of Municipal Solid Wastes

Material	Baseline Generation of Material (Tons)	Alternative Source Reduction (Tons)	GHG Emissions from Source Reduction ($MTCO_2E$)	Alternative Recycling (Tons)	GHG Emissions from Recycling ($MTCO_2E$)	Alternative Landfilling (Tons)	GHG Emissions from Landfilling ($MTCO_2E$)	Alternative Combustion (Tons)	GHG Emissions from Combustion ($MTCO_2E$)	Alternative Composting (Tons)	GHG Emissions from Composting ($MTCO_2E$)	Alternative Anaerobic Digestion (Tons)	GHG Emissions from Anaerobic Digestion (MTCO2E)	Total GHG Emissions ($MTCO_2E$)
Corrugated Containers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Magazines/third-class mail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Newspaper	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Office Paper	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Phonebooks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Textbooks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Mixed Paper (general)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Mixed Paper (primarily residential)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Mixed Paper (primarily from offices)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Food Waste	77,794.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	77,794.00	(3,241.45)	(3,241.45)
Food Waste (non-meat)	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Food Waste (meat only)	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Beef	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Poultry	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grains	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bread	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fruits and Vegetables	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dairy Products	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yard Trimmings	0.00	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grass	0.00	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leaves	0.00	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Branches	0.00	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HDPE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
LDPE	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
PET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
LLDPE	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
PP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
PS	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
PVC	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Mixed Plastics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
PLA	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	0.00
Desktop CPUs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Portable Electronic Devices	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Flat-Panel Displays	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
CRT Displays	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Electronic Peripherals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Hard-Copy Devices	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Mixed Electronics	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Aluminum Cans	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Aluminum Ingot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Steel Cans	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Copper Wire	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Mixed Metals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Glass	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Asphalt Concrete	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	0.00
Asphalt Shingles	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Carpet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Clay Bricks	0.00	0.00	0.00	NA	NA	0.00	0.00	NA	NA	NA	NA	NA	NA	0.00
Concrete	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	0.00
Dimensional Lumber	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Drywall	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	0.00
Fiberglass Insulation	0.00	0.00	0.00	NA	NA	0.00	0.00	NA	NA	NA	NA	NA	NA	0.00
Fly Ash	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	0.00
Medium-density Fiberboard	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Structural Steel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	0.00
Vinyl Flooring	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Wood Flooring	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Tires	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Mixed Recyclables	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Mixed Organics	0.00	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mixed MSW	0.00	NA	NA	NA	NA	0.00	0.00	0.00	0.00	NA	NA	NA	NA	0.00
Total	77,794.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77,794.00	(3,241.45)	(3,241.45)

Appendix H: Water Recycling

Mojave/Metropolitan Water Storage Program

In 2003, Metropolitan entered into a demonstration agreement with Mojave Water Agency. The agreement allows for the exchange of SWP water on the basis of one acre-foot of return water for each acre-foot of water previously delivered to Mojave. A 2011 amendment extended the agreement to 2035 and reduced program costs. Metropolitan did not store or recover water from the Mojave program during FY 2020/21, leaving 18,812 AF in the exchange account as of June 30, 2021.

Water Transfers and Exchanges

San Gabriel Valley Municipal Water District Exchange

A 2013 purchase and exchange agreement with San Gabriel Valley Municipal Water District meant that during FY 2020/21, Metropolitan developed 1,629 AF of additional supply by exchange.

Colorado River Resources

Acquisitions and exchanges made possible by the 2003 Quantification Settlement Agreement continued during FY 2020/21. Figure 3-2 illustrates annual water supplies managed through the CRA since CY 2012. In CY 2020, Metropolitan managed a total of about 1,154,000 AF of water supplies through the Colorado River system. Of this volume, 687,000 AF was conveyed into Metropolitan's service area. Metropolitan also stored 338,000 AF of Intentionally Created Surplus in Lake Mead and stored or exchanged more than 128,000 AF of supplies outside Metropolitan's service area. On January 2021, Metropolitan's ICS storage in Lake Mead reached a record high level of 1,293,029 AF. For the remainder of CY 2021, due to dry conditions on the State Water Project, Metropolitan planned to divert approximately 1,068,000 AF of Colorado River supplies, including 70,000 AF of ICS, while keeping more than 1.2 MAF in Lake Mead for later use.

Figure 3-3 illustrates the storage levels of lakes Mead and Powell through FY 2020/21. While peak snowpack conditions were near average in 2021, a dry fall and significantly below-average spring

Niizawa, Warisa

From: Hartling, Earle
Sent: Friday, January 28, 2022 2:25 PM
To: Niizawa, Warisa
Subject: RE: Recycled Water Volume for 2021

Hey Warisa,

I'm still missing the official groundwater recharge numbers for December, as well as the December flows for the Lakewood and Central Basin MWD systems and Palmdale agriculture. However, my best estimate for calendar year is about 112,500 acre-feet.

If you'd like, I can give you updates as new data is received.

Earle

From: Niizawa, Warisa <warisaniizawa@lacsd.org>
Sent: Thursday, January 27, 2022 2:20 PM
To: Hartling, Earle <EHartling@lacsd.org>
Subject: Recycled Water Volume for 2021

Good Afternoon Earle,

I am working on the 2021 GHG Inventory Report and need the recycled water volume for the year. I understand that you may not have all the data available yet as it is still early in the year. However, I was wondering if there is any preliminary number that I can use?

Thank you in advance for your help,
Warisa

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State Water Project Resources

Metropolitan holds a contract with DWR that provides for SWP participation rights and an allocation of 1,911,500 AF annually, subject to availability. The two-year period from 2020 through 2021 ranked as the second driest two-year period in the historical record, exceeded only by 1976-77. This dry sequence resulted in a 20 percent allocation of SWP contract supplies in CY 2020 and a 5 percent allocation for CY 2021. Below-average snowpack and dry soil conditions in 2021 reduced runoff in the Feather River watershed to near-record lows. In FY 2020/21, Metropolitan managed 685,000 AF through the SWP system (Fig. 3-1), about 790,000 AF less water than in the previous fiscal year (FY 2020/21 deliveries and storage are subject to final reconciliation). During FY 2020/21, Metropolitan exercised options under its SWP water management programs to ensure delivery capability under these dry-year conditions. These included drafting more than 34,000 AF from San Joaquin Valley storage accounts, 117,000 AF from flexible storage accounts in Castaic Lake and Lake Perris, and supplying the Mills Water Treatment Plant with 9,500 AF of supplies from Diamond Valley Lake to offset State Water Project demands.

Metropolitan's net SWP payments during FY 2020/21 were $521.8 million (Table 3-1) on a modified accrual basis. Metropolitan also administered existing storage programs outside its service area along the SWP system, as described on the following pages.

Water Storage Programs

Semitropic/Metropolitan Water Banking and Exchange Program

Metropolitan's 1994 groundwater storage agreement with Semitropic Water Storage District in Kern County allows storage of up to 350,000 AF. During FY 2020/21, Semitropic delivered 12,223 AF in the second half of the fiscal year. The total water in storage on June 30, 2021 was 253,072 AF.

Table 4-13
Single Agency Perspectives

	IEUA	Ontario	San Diego	Los Angeles
Additional Tertiary Recycled Water Available in 2005[1]	43,705 AFY	8,682 AFY (included in IEUA)	23,512 AFY	24,650 AFY
Energy Intensity of TERTIARY Recycled Water[2]	333 kWh/AF (Distribution Energy only)	333 kWh/AF (Distribution Energy only)	1,150 kWh/AF[10] (Treatment & Distribution Energy)	600 kWh/AF[3] (Treatment & Distribution Energy)
Marginal Water Supply	SWP (E.Branch) via MWD	SWP (E.Branch) &/OR City Groundwater	SWP & Co.River via SDCWA/MWD	SWP & Co.River via MWD
Energy Intensity of Marginal Water Supply[4]	3,224 kWh/AF	2,054 kWh/AF (average SWP @ 3,224 & G.W. @ 884)[5]	3,140 kWh/AF (assume 50/50, SWP and Colorado River)	2,666 kWh/AF (avg. 2,917 SWP & 2,415 Co. River)
Incremental R.Water (5 years, 2011-2015]	218,525 AF[6]	43,410 AF	117,560 AF	123,250 AF
Cumulative 5 Year Impact[7]				
Marginal Water Supply	742,985 MWH	89,164 MWH	369,138 MWH	328,585 MWH
Recycled Water	72,769 MWH	14,456 MWH	135,194 MWH	73,950 MWH
Est. Energy Savings	631,756 MWH	74,708 MWH	233,944 MWH	254,635 MWH
Avoided N.Gas (CCGT, MMBTUs)[8]	4,544,219 MMBTUs	537,375 MMBTUs	1,682,759 MMBTUs	1,831,590 MMBTUs
Reduced GHG (CCGT, metric tons)[9]	241,114 metric tons	28,513 metric tons	89,286 metric tons	97,183 metric tons

Notes:

[1] From Table 4-3. Recycled Water Opportunity Profiles of Four Southern California Water Agencies. The San Diego estimate includes secondary effluent being discharged to the ocean that could be treated to tertiary standards with existing treatment plant capacity.

[2] The energy intensity of each agency's recycled water is the ***incremental energy*** needed to treat and deliver wastewater effluent for its intended beneficial use. For IEUA and Ontario, since wastewater must be treated to tertiary standards before disposal, the recycled water energy intensity is the amount of incremental distribution energy only. Correctly computed, the amount of recycled water distribution would be computed as the amount of energy needed to deliver recycled water from its source (wastewater treatment plant), less the amount of distribution energy needed to deliver the marginal water supply(s) the recycled water is displacing. For simplicity and conservatism, we assumed that all recycled water distribution was "incremental." For San Diego and Los Angeles, however, since advanced primary and secondary effluent is allowed to be discharged to the ocean without further treatment, the energy intensity of recycled water is computed as the sum of the incremental energy needed to treat wastewater effluent to tertiary standards, plus the incremental amount of distribution energy needed to use the recycled water.

[3] Incremental energy needed to treat secondary effluent to tertiary was estimated by LADWP at 100 kWh/AF. Recycled water distribution energy was not available. However, distribution energy for potable water supplies (imported and from the Los Angeles Aqueduct) was estimated by LADWP at 387 kWh/AF. For conservatism, we used an estimate of 500 kWh/AF for recycled water distribution and did not make any adjustment for distribution energy that would be incurred in any case to deliver marginal water supplies to end users.

3.0 METROPOLITAN BASELINE FACILITIES AND OPERATIONS

Metropolitan's net energy use and costs are dominated by the pumping (transport) of water over the CRA and SWP systems. For the period of 2013-2018, approximately 93 percent of Metropolitan's annual electricity costs were for the SWP and CRA systems, and the remaining 7 percent of energy costs were associated with retail electricity purchases for water treatment plants and other Metropolitan facilities (Figure 3-1).

During this period, 75 percent of Metropolitan's total annual energy expenditures were associated with the SWP, which accounted for approximately 55 percent of total annual energy consumption to pump water into Southern California. This disproportionate energy cost is attributed to a higher unit price for electricity to pump water along the SWP, as compared to the unit price of electricity for the CRA (which includes low cost federal hydropower from Hoover and Parker Dams). Additionally, the large energy cost is also due to the higher energy intensity of SWP supplies (approximately 3,300 kWh/acre-foot [AF]) compared to CRA supplies (approximately 2,000 kWh/AF).

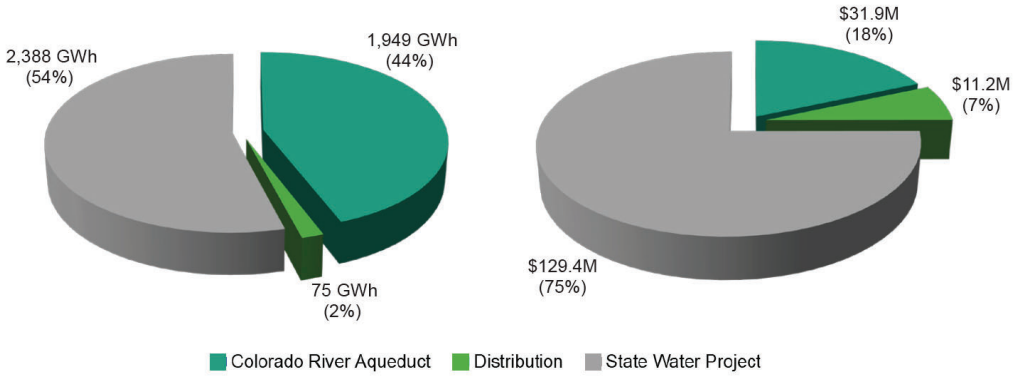


Figure 3-1 Metropolitan's overall electricity requirements and cost (average 2013-2018)

Given Metropolitan does not have direct control over operations of the SWP, the remainder of this section will focus exclusively on the energy use and cost for CRA operations (wholesale power) and for Metropolitan's treatment, distribution and office facilities (retail power).

For wholesale power, Metropolitan has proactively maintained several power contracts with various suppliers that have contract prices and terms set to help Metropolitan and its member agencies maintain a favorable overall low cost for wholesale electricity related to transporting water via the CRA. Today, Metropolitan has existing advantageous contracts with the U.S. Department of Interior, Bureau of Reclamation (USBR), Western Area Power Administration (WAPA) and others. Details on these contracts are discussed in the following sections. Annual costs for wholesale electricity have varied widely due to a variety of factors, including pumping volume, the utilization of energy banking provisions, and the volatility in the energy markets. Additionally, California's cap-and-trade program established in 2013 resulted in an added cost to market prices for energy with GHG emissions, including imported electricity, and affects Metropolitan's wholesale energy cost. Due to this embedded cost of carbon, Metropolitan's carbon footprint is evaluated as a continuing future factor in higher

1. Subregion Output Emission Rates (eGRID2018)

eGRID subregion acronym	eGRID subregion name	Total output emission rates lb/MWh							Non-baseload output emission rates lb/MWh							Grid Gross Loss (%)
		CO_2	CH_4	N_2O	CO_2e	Annual NO_x	Ozone Season NO_x	SO_2	CO_2	CH_4	N_2O	CO_2e	Annual NO_x	Ozone Season NO_x	SO_2	
AKGD	ASCC Alaska Grid	1,039.6	0.082	0.011	1,045.0	5.5	5.4	1.1	1,262.5	0.110	0.015	1,269.6	6.5	6.4	1.1	5.12%
AKMS	ASCC Miscellaneous	525.1	0.024	0.004	527.0	7.7	7.8	0.7	1,528.3	0.068	0.012	1,533.6	22.8	23.0	2.0	5.12%
AZNM	WECC Southwest	1,022.4	0.077	0.011	1,027.5	0.7	0.7	0.3	1,435.3	0.097	0.014	1,441.8	1.0	0.9	0.3	4.80%
CAMX	WECC California	496.5	0.034	0.004	498.7	0.5	0.4	0.0	929.5	0.047	0.006	932.5	0.8	0.7	0.0	4.80%
ERCT	ERCOT All	931.7	0.066	0.009	936.1	0.5	0.6	0.8	1,261.0	0.083	0.012	1,266.5	0.8	0.8	1.1	4.87%
FRCC	FRCC All	931.8	0.066	0.009	936.1	0.4	0.4	0.3	1,123.9	0.068	0.009	1,128.3	0.4	0.4	0.4	4.88%
HIMS	HICC Miscellaneous	1,110.7	0.118	0.018	1,119.1	7.6	7.6	4.0	1,535.7	0.139	0.022	1,545.8	11.8	11.5	5.0	5.14%
HIOA	HICC Oahu	1,669.9	0.180	0.027	1,682.6	3.5	3.8	8.0	1,682.1	0.159	0.025	1,693.6	4.2	4.2	8.4	5.14%
MROE	MRO East	1,678.0	0.169	0.025	1,689.7	0.9	0.9	0.9	1,634.3	0.149	0.022	1,644.5	0.9	1.0	1.0	4.88%
MROW	MRO West	1,239.8	0.138	0.020	1,249.2	1.0	1.0	1.4	1,764.3	0.192	0.027	1,777.0	1.5	1.4	1.8	4.88%
NEWE	NPCC New England	522.3	0.082	0.011	527.6	0.4	0.4	0.1	931.0	0.086	0.011	936.5	0.5	0.4	0.3	4.88%
NWPP	WECC Northwest	639.0	0.064	0.009	643.4	0.6	0.6	0.4	1,575.1	0.148	0.021	1,585.2	1.4	1.4	0.8	4.80%
NYCW	NPCC NYC/Westchester	596.4	0.022	0.003	597.8	0.3	0.2	0.0	1,067.6	0.022	0.002	1,068.9	0.5	0.5	0.1	4.88%
NYLI	NPCC Long Island	1,184.2	0.139	0.018	1,193.1	0.9	0.8	0.2	1,320.3	0.040	0.005	1,322.8	1.0	0.9	0.4	4.88%
NYUP	NPCC Upstate NY	253.1	0.018	0.002	253.9	0.1	0.1	0.1	931.5	0.043	0.005	934.0	0.5	0.5	0.5	4.88%
RFCE	RFC East	716.0	0.061	0.008	720.0	0.3	0.3	0.5	1,242.6	0.091	0.013	1,248.6	0.7	0.6	0.8	4.88%
RFCM	RFC Michigan	1,312.6	0.129	0.018	1,321.2	0.8	0.8	1.3	1,748.9	0.171	0.024	1,760.3	1.2	1.2	2.1	4.88%
RFCW	RFC West	1,166.1	0.117	0.017	1,174.0	0.8	0.7	0.9	1,828.3	0.179	0.026	1,840.5	1.4	1.1	1.4	4.88%
RMPA	WECC Rockies	1,273.6	0.123	0.018	1,281.9	0.7	0.7	0.4	1,542.6	0.120	0.017	1,550.7	0.8	0.8	0.4	4.80%
SPNO	SPP North	1,163.2	0.124	0.018	1,171.6	0.6	0.7	0.3	1,945.5	0.201	0.029	1,959.2	1.2	1.3	0.7	4.88%
SPSO	SPP South	1,166.6	0.091	0.013	1,172.8	0.8	0.9	1.2	1,603.5	0.118	0.017	1,611.5	1.3	1.3	1.9	4.88%
SRMV	SERC Mississippi Valley	854.6	0.055	0.008	858.4	0.6	0.7	1.0	1,137.6	0.069	0.010	1,142.2	0.9	0.9	1.4	4.88%
SRMW	SERC Midwest	1,664.2	0.185	0.027	1,676.8	1.1	0.8	2.5	1,907.0	0.204	0.030	1,920.9	1.1	0.9	2.7	4.88%
SRSO	SERC South	1,027.9	0.081	0.012	1,033.5	0.5	0.4	0.3	1,413.7	0.107	0.015	1,420.9	0.8	0.7	0.5	4.88%
SRTV	SERC Tennessee Valley	1,031.5	0.097	0.014	1,038.1	0.6	0.5	0.6	1,644.3	0.149	0.021	1,654.4	0.8	0.8	0.9	4.88%
SRVC	SERC Virginia/Carolina	743.3	0.067	0.009	747.5	0.4	0.4	0.3	1,422.6	0.128	0.018	1,430.9	0.9	0.8	0.5	4.88%
U.S.		**947.2**	**0.085**	**0.012**	**952.9**	**0.6**	**0.6**	**0.7**	**1,432.3**	**0.117**	**0.017**	**1,440.1**	**1.0**	**0.9**	**1.0**	**4.87%**

Created: 3/9/2020

Appendix I: Tulare Lake Compost

Composting

Unit Processes & Inputs	Inputs & Daily Emissions	Default Input (Optional)
Feedstock Input		
Material type	sludge	
Quantity of sludge going to composting (Mg/day-wet)	100	
Solids content (%)	28.0%	
Quantity of sludge going to composting (Mg/day-dry)	28.1	
Sludge density (kg/m^3)	950	950
Volume of sludge going to composting (m^3/day)	106	
Has the sludge been digested prior to composting?	yes	no
Total nitrogen (%-dry weight)	5.0%	5.0%
Total phosphorus (%-dry weight)	1.9%	1.9%
Total volatile solids - TVS (%-dry weight)	51.0%	51.0%
Organic carbon (%-dry weight)	29.0%	29%
Will compost use replace commercial fertilizer use where it is applied?	yes	yes
Volumetric ratio of amendment to sludge (m^3 amendment:m^3 sludge, as is)*	3	3
Amendment grinding on-site?	yes	yes
Volume of sludge in compost (%)	25%	
Volume of amendment in compost (%)	75%	
Density of amendment (kg/m^3)**	250	250
Quantity of amendment going to composting (Mg/day-wet)	79	
Blended Feedstock Characteristics		
C:N	22	22
Solids content (%)	43%	43%
Type of composting operation	ASP	
Are active composting piles covered or is the air from them treated through a biofilter?	yes	yes
Fuel Use		
Grinding (L-diesel fuel/day)		261
Setting up and breaking down piles (L-diesel fuel/day)		448
Total fuel use for composting equipment (L-diesel fuel/day)	710	710
Applying compost to land (L-diesel fuel/day)	68	68
CO_2 Emissions from Diesel used (Mg/day)	**2.15**	
Electricity Use		
Electricity requirements of composting system (kWh/day)	5,053	5,053
CO_2 Emissions from Electricity used (Mg/day)	**0.92**	
Methane Emissions		
CH_4 emitted from compost pile (Mg/day)	0.00	
CO_2 Emissions equivalents from released CH_4 (Mg/day)	**0.00**	
Nitrous Oxide Emissions		
N_2O emitted from compost pile (Mg/day)	0.033	
N_2O emitted from applying compost to soils (Mg/day)	0.0110	
CO_2 Emissions equivalents from released N_2O (Mg/day)	**10.26**	
Carbon Sequestration		
From compost applied to soil (Mg CO_2/day)	**-7.02**	
Fertilizer Off-set Credits		
From nitrogen applied to soil (Mg CO_2/day)	**-5.61**	
From phosphorus applied to soil (Mg CO_2/day)	**-1.07**	

CO_2 equivalents (Mg/year)	**-136**
Scope 1	**1,968**
Scope 2	**334**
Scopes 1 & 2	**2,303**
Scope 3	**-2,439**
Biomass combustion	**-**

Instructions and Notes

General: Enter data for all solids that were composted. Whenever possible use data from local measurements.

*For this row, if entering a local value, enter in both the blue and orange cells.
**Default is for density of sawdust.

Key	
Input	0
Default from reference values	0
Data used to calculate default (for information only)	0
Process output	**0**

Appendix J: Biogas-to-Vehicle Fuel

Last Updated 1/7/2022 Total Number of Applications (2.0) or Pathways (3.0) 1240

App/Pathway #	Class	Calculator Version	Applicant & Pathway Description	Facility Location	Feedstock	Fuel Type	Current Certified FPC	Current Certified CI	Certification Date
A038501	Tier 1	3.0	Fuel Producer: Los Angeles County Sanitation District (L375); Facility Name: Biogas Conditioning System Facility (F00308); Biomethane produced from the mesophilic anaerobic digestion of wasterwater sludge; grid electricity; finished fuel is compressed and dispensed as CNG transportation fuel onsite. (Provisional)	California	Wastewater Sludge (030)	Compressed Natural Gas (CNG)	CNG030A03850100	19.28	8/20/2021

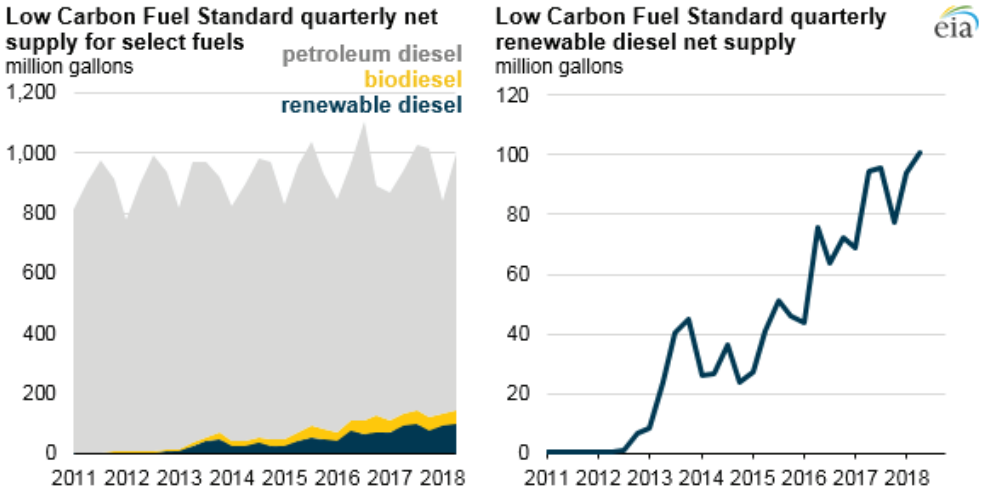
U.S. Energy Information Administration

Skip to sub-navigation

Today in Energy

November 13, 2018

Renewable diesel is increasingly used to meet California's Low Carbon Fuel Standard



Source: U.S. Energy Information Administration, based on California Air Resources Board

Renewable diesel net supply to California's fuel market has increased since the state's Low Carbon Fuel Standard (LCFS) program went into effect in 2011, reaching 100 million gallons during the second quarter of 2018, or 10.1% of the total diesel supplied to California that quarter. The LCFS program, which is administered by the California Air Resources Board, sets standards to incrementally decrease the carbon intensity of motor gasoline and diesel fuel by at least 10% by 2020 relative to a 2010 baseline.

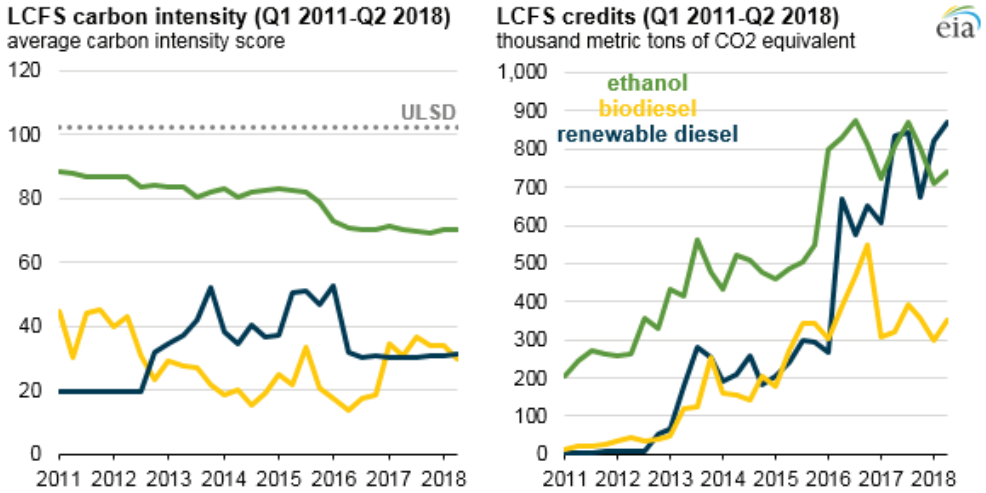
Renewable diesel is an alternative fuel that is chemically similar to petroleum diesel and nearly identical in its performance characteristics. Renewable diesel shares the same fat, oil, and grease feedstocks as biodiesel, but renewable diesel can be blended into petroleum diesel at higher blend levels compared with biodiesel blends. Renewable diesel is often produced either through hydrotreating at a biorefinery or co-processing at a petroleum refinery.

To comply with the LCFS, petroleum refiners, importers of motor gasoline and diesel, and wholesalers of motor transportation fuel are required to either produce low carbon fuels or purchase credits to demonstrate compliance. The mechanism used to regulate the LCFS is a measurement called carbon intensity, which is an estimate of a fuel's lifecycle greenhouse gas emissions. Transportation fuels with a carbon intensity lower than the annual standard earn credits, while transportation fuels with a carbon intensity higher than the annual standard earn deficits. Regulated parties trade credits through the online LCFS Reporting Tool and Credit Bank & Transfer System.

As carbon intensity requirements have become progressively more stringent, prices for LCFS credits have increased. Throughout most of the program's history, LCFS credits averaged lower than $100/metric ton (mt). During 2017, LCFS credits averaged $89/mt, growing to $164/mt through the first 10 months of 2018, suggesting an increasing difficulty for refiners, importers, and wholesalers in meeting annual carbon intensity targets.

Source: U.S. Energy Information Administration, based on Argus Media

The credits generated by renewable diesel producers have some of the lowest carbon intensities of any of the LCFS-approved liquid fuel pathways. **The average carbon intensity of renewable diesel, measured in grams of carbon dioxide equivalent per megajoule (gCO2e/MJ), has been about 30 gCO2e/MJ since spring 2016. Much of this low carbon intensity fuel is made from used cooking oil feedstock.** Compared with other liquid transportation fuels, renewable diesel's carbon intensity is approximately 20 gCO2e/MJ lower than ethanol and about equal to the average carbon intensity of biodiesel. Ultra-low sulfur diesel, which accounts for most of the diesel supplied in California, has a carbon intensity of 102 gCO2e/MJ.



Source: U.S. Energy Information Administration, based on California Air Resources Board

Under the LCFS program, renewable diesel generates a large number of credits relative to other fuels because it has some of the largest lifecycle greenhouse gas reductions compared with other fuels. The total volume of LCFS credits associated with renewable diesel exceeded that of fuel ethanol for the first time in 2018, reaching about 870,000 mt of carbon dioxide equivalent during the second quarter of 2018.

While renewable diesel imports from Singapore remain significant, planned renewable diesel production capacity additions during the next several years have the potential to increase the share of domestic renewable diesel in the California market. A number of LCFS amendments are slated to go into effect in 2019, including an extension of the program to increase the total reduction in carbon intensity to at least 20% by 2030.

Principal contributors: Steve Hanson, Neil Agarwal

Energy Density and Conversion Facros

Fuel (units)	*Energy Density and Conversion Factors*
CARBOB (gal)	119.53 (MJ/gal)
CaRFG (gal)	115.83 (MJ/gal)
Diesel fuel (gal)	134.47 (MJ/gal)
CNG (scf)	105.5 (MJ/Therm)
LNG (gal)	78.83 (MJ/gal)
Electricity (KWh)	3.60 (MJ/KWh)
Hydrogen (kg)	120.00 (MJ/kg)
Undenatured Anhydrous Ethanol (gal)	80.53 (MJ/gal)
Denatured Ethanol (gal)	81.51 (MJ/gal)
FAME Biodiesel (gal)	126.13 (MJ/gal)
Renewable Diesel (gal)	129.65 (MJ/gal)
Alternative Jet Fuel (gal)	126.37 (MJ/gal)
Renewable Naphtha	117.66 (MJ/gal)
Propane (gal)	89.63 (MJ/gal)

Source: CARB's Quarterly Fuel Usage Spreadsheet
https://ww3.arb.ca.gov/fuels/lcfs/dashboard/quarterlysummary/quarterlysummary_103119.xlsx

RNG CI			**Diesel**		
RNG CI	19.28	gCO2e/MJ	RNG CI	102.00	gCO2e/MJ
Energy in Diesel	134.47	MJ/gal	Energy in Diesel	134.47	MJ/gal
RNG CI	2.59	CO2e/gallon	RNG CI	13.72	CO2e/gallon

ESA

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April 8, 2022

Mr. Mathew Watson P.E.
Supervising Engineer
Los Angeles County Sanitation Districts
1955 Workman Mill Road
Whittier, CA 90601

Subject: Positive Verification Opinion for Greenhouse Gas Emissions and Reductions for Emissions Year 2021

Dear Mr. Watson:

Environmental Science Associates (ESA) is pleased to provide the following Positive Verification Opinion for Greenhouse Gas (GHG) Emissions and GHG Reductions for Emissions Year 2021 based on information within the Draft 2021 GHG Emissions Inventory Report (Report) compiled by Los Angeles County Sanitation Districts (LACSD) and submitted to ESA on March 15, 2022.

Based on verification analysis conducted that is generally consistent with California's Global Warming Solutions Act methods and in accordance with standards within ISO 14064-3, ESA concludes, with the assurances detailed below, that the 2021 GHG inventory and GHG reduction statements in the Report are free of material errors and a fair representation of the GHG data and information; and prepared in accordance with the best practices related to GHG quantification, monitoring, and reporting.

This statement is made with the following assurances. In ESA's limited review of data collected from emissions sources, individual facilities and the organization, ESA verified evidence that LACSD's 2021 GHG emissions and the GHG reductions were:

- Materially correct and a fair representation of the GHG data and information; and generally prepared in accordance with the best practices related to GHG quantification, monitoring, and reporting, and
- Based on data checks conducted, ESA has determined, with limited assurance, that there is low risk for material misstatement from GHG calculations and data aggregation at the organizational level.

Based on the GHG emissions and reductions data provided within the Report, LACSD has demonstrated carbon neutrality.

Thank you for engaging ESA to complete this verification. If you have any questions about our verification statement, or the underlying analysis, please feel free to contact me at ceaster@esassoc.com or 925.900.3675.

Sincerely,

Christopher Easter
Air Quality & GHG Director
CARB Lead GHG Verifier Accreditation #CARB H-21-039

Copy: David Rothbart (LACSD)
Warisa Niizawa (LACSD)
Jeff Caton (ESA)
Tim Sturtz (ESA)

2.3.1.1 Letter A3: Los Angeles County Sanitation Districts

This letter provides input on the Revised Draft 2045 CAP as well as CEQA comments on the Recirculated Draft PEIR. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4, *Comments on the Revised Draft 2045 CAP*, in Chapter 1, *Introduction*. PEIR-focused comments are addressed below.

A3-1 The comments on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses general comments received on the Revised Draft 2045 CAP.

In response to the comment's statement regarding incorporating by reference the commenter's previous July 6, 2022, comments, the Recirculated Draft PEIR wholly replaces the May 2022 Draft PEIR such that the commenter's previous submittals predate the issuance of this Recirculated Draft PEIR, are inapplicable, and are presumed not to bear on the adequacy or accuracy of the Recirculated Draft PEIR pursuant to CEQA Guidelines section 15088.5(f)(1), stating "[w]hen an EIR is substantially revised and the entire document is recirculated, the lead agency may require reviewers to submit new comments and, in such cases, need not respond to those comments received during the earlier circulation period."

A3-2 As discussed in General Response 3, in response to comments received, the County has revised the Checklist to clarify that the Checklist will be used only for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis.

The County acknowledges the commenter's suggestion to consider public agency projects covered by their own agency CAPs as consistent with the Revised Draft 2045 CAP. The County retains discretion over this decision on a project-by-project basis. However, to qualify for CEQA streamlining of GHG impacts CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b), all projects must complete the Checklist.

A3-3 The comments on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see response to comment A3-2 above and General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects.

A3-4 The comments do not raise significant environmental issues related to the Recirculated Draft PEIR, as the Recirculated Draft PEIR wholly replaces the May 2022 Draft PEIR such that the commenter's previous July 6, 2022 comment submittal predates the issuance of this Recirculated Draft PEIR, are inapplicable, and are presumed not to bear on the adequacy or accuracy of the Recirculated Draft PEIR pursuant to CEQA Guidelines section 15088.5(f)(1), stating "[w]hen an EIR is substantially revised and the entire document is recirculated, the lead agency may require reviewers to submit new comments and, in such cases, need not respond to those comments received during the earlier circulation period." To the extent the commenter believes its prior comments have continuing relevance, the burden was on the commenter to explain how, with sufficient specificity, to enable the County to provide a detailed response. The County does not have the duty to decipher what comments on the May 2022 Draft PEIR the commenter believes to still be applicable from its previous comment letters, which is why the public has been given the opportunity to draft new comment letters on the Recirculated Draft PEIR.

2.3.2 Responses to Comments from Organizations

May 15, 2023

Los Angeles County Department of Regional Planning
320 W. Temple Street, 13th Floor
Los Angeles, CA 90012

Dear County of Los Angeles,

We at Abundant Housing LA would like to express our gratitude for the work you have done in creating the Revised Draft of the 2045 Climate Action Plan. However, we also see the need to express concerns with housing policy in this Revised Draft. As an organization that advocates for more housing options and sustainable land use policies, we recognize the important connection between climate change and zoning/land use decisions.

The 2045 Climate Action Plan is an important document that has significant implications for housing planning, zoning, and land use policies in Los Angeles County. The plan recognizes the critical connection between climate change and land use decisions, and outlines strategies to reduce greenhouse gas emissions while promoting sustainable development practices. By addressing issues such as affordable housing, transportation, and density near transit areas, the plan seeks to create more equitable and sustainable communities that are better able to withstand the impacts of climate change. As such, it is essential that housing planners, zoning officials, and other stakeholders take this plan into account when making decisions about future development in Los Angeles County.

While we appreciate the efforts made in this plan, there are critical issues in housing policy that need to be addressed in order to achieve a more equitable and sustainable future for all residents of Los Angeles County.

Firstly, we believe that there is a need for more affordable housing options near colleges and universities. We suggest permitting SROs or co-ops near these institutions where possible, as this could help address the housing needs of students and other community members while promoting sustainable transportation options like biking. Additionally, we urge you to consider connecting every college/university with safe, protected bikeways as part of your transportation plan.

Secondly, we believe that there is a need to address the jobs-housing imbalance in job-rich areas. We suggest allowing apartments with reduced or eliminated parking minimums in residential neighborhoods within a 1-2 mile buffer around job centers identified on the SCAG map. This could help reduce vehicle miles traveled and promote more sustainable transportation options.

Finally, we are concerned about the lowering of maximum allowable densities in HQTAs from 50 to 30. While we understand that there is a range of 30-150 mentioned in the plan, it is possible that some areas may end up with lower densities due to community input and other factors. We urge you to consider ways to ensure that high-quality transit areas are able to accommodate higher densities where appropriate.

We hope that you will take these concerns into consideration as you continue to refine and implement this important plan. Thank you again for your hard work on behalf of all residents of Los Angeles County.

Sincerely,

Leonora Camner

Leonora Camner
Executive Director
Abundant Housing LA

Scott Eptein

Scott Epstein
Director of Policy and Research
Abundant Housing LA

2.3.2.1 Letter O1: Abundant Housing LA

This letter provides input on the Revised Draft 2045 CAP only. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4, *Comments on the Revised Draft 2045 CAP*, in Chapter 1, *Introduction*.

ACTON TOWN COUNCIL
P.O.Box 810, Acton CA 93510

Thuy Hua
Supervising Regional Planner
Los Angeles County Department of Regional Planning
320 W. Temple Street, 13th Floor
Los Angeles, CA 90012
Electronic transmission of twelve (12) pages to:
climate@planning.lacounty.gov and
THua@planning.lacounty.gov

May 15, 2023

Subject: Acton Town Council Comments on the Draft Climate Action Plan and the Recirculated Draft Program Environmental Impact Report.

Reference: Solicitation of Public Comment on the Draft Climate Acton Plan and the Recirculated Draft Environmental Impact Report Issued March 29, 2023.

Dear Ms. Hua;

The Acton Town Council appreciates this opportunity to provide comments on the Draft Climate Action Plan ("DCAP") and the Recirculated Draft Environmental Impact Report ("DEIR"). These comments are submitted before the 5:00 PM deadline on May 15, 2023 that was established by the Department of Regional Planning; therefore, they are timely filed.

Unfortunately, the Acton Town Council did not have sufficient time to conduct a proper review the 774 page DEIR or its 610 pages of appendices or the 150 page DCAP with its 234 pages of appendices. Nonetheless, we present the comments that we have been able to prepare over the following pages and respectfully request that they be taken into consideration as DRP moves forward with developing the CAP. For the sake of simplicity, our comments are offered in a list format. Additionally, and to the extent that they continue to be relevant, the ATC hereby incorporates by reference all previous comments that we submitted regarding the Climate Action Plan including, but not limited to, the comments submitted in January 2022 and April, 2022 O2-1

<u>Decarbonization and Electrification in Areas That Have Unreliable Electrical Service</u>:
The ATC appreciates that the DCAP reflects the content of the motion adopted by the Los Angeles County Board of Supervisors ("Board") on March 15, 2022 which directs that new County policies, ordinances, and code changes pertaining to building decarbonization and electrification in unincorporated areas consider "the varying climate, geography, and O2-2

infrastructure challenges that rural communities face"; this motion was a critical step to ensuring that rural communities like Acton (which have unreliable electrical service and therefore depend on propane and natural gas for heating and cooking) are not harmed by the County's march toward full electrification of all unincorporated areas. The motion is reflected in description of DCAP Measure E1 (which transitions existing buildings to "all electric" while taking into consideration the unique challenges that rural communities face) and DCAP Measure E2 (which standardizes electrification of all new development while taking into consideration the unique challenges that rural communities face).

O2-2 (cont)

The Acton Town Council is concerned that the criteria which ultimately be used to identify rural communities having "climate, geography, infrastructure, and sole-source dependency challenges" in the ordinances that will implement Measures E1 and E2 will not be sufficiently broad to properly capture the residential areas that will experience life-safety risks if they are required to fully decarbonize. Acton and other rural communities have, since 2019, experienced devastating electrical power shutoffs in the Fall and Winter that have lasted days. Additionally, the climate in Acton and other rural communities is significantly colder than many other regions in Los Angeles County, and we often experience harsh winters with temperatures plummeting below 20 degrees and heavy snowfall accumulations over 1 foot. A considerable amount of energy is required to maintain safe living conditions in such inclement weather which, incidentally, also causes additional electrical power shutoffs. As such, wood-burning and fossil fuel-powered heating systems are not mere conveniences in Acton; they are necessary survival tools which provide a reliable and independent source of warmth. These traditional heating methods are not contingent on the availability of electricity and they provide a lifeline during extended power outages. Accordingly, the ATC respectfully requests that the DCAP be revised to incorporate the following criteria for identifying the unincorporated communities that face climate, geography, and infrastructure challenges pursuant to Measures E1 and E2:

O2-3

Any rural community at an elevation of 1,800 feet or higher and which has

- experienced two or more "Public Safety Power Shutoff" events lasting more than 24 hours since October, 2019 or
- experienced a loss in electrical service lasting more than 24 hours due to snow or other climate conditions.

O2-4

The Acton Town Council believes these criteria will provide the flexibility that is called for in the Board motion while contemporaneously achieving the broad decarbonization and building electrification objectives established by the DCAP.

<u>Modifications to Measure E5 are Greatly Appreciated, However the Measure E5 Performance Objectives Can Only Be Achieved in Urban Areas.</u>

The Acton Town Council greatly appreciates the revisions that were made to the Performance Objectives established for Measure E5 which increase recycled graywater and

O2-5

"potable reuse" in unincorporated areas; however, we are struggling to understand how this performance objective will be achieved in rural areas where recycled water does not exist. Moreover, in rural communities where septic systems are used, Action E5.1 (which segregates graywater streams from use in irrigation) will result in the discharge of very high concentrations of nitrified and acidified organic waste into residential septic systems because the graywater streams (which substantially dilute the nitrate and organic content of the blackwater streams) will be removed from the septic system. This in turn will substantially increase nitrate concentrations in the effluent released from the septic dispersal fields. Moreover, it is not clear that septic systems will function properly with high concentrations of nitrified and acidified organic waste; if these concentrated wastes cause a septic system to fail, then there are no alternatives and the resident must replace the entire system. Concerns with implementation of Measure E5 in rural areas were previously identified in the comments submitted by the Acton Town Council in 2022; a few of these concerns (though not all) still persist. A possible solution would be to limit the implementation of Acton E5.1 to only those areas that are served by a municipal sewer system.

O2-5 (cont)

A typographical Error noted in the Performance Objectives for Measure E2:
The ATC recommends the following revision:

PERFORMANCE OBJECTIVES

Require all applicable new buildings ~~will~~ to be all-electric. Provide affordable housing set-aside to offset first cost.

O2-6

A typographical Error noted on page 1.13
The Acton Town Council recommends the following revision:
"The 2045 CAP is intended to be inclusive, accessible, and meaningful and prioritize~~s~~ frontline …."

O2-7

The New Emphasis on Local Renewable Generation Reflected in the Revised DCAP is Appreciated; However, the DCAP Misrepresents CPA's Utility Scale Renewable Resources and the DEIR Fails to Consider Alternatives in a Manner Consistent with CEQA.
The Acton Town Council has endeavored to inform policymakers, lawmakers, and government agencies that there are two ways to achieve California's renewable energy goals: one way destroys thousands of square miles of unspoiled desert lands with endless seas of black glass, decimates pristine viewsheds with industrial wind turbines and high voltage transmission lines, blights entire rural communities with miles of concentrated, industrial, and dangerous battery storage facilities, reduces energy resiliency, and unnecessarily costs ratepayers billions of dollars; the other way enhances community resiliency, improves electrical reliability, protects the environment, and saves ratepayers billions of dollars. The former relies on the development of remote, utility scale solar "farms" and remote, utility scale battery "farms" to produce power that is then transmitted

O2-8

via high voltage transmission lines over hundreds of miles to serve urban load pockets; and, because this alternative makes urban communities entirely reliant on a diffuse and fragile network of utility lines and energy nodes to meet all their energy needs, it is intrinsically non-resilient and arguably unreliable. The latter relies on the development of small scale generation and battery storage resources distributed throughout urban load pockets to supply local energy needs; and, because this alternative allows urban communities meet their own electrical demand without relying on remote generation and transmission facilities, it is intrinsically resilient and demonstrably reliable. O2-8 (cont)

Powerful utilities like Southern California Edison and powerful corporations like AES have a vested interest in substantially expanding utility-scale renewable generation and ensuring that distributed resources are both marginalized and minimized; as a result, their influence and their "voice" often overshadows our message. However, we are heartened because our message does appear to be "getting out". O2-9

In particular, the Acton Town Council is grateful that the revised DCAP includes a number of new provisions which appears to reflect our message that distributed generation increases community resiliency. For instance, Measure ES4 adds new Performance Objectives that will achieve community electricity generation capacity equal to the communitywide 24 hour average and will install microgrids in unincorporated areas. O2-10

However, what is lacking in the DCAP and the DEIR is an acknowledgement that distributed generation provides specific and intrinsic advantages such as reducing environmental impacts to desert resources, reducing wildfire risks by avoiding transmission lines, and preserving mountain vistas that would otherwise be marred by new transmission lines; furthermore, and frankly, distributed generation is also the ONLY path to achieving the community resiliency that the DCAP claims to support. O2-11

The Acton Town Council is also substantially concerned by revisions to the DCAP which incorrectly report the amount of utility scale solar renewable energy that "Clean Power Alliance" ("CPA") supplies. Specifically, page 3-16 asserts that utility-scale solar is a relatively small portion of CPA's renewable energy supply because CPA's projected renewable electricity mix for 2035 is "30 percent utility-scale solar, 45 percent battery storage, 24 percent onshore wind, and 1 percent hydro". What this statement fails to consider is that *the battery storage facilities included in these statistics are charged using energy that comes from utility scale solar farms*; this means that *all* of the renewable power that is supplied by CPA's "45% battery storage" facilities *is actually generated by utility scale solar farms*. Claiming that 45% of CPA's renewable energy comes from batteries is a gross misrepresentation; batteries do not supply renewable energy, they merely store whatever type of energy that is delivered to them and then release it at a later time. The *only* time that energy flowing from a battery farm is designated as "renewable energy" is when that battery farm is connected to a utility scale solar farm and is thereby charged solely with renewable energy. This *fact* is demonstrated in CPA's 2022 Integrated Resource Plan ("IRP") which establishes that only CPA battery facilities which are operated O2-12

in conjunction with utility-scale solar farms (known as "hybrids") are deemed to provide renewable energy; CPA's standalone battery facilities (which are directly connected to the transmission grid and not to a utility scale solar farm) are *not* deemed to provide renewable energy"[1]. Furthermore, because of SB100, all energy deliveries will be carbon free by 2030 regardless of whether the energy is delivered to the end user or to battery storage; therefore, within a few short years, most of the energy that will be used to charge all the batteries that are assumed in CPA's IRP will come from utility scale solar farms because the long term plan of all utilities (including CPA) is to rely heavily on utility scale solar facilities to meet their power delivery obligations[2]. Additionally, even though the energy resources provided by CPA's standalone battery storage projects are not deemed to be renewable, they are in fact supplied by utility scale solar farms[3]; accordingly, the statement in the DCAP which claim that CPA's utility scale solar projects comprise a relatively small portion of CPA's renewable electricity mix is patently false. The Acton Town Council would be happy to discuss these matters with staff; in the meantime, we recommend the following correction to page 31 of the DCAP:

O2-12 (cont)

O2-13

O2-14

O2-15

> ~~According to CPA's 2022 Integrated Resource Plan (a CPUC proceeding to evaluate long-term grid resource needs), the projected 2030 renewable electricity mix is approximately 23 percent utility-scale solar, 53 percent battery storage, 21 percent onshore wind, and 2 percent hydro; the projected 2035 renewable electricity mix is 30 percent utility-scale solar, 45 percent battery storage, 24 percent onshore wind, and 1 percent hydro[31]. This demonstrates that utility-scale solar is a relatively small portion of CPA's renewable energy supply mix through 2035. In addition, because of the large number of 100 percent Green Power customers, CPA expects to meet and exceed the State of California's 30 million MTCO2e GHG targets, even in its lowest renewables case. Note that these projections do not include behind-the-meter distributed energy generation like rooftop solar because DER electricity generation is not supplied by CPA.~~
>
> The County's strategy to shift to a renewables-based electricity supply must ensure equitable access to affordable, local, and reliable energy sources…..

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[1] See page 14 of CPA's 2022 Integrated Resource Plan Summary: https://cleanpoweralliance.org/wp-content/uploads/2022/11/cpasc_narrative_public.pdf.

[2] As shown on page 19 of CPA's 2022 Integrated Resource Plan Summary, "Solar Resources" will be the primary renewable energy source for all utilities [Id at 19]. These "solar resources" are NOT distributed resources, they are utility scale solar resources.

[3] CPA's 100 MW "Luna" battery facility is located in a utility scale solar farm in the Antelope Valley and is charged by the utility scale solar farm that surrounds it [https://www.youtube.com/watch?v=X-MBRhaFN4c]. CPA's 50 MW "High Desert" battery facility is located in a utility scale solar farm in the Antelope Valley and is charged by the surrounding utility scale solar farm [https://cleanpoweralliance.org/2022/03/25/new-solar-plus-storage-clean-energy-facility-now-online/]. CPA's 100 MW "Sanborn" battery facility is located in a utility scale solar farm in the Antelope Valley and it is charged by the surrounding utility scale solar farm [https://cleanpoweralliance.org/wp-content/uploads/2021/11/Sanborn-Release-Final-110821-1.pdf]. Even CPA's 75 MW "Desert Sands" project that was just approved will be charged by utility scale resources because it is connected to an SCE transmission substation (note: transmission substations and transmission lines *only* carry power from utility scale generation facilities).

The claim set forth in the DCAP and the DEIR that it is not possible to "quantify the renewable energy potentially facilitated by the 2045 CAP that would be provided by new utility-scale solar projects" is also incorrect. Information provided in CPA's 2022 IRP, along with accessible data pertaining to CPA's existing and pending "Power Purchase Agreements" ("PPAs"), provide a clear picture of the "mix" of renewable resources that CPA will use to serve its customers through at least 2035; so, the County can easily assess the portion of future CPA energy deliveries that will come from utility scale solar. The County also knows how much electrical energy is currently being used in unincorporated areas now and how much electrical energy will be used in unincorporated areas by 2035 and by 2045 once all of the CAP's electrification and decarbonization measures are implemented. By reconciling this information, the County can easily "quantify the renewable energy potentially facilitated by the 2045 CAP that would be provided by new utility-scale solar projects". O2-16

Moreover, because the County *can* accurately quantify the renewable energy potentially facilitated by the 2045 CAP that would be provided by new utility-scale solar projects, the EIR that is certified for the DCAP *must* address the cumulative impacts of developing these utility scale solar projects and provide programwide mitigation measures. Such mitigation measures must address dust control (via mulch or gravel) as well as water supply impacts (water is needed to clean all the solar panels), wildlife impacts (hundreds of square miles of habitat will be destroyed and large numbers of migrating birds will be injured and killed when they crash into massive "seas of solar panels because they think they are landing on a lake), heat island impacts of hundreds of square miles of heat trapping surfaces (solar farms create just as much heat in rural urban areas as pavement creates in urban areas), and aesthetic impacts (resulting from the industrialization of hundreds of square miles of desert lands). O2-17

In other words, the County does not have to know precisely the number utility scale solar farms that will result from CAP implementation in order to broadly assess their effects and develop programwide mitigation measures to address these effects; it does not even need to know precisely where these solar farms are located (although the California Energy Commission has already provided this information – see Attachment 1). O2-18

Unfortunately, the DEIR fails to address any of these impacts and it fails to offer any mitigation measures to address these impacts. Instead, it states (incorrectly) that "it would be speculative to quantify the amount of renewable energy that could be facilitated by the Draft 2045 CAP that would be provided by new utility-scale solar projects" [page 3.1-13]. The DEIR then trivializes concerns regarding these impacts by stating that the renewable energy demand that will result from the DCAP "could be met in a variety of additional ways, other than through new utility-scale solar projects"; CPA's 2022 IRP reveals this statement to be false because it clearly and quantitatively demonstrates that CPA will not meet its renewable energy demand in a "variety of ways". Specifically, CPA's IRP shows that *utility scale solar will be **the** primary mechanism that CPA will use to secure 100% renewable energy until at least 2035* and *that the "additional ways" CPA will use to achieve its renewable energy targets account for only 20% of CPA's renewable portfolio.* O2-19

The DEIR also O2-20

disingenuously postulates that "a substantial amount of solar energy generation would likely occur on rooftops within the County"; this prediction is patently false for several reasons. First, rooftop solar only provides a small portion of current electrical demand. Second, because of new "net metering" regulations that became effective in April 2023 and which were approved by the CPUC on behalf of the major utilities, there will be very little new rooftop solar development in future. These facts, combined with information from CPA's IRP indicating that rooftop solar provides a negligible portion of CPA's electrical supply, utterly refute the DEIR's claim a substantial amount of solar energy would likely occur on rooftops within the County. For all these reasons, Section 3.1.3.6 of the DEIR must be entirely revised to provide correct information and properly address the new utility-scale solar projects that will be facilitated by the 2045 CAP.

O2-20 (cont)

O2-21

Among other things, a Program EIR is *supposed to* "provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action" and the Lead Agency is *supposed to* use a Program EIR to consider "broad policy alternatives and programwide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts" [CEQA Guidelines 15168. (b)]. Notably, these characteristics are not found in the DEIR's discussion of alternatives for achieving the DCAP's renewable energy targets; instead, the DEIR patronizingly dismisses the concerns raised by the Acton Town Council and others regarding the significant expansion of utility scale solar farms that will result from achieving DCAP targets by declaring that "renewable energy demand could be met in a variety of additional ways, other than through new utility-scale solar projects".

O2-22

What the Acton Town Council is looking for in the DEIR is: 1) a broad discussion addressing the alternatives available to implement the DCAP's renewable energy policies and achieve its renewable energy targets *and a comparison of their associated impacts*; and 2) a list of programwide mitigation measures that will minimize these effects. For instance, the DCAP recognizes that battery storage is critical to achieving its renewable energy objectives and it actively encourages the substantial expansion of battery storage systems by establishing Implementation Action ES3.6 to "Streamline and prioritize permitting for solar and battery storage projects". Consistent with CEQA Guidelines 15168(b) the DEIR must consider the environmental implications of the battery storage expansion objectives advocated by the DCAP and in particular, address the Implementing Action that "streamlines and prioritizes" battery storage facilities; this is done by first broadly addressing the effects of, and alternatives for, implementing the DCAP's battery storage expansion objectives and then formulating programwide mitigation measures to reduce these impacts. Specifically, what the DEIR *is supposed to do* is address the fact that there are two alternative strategies for expanding and streamlining battery storage: one alternative (distributed storage) is to distribute stored energy resources throughout the load pocket; this substantially increases community resiliency by delivering stored energy directly to load and it decreases transmission grid congestion because it does not put power on the transmission grid

O2-23

O2-24

O2-25

during peak hours (which, incidentally, provides the added benefit of substantially reduces ratepayer costs). This alternative also minimizes aesthetic impacts and wildfire risks because the battery facilities are distributed over a wide area and not concentrated in a manner that will cause a catastrophic fire event. The other alternative (utility scale storage) concentrates the battery storage units in remote rural locations and requires high voltage transmission lines to deliver the stored electricity to load. This alternative substantially decreases community resiliency, increases grid congestion (and, by extension, ratepayer costs), results in significant aesthetic impacts (because it converts hundreds of acres of rural open space to industrial use), and poses a significant wildfire risk (particularly if such facilities are located in or adjacent to a Very High Fire Hazard Severity Zone). Based on the results of this alternatives analysis, the DEIR *is supposed to* develop programwide mitigation measures that address the environmental effects of the alternatives. For example, the DEIR *is supposed to* incorporate appropriate measures such as limiting the application of Action ES3.6 to only distributed battery storage projects because utility scale storage projects pose substantial risks and provide no community resiliency benefits and therefore should NEVER be streamlined (instead, they must be carefully evaluated through a discretionary review process). The DEIR is also *supposed to* adopt appropriate mitigation measures to reduce the significant effects posed by utility scale storage facilities such as "utility scale storage projects must be located outside of Very High Fire Hazard Severity Zones" and "utility scale storage projects must be located only in remote areas where there are no residences". Furthermore, and in recognition of the significant community resiliency benefits and energy characteristics provided by distributed storage resources, the DCAP should include policies that prefer distributed storage resources and highly encourage them; it should also discourage utility scale storage unless it is located in remote, unpopulated areas outside VHFHSZs. The latter is particularly important because *environmental documents are supposed to inform and even shape the projects that they consider*; they are not supposed to merely analyze the project in isolation. Correspondingly, LCAP policies should reflect the results and conclusions set forth in the DEIR.

O2-25 (cont)

O2-26

O2-27

O2-28

The analysis provided above illustrates the type of "effects and alternatives" that Program EIRs are supposed to consider as they develop "broad policy alternatives and programwide mitigation measures"; unfortunately, the DEIR appears to have "missed the boat" because none of these elements are reflected in the Draft Program EIR. To ensure consistency with CEQA, the DEIR must be revised to properly consider the "effects and alternatives" of key DCAP measures and actions (including, but not limited to, energy storage expansion and renewable resource generation); it must also develop "broad policy alternatives and programwide mitigation measures" to address these effects and alternatives.

O2-29

<u>Concerns with the DCAP's "Aspirational Goal"</u>

O2-30

The Acton Town Council continues to be troubled by the DCAP's "aspirational" goal. It is noted that the CAP will be incorporated within the County General Plan, and when that

O2-31

happens, all CAP goals will become "binding" in that they will direct all future land use and development decisions; accordingly, all future County actions must ensure conformance with all CAP goals regardless of whether they are merely "aspirational" goals. The County is obligated to strive for achieving *all* goals expressed in the General Plan; thus, designating a goal as merely "aspirational" is meaningless in a General Plan context. Moreover, the intent of "goals" in a General Plan is to provide a general direction and express a "future end"; goals are not supposed to be quantified or time dependent[4]. In this sense, all General Plan goals are "aspirational", thus designating one goal as "aspirational" makes little sense. Moreover, Figure ES-2 of the DCAP indicates that achieving "carbon neutrality" by 2045 is impossible, which suggests that the "aspirational goal" set forth in the DCAP cannot be, and will not be, achieved. This too is troubling because General Plan goals are supposed to be meaningful and achievable. Perhaps the DCAP's 2045 Carbon Neutrality goal is designated as "aspirational" because it cannot be achieved in practice; if so, then this should be clarified in the DCAP.

O2-31 (cont)

O2-32

O2-33

<u>Modifications to Measure E6 are Greatly Appreciated.</u>

The Acton Town Council is very appreciative of the revisions that were made to the Implementing Actions established by Measure E6 for reducing indoor and outdoor water consumption. It is noted however that Implementing Acton E6.1 asserts that a future water conservation ordinance may include a net zero water requirement for new greenfield development. To address the problems that such a requirement would create if it were imposed in rural communities like Acton, the Acton Town Council herein incorporates by reference the comments provided on page 7 and elsewhere in the letter that we submitted to DRP on July 18, 2022 in response to the DCAP.

O2-34

<u>The Acton Town Council Remains Very Concerned About the Vagueness of Action E4.1.</u>

Implementing Action E4.1 requires "all buildings to perform energy efficiency retrofits at the point of sale". As we commented previously, this Implementing Action is very vague and the DCAP provides no information whatsoever regarding the scope and extent of the "energy efficiency retrofits" that are contemplated. The potential costs of this action are in the hundreds of thousands of dollars: Will homeowners have to replace all their windows with triple glazing and replace all their insulation with material that has a better R factor and replace their roof with "cool roof" materials and replace all their appliances with appliances having the highest energy star rating before they can sell their home? This action could mean all of these things, or it could mean none of them. Page xiii of the DCAP does state that "deep retrofits to existing buildings" will be necessary to achieve carbon neutrality; is that what is anticipated by Acton E4.1? And if so, what are "deep retrofits" anyway? Why isn't there any transparency in this Implementing Action? Page 3-52 of the DCAP states that implementation details for Action E4.1 can be found in "Appendix E", but

O2-35

O2-36

O2-37

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[4] "General Plan Guidelines" issued by the Office of Planning and Research Page 381 [https://opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf].

there are no implementation details in Appendix E. In fact, Appendix E adds to the confusion because it states that the "tracking metrics" for this Action are "Number of homes or businesses participating"; this suggests that property owners will be able to choose whether or not to "participate" in Implementing Action E4.1. This is in direct conflict with the plain language of Implementing Action E4.1 which clearly and unambiguously makes "participation" mandatory because it requires "all buildings to perform energy efficiency retrofits *at the point of sale*". Equally troubling, Appendix E identifies various funding sources for Implementing Action E4.1; this gives a false impression that the compulsory retrofits mandated by Action E4.1 will be paid for by entities other than the property owner. This is incorrect. Because Implementing Action E4.1 is initiated at the "point of sale", the funds required to comply with Action E4.1 will come solely from the property owner and not some benevolent government agency or non-profit group. The vagueness of, and the lack of transparency in, Implementing Action E4.1 makes it impossible for the Acton Town Council to provide any meaningful comment on its implications. The DCAP *must* be revised to explain what is meant by "energy efficiency retrofits" and identify the specific "energy efficiency retrofits" that are captured by Implementing Action E4.1. The Acton Town Council is confident that the County can provide this information; after all, the DCAP does estimate the GHG emission reductions that will be achieved through Implementing Action E4.1, thus the County has a reasonable knowledge of the various "energy efficiency retrofits" that are needed to achieve these GHG emission reductions.

O2-38 (cont)

O2-39

O2-40

<u>Action E4.3 Will Result in Significant Impacts that Must be Addressed in the DCAP EIR.</u>
Implementing Action E4.3 appears to require the County to replace *all* the heat-trapping surfaces it owns and operates with cool or green surfaces; this includes all roads and highways and parking lots and hardscapes. Thousands of miles of roadways are owned and operated by the County and according to Action E4.3, they will all have to be replaced. Moreover, various alternatives (each creating its own unique effects) are available to replace roadways with cool or green surfaces; the DEIR is supposed to broadly address these alternatives and their effects and offer appropriate programwide mitigation measures, but it does not. Instead, the DEIR simply sidesteps all of these requirements by simply declaring that the "The Draft 2045 CAP is a policy-level document that does not include any site-specific designs or Proposals". All of this violates CEQA. Any Program EIR developed for any "policy document" which make specific actions mandatory must broadly address the effects of, and alternatives for, these specific mandatory actions and present programwide mitigation measures to address them. The DEIR must be revised to comply with this requirement by considering key mandatory actions like E4.3 that are established by the DCAP and which have the potential to result in significant environmental effects.

O2-41

O2-42

<u>The Acton Town Council Remains Troubled by "Strategy 9"</u>
Strategy 9 seeks to preserve agricultural lands from residential uses, but in Acton, residential uses and agricultural uses are one in the same, so the application of Strategy 9 in Acton is self-contradictory. Additionally, Strategy 9 improperly conflates "residential

O2-43

uses" with "urbanized uses". Residential uses in Acton do not constitute urbanized uses because the Acton CSD ensures that 90% of parcels in Acton remain untouched; the only exception is when a property owner wants to initiate an agricultural or equestrian operation (in which case, the property owner must obtain a conditional use permit). Strategy 9 should be revised to resolve these contradictions in a manner that makes it clear how Strategy 9 will be applied in rural communities like Acton; until this revision is processed, the Acton Town Council is unable to provide meaningful comments on "Strategy 9" and we are unable to support it.

O2-43 (cont)

<u>Revisions to Implementation Acton 6.3 are Appreciated</u>
The Acton Town Council greatly appreciates revisions made to Implementation Action 6.3.

O2-44

<u>Measure T6 Should Include a Prohibition on New Gasoline and Diesel Service Stations.</u>
The purpose of Measure T6 is to "Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales" and according to the description provided by the DCAP, it is supposed to "Set targets for reducing total gasoline and diesel vehicle fuel sales". However, Measure T6 does not include any Implementing Actions or Performance Objectives that address gasoline or diesel vehicle sales. Furthermore, it does not advocate for any process that addresses gasoline and diesel vehicle sales. One obvious Implementing Action that should be adopted by Measure T6 is to prohibit the development of any new commercial gasoline or diesel fueling stations (i.e., gas stations) in unincorporated Los Angeles County.

O2-45

<u>The Acton Town Council is Concerned that Measure T5 Will Apply to New Commercial Developments in Acton and Thus Substantially Increase Already Significant Traffic Hazards.</u>
The stated purpose of Measure T5 is to "Limit and Remove Parking Minimums" to "help reduce Vehicle Miles Traveled ("VMT")". Measure T5 only identifies parking requirements for new residential development and does not mention new commercial development, but the Acton Town Council presumes that Measure T5 will not be limited to just new residential development and that it will eliminate parking minimums and establish parking maximums for new commercial development. If so, then Measure T5 will substantially exacerbate already existing traffic and safety hazards in the Community of Acton. Specifically, because the County has (unfortunately) already approved many freeway-serving businesses in the vicinity of Crown Valley in Acton, the elimination of parking minimums and the establishment of parking maximums for commercial businesses in Acton will force all the freeway customers who frequent these businesses to illegally park along both sides of Sierra Highway and even in the middle of Sierra Highway. Sierra Highway is a heavily used major highway on which travelers typically drive at speeds exceeding 60 mph; there is also a mapped "truck stop" at this location which causes even more safety problems because of the slow-moving trucks turning onto and off of Sierra Highway. The Department of Public Works has posted "no parking" signs along Sierra Highway, but trucks and cars park there anyway; this makes it very difficult for drivers to see oncoming traffic and it makes turning onto and off of Sierra Highway very dangerous.

O2-46
CAP

If Measure T5 is implemented for new commercial businesses in Acton, then extant traffic and safety hazards will get even worse because it will cause even more freeway travelers to park on Sierra Highway (since they will not have anywhere else to park). Therefore, the Acton Town Council respectfully requests that Measure T5 be revised to clarify that it does not apply to new commercial businesses in rural areas that lack high quality transit.

O2-46 (cont)
CAP

CONCLUSION

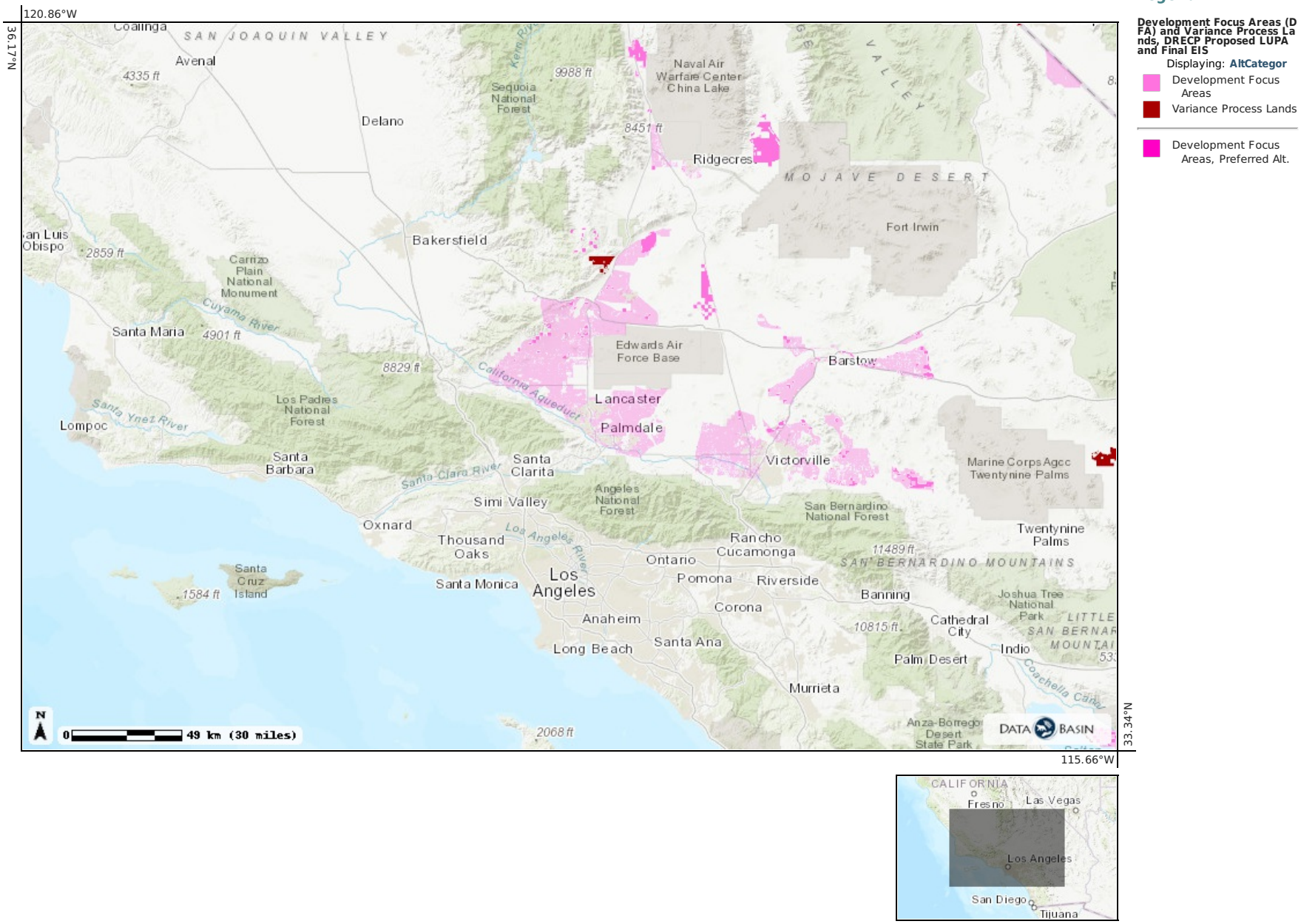
The Acton Town Council regrets that we did not have more time to consider the DCAP and review the enormous Draft Environmental Impact Report; it has been very difficult to process all the information that these documents provide in the 45 day review period that was allocated. These difficulties were compounded by the fact that the County is currently processing many new projects and development proposals in Acton; such developments always require immediate attention so they took up time that we would rather have spent on reviewing the DCAP and DEIR. Nonetheless, we have managed to put together the enclosed comments, and we respectfully request that the County incorporate them into the DCAP and the DEIR. If you have any questions or require additional information, please do not hesitate to contact us at atc@actontowncouncil.org.

O2-47

Sincerely;

Jeremiah Owen, President
The Acton Town Council

cc: The Honorable Kathryn Barger, 5th District Supervisor [Kathryn@bos.lacounty.gov].
Anish Saraiya, 5th District Planning and Public Works Deputy [ASaraiya@bos.lacounty.gov].
Donna Termeer, 5th District Field Deputy [DTermeer@bos.lacounty.gov].
Chuck Bostwick, 5th District Assistant Field Deputy [CBostwick@bos.lacounty.gov].

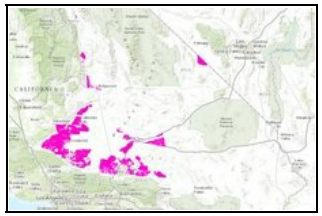

Legend
Development Focus Areas (DFA) and Variance Process Lands, DRECP Proposed LUPA and Final EIS
Displaying: AltCategor
Development Focus Areas
Variance Process Lands
Development Focus Areas, Preferred Alt.
120.86°W
36.17°N
115.66°W
33.34°N
SAN JOAQUIN VALLEY
MOJAVE DESERT
Coalinga
Avenal
Delano
Sequoia National Forest
Naval Air Warfare Center China Lake
Ridgecrest
Fort Irwin
Bakersfield
San Luis Obispo
Carrizo Plain National Monument
Santa Maria
Cuyama River
Edwards Air Force Base
Barstow
California Aqueduct
Lancaster
Palmdale
Los Padres National Forest
Lompoc
Santa Ynez River
Santa Barbara
Santa Clara River
Santa Clarita
Victorville
Marine Corps Agcc Twentynine Palms
Angeles National Forest
Simi Valley
San Bernardino National Forest
Oxnard
Thousand Oaks
Los Angeles River
Rancho Cucamonga
Twentynine Palms
Ontario
SAN BERNARDINO MOUNTAINS
Santa Cruz Island
Santa Monica
Los Angeles
Pomona
Riverside
Banning
Joshua Tree National Park
Corona
Anaheim
Cathedral City
Long Beach
Santa Ana
Indio
Palm Desert
Murrieta
Coachella Canal
Anza-Borrego Desert State Park
0 49 km (30 miles)
DATA BASIN
CALIFORNIA
Fresno
Las Vegas
Los Angeles
San Diego
Tijuana

Map Details

Datasets

Development Focus Areas (DFA) and Variance Process Lands, DRECP Proposed LUPA and Final EIS
https://reti.databasin.org/datasets/15fbd81db7984c22be7fc144fc262c47/

Credits: Dudek
Layers:
- Development Focus Areas (DFA) and Variance Process Lands, DRECP Proposed LUPA and Final EIS



Development Focus Areas, Preferred Alt.
https://reti.databasin.org/datasets/c77425c9badf460b9bbcf80517bcf91f/

Credits: California Energy Commission, U.S. Bureau of Land Management, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Dudek, DRAFT Desert Renewable Energy Conservation Plan (DRECP) and EIR/EIS.
Layers:
- Development Focus Areas, Preferred Alt.

2.3.2.2 Letter O2: Acton Town Council

This letter provides input on the Revised Draft 2045 CAP as well as CEQA comments on the Recirculated Draft PEIR. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4, *Comments on the Revised Draft 2045 CAP*, in Chapter 1, *Introduction*. PEIR-focused comments are addressed below.

O2-1 The County acknowledges timely receipt of these May 15, 2023, comments on the Recirculated Draft PEIR. The County has reviewed them and provided responses below. The letter in its entirety is included in the administrative record for the Project, which will be considered by decision-makers prior to their decision on whether to certify the Recirculated Draft PEIR and approve the Project.

Regarding the comment's statement regarding sufficient time to review the Recirculated Draft PEIR, when a Draft PEIR is submitted to the State Clearinghouse for review by state agencies, the public review period shall not be less than 45 days nor should it be longer than 60 days. (CEQA Guidelines, § 15105(a).) CEQA presumes a 45-day review period to be sufficient. The Recirculated Draft PEIR was available for public review and comments for 45 days. While not required by CEQA, Recirculated Draft PEIR Section 1.4.3, *Recirculated Draft Program* (p. 1-7 et seq.), summarizes the types of changes the Recirculated Draft PEIR made to the Draft PEIR toward increasing the efficiency (by narrowing the necessary scope) of review particularly for commenters, like this one, who reviewed and commented on the prior Draft PEIR.

In response to the comment's statement incorporating by reference all previous comments submitted by the commenter, CEQA Guidelines section 15088.5(f)(1) provides that "[w]hen an EIR is substantially revised and the entire document is recirculated, the lead agency may require reviewers to submit new comments and, in such cases, need not respond to those comments received during the earlier circulation period." As explained in Recirculated Draft PEIR Executive Summary Section ES.1 (p. ES-1), Section 1.2 (p. 1-2), Section 1.4.3 (p. 1-7), and Section 1.4.4 (p. 1-9), the "Recirculated Draft PEIR wholly replaces the May 2022 Draft PEIR." The Recirculated Draft PEIR specifically states, "[c]omments on the May 2022 Draft PEIR, though part of the administrative record, will not be responded to in the Final PEIR; new comments must be submitted on the Recirculated Draft PEIR." This also was noted in the Notice of Availability for the Recirculated Draft PEIR posted on the project website at https://planning.lacounty.gov/long-range-planning/climate-action-plan/documents/. It was also noted in the April 19, 2023, email sent to interested parties registered on the project email list.

The commenter's previous submittals predate the issuance of the Recirculated Draft PEIR, are inapplicable, and do not address adequacy or accuracy of the analysis

included in the Recirculated Draft PEIR that post-dates the commenter's January 2022 and April 2022 comments on the Draft PEIR. The comment's general statement incorporating prior submittals by reference without some indication of their applicability or relevance does not provide the County with enough information to provide a detailed response in this Final PEIR or in the context of any further revisions to the Revised Draft 2045 CAP. To the extent the commenter believes its prior comments have continuing relevance, the burden was on the commenter to explain with sufficient specificity how they are relevant to the Recirculated Draft PEIR to enable the County to provide a detailed response. The County does not have the duty to decipher what comments on the May 2022 Draft PEIR the commenter believes to still be applicable from its previous comment letters, which is why the public has been given the opportunity to draft new comment letters on the Recirculated Draft PEIR.

O2-2 Outreach that includes input from and consideration of diverse residents, businesses, and stakeholders will be an important component of a County-initiated building decarbonization ordinance. The Revised Draft 2045 CAP highlights the different considerations that rural and remote communities may face. The County commits to include rural populations in the stakeholder engagement processes in the consideration of the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities may face prior to implementation of the future County-initiated building decarbonization ordinance. The comment mentions life-safety risks but does not provide sufficient detail for the County to provide a detailed response in this Final PEIR. Nevertheless, the stakeholder engagement process prior to implementation of future ordinances would provide an opportunity for the public to express safety concerns that the County can address.

O2-3 Northern rural areas face wider weather ranges than the southern portion of the County. Local decarbonization implementation will be informed by stakeholder input, including on wood-burning and fossil fuel-powered heating systems, as well as research on successful implementation and lessons learned in other parts of the state and country with similar inclement weather.

O2-4 The County will carry forward the recommended criteria to future decarbonization outreach to allow all rural residents to provide input on the recommended criteria and future ordinances implementing the Revised Draft 2045 CAP Measures E1 and E2 and ensure all recommendations are considered and discussed before the adoption of ordinances implementing Revised Draft 2045 CAP Measure E1 and E2.

O2-5 Regarding the comment's concern regarding implementation of Measure E5.1 and its effect on rural communities that are not served by a municipal water system and/or rely on a septic system, the County recognizes that the GHG reduction measures are broad, that the unincorporated County features a diverse set of land uses, and that there is not a "one size fits all" solution to implementation of the Revised Draft 2045 CAP. For this reason, the Revised Draft 2045 CAP includes the Checklist

(Appendix F of the Revised Draft 2045 CAP), which allows for multiple pathways of compliance. As revised in Section F.2, *Checklist Instructions*, the Revised Draft 2045 CAP Checklist is only required if "a project applicant wants to use CEQA streamlining for GHG impacts; it is not required if a project-level environmental analysis of GHG impacts is conducted. As such, the Revised Draft 2045 CAP Checklist is voluntary." Further, the Revised Draft 2045 CAP Checklist allows for alternative GHG emissions reduction measures to serve as replacements for any measures that are infeasible to implement for any given project. Therefore, the Revised Draft 2045 CAP and CEQA Streamlining process allows for flexibility in implementation of measures, including those listed under Measure E5. Thus, the County rejects the comment's suggestion regarding limiting implementation of Action E5.1.

The comment also expresses concerns that implementation of Action E5.1 would result in discharges of nitrified and acidified organic waste into residential septic systems and increase in nitrate concentrations in septic system effluent. Checklist item #21 is a voluntary Tier 2 item that encourages residential graywater systems that meet appropriate regulatory standards and the installation of dual plumbing for the use of recycled water. All dual waste piping to be installed in new residential developments to allow for future graywater irrigation systems would meet regulatory standards for nitrate concentrations in septic system effluent. In addition, as explained in Recirculated Draft PEIR Chapter 3.17 *Utilities and Service Systems*, Measure E5 encourages the development of gray water systems in new developments, but does not require their installation. This allows for flexibility in areas where diverting gray water may adversely affect septic systems or package treatment facilities. Septic systems would continue to be permitted through LA County, ensuring that any new gray water systems could be installed to be compatible with permitted septic systems. Septic systems in new residential development would be designed to operate with dual waste piping. (Recirculated Draft PEIR p. 3.17-14).

Please refer to Section F.2, Step 4, *Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions*, for more information.

O2-6 This comment on the Revised Draft 2045 CAP does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses general comments received on the Revised Draft 2045 CAP.

O2-7 This comment on the Revised Draft 2045 CAP does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses general comments received on the Revised Draft 2045 CAP.

O2-8 See Section 2.2.1, *General Response 1: CEQA Alternatives*, which addresses the comment's suggested alternative regarding small scale generation and battery storage resources that are distributed throughout urban load pockets and explains why the Recirculated Draft PEIR considers alternatives in a manner consistent with CEQA.

The County acknowledges the comment's stated preference for small-scale, distributed renewable energy generation and battery storage over utility-scale developments. While the commenter broadly focuses on California's renewable energy goals, the Revised Draft 2045 CAP focuses on GHG emissions reduction goals for the County that include, but are not limited to, energy. The Revised Draft 2045 CAP, as described in Recirculated Draft PEIR Chapter 2, *Project Description* (p. 2-12 et seq.), includes GHG emissions reduction strategies, measures, and actions that address a multitude of environmental resource areas, including transportation, solid waste, and natural resources, as well as energy. The Revised Draft 2045 CAP does not rely on renewable energy development within the County to achieve its GHG emissions reduction goals, acknowledges that utility-scale energy projects, distributed energy projects or a combination of the two could facilitate Revised Draft 2045 CAP measures and actions, and analyzes impacts as if utility-scale development would occur.

Recirculated Draft PEIR Section 3.1.3.6, *Future Projects Facilitated by the Draft 2045 CAP* (p. 3.1-13), expressly acknowledges that future projects facilitated by Draft 2045 CAP measures and actions, including "distributed generation via solar roofs, community solar, or microgrids; battery storage and electric vehicle charging stations; utility-scale solar photovoltaic (PV) development; and/or energy transmission and subtransmission facilities" may cause adverse environmental impacts. The Recirculated Draft PEIR provides two full pages (p. 3.1-13 et seq.) discussing new utility-scale solar projects and why the County believes that renewable energy demand could be met in a variety of ways other than through new utility-scale solar projects, such as further development of rooftop solar. Nonetheless, because the future development of new utility-scale solar projects could be part of the mix of projects to meet the renewable energy demand, the impacts of such new utility-scale solar projects are qualitatively analyzed throughout Recirculated Draft PEIR Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures* (p. 3.1-1 et seq.). See, for example, Recirculated Draft PEIR Section 3.2, *Aesthetics*, pp. 3.2-8, 3.2-10 to 3.2-12, 3.2-17 to 3.2-18, and 3.2-22 regarding indirect impacts of the Project as pertaining to new solar development and p. 3.2-19 regarding related cumulative effects.

Recirculated Draft PEIR Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*, also analyzes the impacts of battery energy storage projects, which include impacts on those resource areas suggested by the comment. See Section 3.1.3.6, p. 3.1-15, which states: "The qualitative programmatic analysis considers the potential impacts of new utility-scale, ground-mounted solar PV projects, and associated infrastructure, e.g., battery storage, substation or transmission projects". For discussion of impacts on specific environmental resource areas associated with battery energy storage projects facilitated by 2045 CAP measures and actions, please see

Section 3.2, *Aesthetics* (pp. 3.2-10, 3.2-16), Section 3.3, *Agriculture and Forestry Resources* (p. 3.3-13), Section 3.5, *Biological Resources* (pp. 3.5-18, 3.5-19, 3.5-21, 3.5-22, 3.5-24, 3.5-25), Section 3.6, *Cultural Resources* (pp. 3.6-23, 3.6-27, 3.6-30), Section 3.7, *Energy* (pp. 3.7-5, 3.7-6), Section 3.9, *Greenhouse Gas Emissions* (p. 3.9-10 et seq.), Section 3.10, *Hazards and Hazardous Materials* (p. 3.10-23), Section 3.12, *Land Use and Planning* (pp. 3.12-21, 3.12-22), Section 3.13, *Noise* (pp. 3.13-18, 3.13-20, 3.13-21), Section 3.14, *Population and Housing* (p. 3.14-9), Section 3.15, *Transportation* (p. 3.15-21), Section 3.16, *Tribal Cultural Resources* (p. 3.16-10) Section 3.17, *Utilities and Service Systems* (pp. 3.17-14, 3.17-21), and Section 3.18, *Wildfire* (pp. 3.18-23, 3.18-24, 3.18-28).

Further, the Recirculated Draft PEIR expressly acknowledges and considers agency and public input received regarding the impacts of utility scale solar development that could be facilitated by the Revised Draft 2045 CAP measures and actions. See, for example, Section 3.2 *Aesthetics* (p. 3.2-1), Section 3.4, *Air Quality* (p. 3.4-1), Section 3.5, *Biological Resources* (p. 3.5-1), Section 3.6, *Cultural Resources* (p. 3.6-1), Section 3.8, *Geology and Soils* (p. 3.8-1), Section 3.11, *Hydrology and Water Quality* (p. 3.11-1), Section 3.13, *Noise* (p. 3.13-1), Section 3.17, *Utilities and Service Systems* (p. 3.17-1), and Section 3.18, *Wildfire* (p. 3.18-1).

O2-9 The relative success of messaging regarding the types of renewable energy development is beyond the scope of the CEQA environmental review process for the Revised Draft 2045 CAP and does not raise significant environmental issues related to the Recirculated Draft PEIR, such that no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O2-10 The comment on the Revised Draft 2045 CAP does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses generally comments received on the Revised Draft 2045 CAP.

O2-11 CEQA does not require an assessment of comparative benefits of multiple, different approaches for facilitating the Revised Draft 2045 CAP measures and actions. The Recirculated Draft PEIR analyzes the significant environmental impacts of the Revised Draft 2045 CAP as a whole within each environmental resource area within the Recirculated Draft PEIR. For a specific discussion regarding the comment's suggested distributed energy generation alternative, please see General Response 1. As explained in General Response 1, distributed generation and storage are not without adverse environmental impacts, which are introduced in Recirculated Draft PEIR Section 3.1.3.6 and are quantitatively analyzed throughout Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures* (p. 3.1-1 et seq.).

O2-12 to O2-15 For discussion regarding the comment's concern about the amount of utility scale solar renewable energy that Clean Power Alliance (CPA) supplies, see Response to

Comment O2-16 below. The remainder of the comments are on the Revised Draft 2045 CAP and do not raise significant environmental issues related to the Recirculated Draft PEIR such that no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses generally comments received on the Revised Draft 2045 CAP.

O2-16 The text in this comment included in quotation marks does not appear in the Recirculated Draft PEIR. The Recirculated Draft PEIR does not say quantification is not possible; instead, it says that it would be *speculative*. Specifically, Recirculated Draft PEIR Section 3.1.3.6 (p. 3.1-13 et seq.) states:

"Regarding new utility-scale solar projects, it would be speculative to quantify the amount of renewable energy that could be facilitated by the Revised Draft 2045 CAP that would be provided by new utility-scale solar projects, or identify where that demand would be met, since the increased renewable energy demand could be met in a variety of additional ways, other than through new utility-scale solar projects. In particular, the importation of renewable energy into the unincorporated areas by providers such as the Clean Power Alliance (CPA) and further development of rooftop solar are described below as reasonable, feasible steps on the County's overall path to meeting its targets and advancing toward its goal of carbon neutrality. However, because the future development of new utility-scale, ground-mounted solar PV could be part of the mix, the impacts of such future development are evaluated qualitatively in this EIR."

The Recirculated Draft PEIR provides two full pages (p. 3.1-13 et seq.) discussing new utility-scale solar projects and why renewable energy demand could be met in a variety of ways other than through new utility-scale solar projects, such as further development of rooftop solar. Nonetheless, because the future development of new utility-scale solar projects could be part of the mix of projects included to facilitate the Revised Draft 2045 CAP measures and actions to meet the renewable energy demand, the impacts of such new utility-scale solar projects are qualitatively analyzed throughout Recirculated Draft PEIR Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures* (p. 3.1-1 et seq.). See, for example, Section 3.2, *Aesthetics*, pp. 3.2-8, 3.2-10, 3.2-11, 3.2-12, 3.2-17, 3.2-18, and 3.2-22 regarding indirect impacts of the Project as pertaining to new solar development and p. 3.2-19 regarding related cumulative effects.

In response to the comment's suggestion that an ability to identify a number of megawatts that could be generated by utility-scale solar developments through 2035 would be possible based in part on pending agreements, such as the Power Purchase Agreements that have not been finalized, the County asserts such identification would not be accurate or helpful to decision-makers in their consideration of the environmental impacts of the Revised Draft 2045 CAP as a whole.

The comment states that the CPA's 2022 Integrated Resource Plan includes information regarding the amount of utility scale solar needed to meet CPA's customer demands through 2035, and therefore that the County could determine the amount of renewable energy that could be facilitated by the Revised Draft 2045 CAP that would be provided by new utility-scale solar projects. According to the CPA's 2022 Integrated Resource Plan, utility-scale solar will expand from 341 megawatts in 2023 to 1,959 megawatts in 2035 under its preferred Conforming Portfolio.[3] However, this number represents CPA's entire service territory, which includes 32 communities across Los Angeles and Ventura counties, not just the unincorporated LA County. As such, it would be speculative to estimate what subset of utility-scale resources would be needed for unincorporated LA County alone.

Further, as noted in the Revised Draft 2045 CAP, since October 2022, all customers in unincorporated Los Angeles County are automatically enrolled in CPA's 100 percent renewable energy option and all residents and businesses in unincorporated LA County have been receiving 100 percent renewable energy—wind, solar, geothermal—from CPA (Revised Draft 2045 CAP, p. 3-17). As such, the Revised Draft 2045 CAP itself may not facilitate any new utility-scale solar projects not already anticipated and planned for by the CPA to meet their customer demand.

Further, the comment does not question the accuracy of the Recirculated Draft PEIR's statement that quantification would be speculative and accordingly, the County has not undertaken the suggested reconciliation.

O2-17 For the reasons explained in Response O2-16, the County disagrees with the assertion that quantification of the utility-scale solar energy that could be facilitated by the Revised Draft 2045 CAP measures and actions would be accurate and, consistent with CEQA, declines to speculate.

The comment generally recommends incorporation of unspecified programmatic mitigation measures to address potential impacts from utility-scale solar projects but does not provide specific suggestions. However, the Recirculated Draft PEIR identifies reasonable, feasible programmatic mitigation measures, to avoid or reduce significant environmental impacts, including cumulative environmental impacts, of future projects implementing Revised Draft 2045 CAP measures and actions. See, for example, Recirculated Draft PEIR:

- Section 3.4.2.4 (p. 3.4-74), which analyzes the cumulative impacts of future facilities facilitated by the Revised Draft 2045 CAP measures and actions "in areas prone to high wind and/or in areas with exposed surfaces, like solar farms," and that "could result in fugitive dust emissions from vehicle travel on unpaved surfaces or other similar types of operational activities." Implementation of Mitigation Measures 3.4-1 (*Construction Emissions*), 3.4-2 (*Operational Fugitive Dust Emissions*), and 3.4-3 (*Architectural Coating VOC Emissions*), described on

[3] Clean Power Alliance, 2022. *2022 Integrated Resource Plan*. November 1. Page 18. Available at https://cleanpoweralliance.org/wp-content/uploads/2022/11/cpasc_narrative_public.pdf. Accessed August 2023.

pages 3.4-51 to 3.4-52, would reduce the impacts associated with construction emissions.

- Section 3.11.2.4 (p. 3.11-31 et seq.), which analyzes the cumulative hydrology and water quality impacts of future facilities facilitated by the Revised Draft 2045 CAP measures and actions, including p. 3.11-26 regarding water supply impacts "associated with utility-scale ground-mounted solar development." Implementation of Mitigation Measure 3.10-2, described in Section 3.10.2.3 (p. 3.10-23) would ensure that hazardous waste is properly managed.

- Section 3.5.2.4 (p. 3.5-27 et seq.), which analyzes the cumulative biological resources impacts of future facilities facilitated by the Revised Draft 2045 CAP measures and actions, including p. 3.5-27 et seq., which concludes in the context of Impact 3.5-7 that the Project, as a result of projects facilitated by Draft 2045 CAP, would result in a significant unavoidable cumulative impact through habitat modifications on one or more species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS. The Recirculated Draft PEIR expressly acknowledges on pages 3.5-18 and 3.5-19 that the Revised Draft 2045 CAP "may facilitate new development such as utility-scale energy projects…in the Antelope Valley or other rural areas and could affect special-status species by direct removal or conversion of suitable habitat or indirectly through introduction of barriers to movement or reflective surfaces."

- Section 3.2.2.4 (p. 3.2-19 et seq.), which analyzes the cumulative aesthetics impacts of future facilities facilitated by the Revised Draft 2045 CAP, including in the context of Impact 3.2-6, which concludes that projects facilitating the Revised Draft 2045 CAP measures and actions would cause a significant unavoidable cumulative impact to scenic vistas due in part to the "incremental impacts of the Project, together with the incremental impacts of past, present and reasonably foreseeable future projects, including past and present utility-scale solar projects in the Antelope Valley."

Heat island impacts are not among the CEQA Guidelines Appendix G environmental checklist considerations and this comment does not indicate what potential adverse impact on the physical environment would result from a heat island effect created by a project facilitated by the Revised Draft 2045 CAP measures and actions such that a specific response cannot be provided. Nonetheless, see Recirculated Draft PEIR Section 3.9, *Greenhouse Gas Emissions*, which analyzes the potential climate change-related impacts of the Project as a whole.

The County is aware that temperatures can be between approximately 1 degree Fahrenheit (°F) and 7 °F higher in cities than in rural areas because cities contain masses of darker-colored objects such as buildings and paved areas that emit more

heat than lighter-colored objects and that cause heat to dissipate more slowly[4,5,6,7] and that the higher density of vegetation in rural areas also contributes to cooling. Solar projects resulting from facilitating Revised Draft 2045 CAP measures and actions that would require vegetation clearance and the introduction into the landscape of elements of a built environment could result in the creation of a heat island effect that is similar to that which can occur in urban areas.

Research regarding the potential for photovoltaic heat island effects has been limited and few studies have analyzed the potential for any such effect to extend laterally. Fthenakis and Yu from Columbia University and Brookhaven National Laboratory combined models with field data to determine the extent to which photovoltaic facilities altered ambient air temperatures.[8] Their research demonstrated some increase in temperatures above solar facilities relative to surrounding ambient temperatures (1.9 degrees Celsius [°C], approximately 3.4°F). However, the researchers determined that the photovoltaic facility did not result in long term changes to ambient temperatures that could lead to adverse micro-climate changes. Additionally, the researchers found that increases in temperatures completely dissipated approximately 16-59 feet (5-18 meters) above the facility and that thermal energy "promptly dissipated" with distance from the facility.[9]

A 2016 paper authored by Barron-Gafford et al. determined that temperatures over a photovoltaic facility were consistently 7.2°F (4°C) higher at night than surrounding temperatures.[10] The researchers determined that their results indicated that solar facilities can lead to a photovoltaic heat island effect. However, they acknowledged that their research did not have sufficient data to determine the extent to which the effect extends laterally from the facility. Since the 2016 study, Barron-Gafford et al. conducted further research, finding that at 98 feet (30 meters) from the edge of the solar arrays, the difference between temperatures recorded and surrounding temperatures were greatly reduced. At 131 feet (40 meters) from the edge of the array no difference was found between temperatures recorded by probes and the surrounding ecosystem.[11] Before any specific future project facilitating the Revised Draft 2045 CAP measures and actions could be analyzed and determined to result in a

4 U.S. Environmental Protection Agency (US EPA), 2023b. Heat Island Effect. https://www.epa.gov/heatislands#:~:text=Heat%20islands%20are%20urbanized%20areas,as%20forests%20and%20water%20bodies. Updated July 10, 2023.

5 US EPA, 2022. Learn About Heat Islands. https://www.epa.gov/heatislands/learn-about-heat-islands. Updated September 2, 2022.

6 Bornstein, Robert D., 1968. "Observations of the Urban Heat Island Effect in New York City." https://journals.ametsoc.org/doi/pdf/10.1175/1520-0450%281968%29007%3C0575%3AOOTUHI%3E2.0.CO%3B2. May 8, 1968.

7 Donovan, Matt, 2010. "Memo: Impact of PV Systems on Local Temperature." July 6, 2010.

8 Fthenakis, Vasilis and Yuanhao Yu, 2013. "Analysis of the potential for a heat island effect in large solar farms." Photovoltaic Specialists Conference (PVSC) June 16–21, 2013.

9 Fthenakis and Yu, 2013.

10 Barron-Gafford, G. A., Minor, R.L., Allen, N.A., Cronin, A.D., Brooks, A.E., Pavao-Zuckerman, M.A. 2016. "The Photovoltaic Heat Island Effect: Larger solar power plants increase local temperatures." Nature. October 13, 2016.

11 Barron-Gafford, Greg, 2018. Phone call between Jessica O'Dell (ESA) and Greg Barron-Gafford (University of Arizona). March 16, 2018.

cumulative impact, other past, present, or reasonably foreseeable future development would have to be identified within sufficient proximity for the incremental impacts to combine, i.e., within 131 feet of one another.

Given that there are no significance thresholds for the photovoltaic heat island effect and given the limited number of studies regarding this effect, there is no evidence of a potential increase in ambient temperature from potential future utility-scale solar projects facilitating the Revised Draft 2045 CAP measures and actions would significantly impact human health or the environment.

O2-18 CEQA does not require the Recirculated Draft PEIR to include a precise number or location of utility-scale solar farms that could result through facilitating Revised Draft 2045 CAP measures and actions but, rather, CEQA requires a broad assessment of such project's environmental impacts. The Recirculated Draft PEIR provides the necessary level of environmental impact analysis required under CEQA.

Responding to the comment's concern regarding mitigation measures to address impacts of utility-scale solar projects that could be facilitated by Draft 2045 CAP measures and actions, the Recirculated Draft PEIR, Table ES-2, *Summary of Impacts and Mitigation Measures*, summarizes the Revised Draft 2045 CAP's environmental impacts, lists mitigation measures for significant impacts, and for each impact indicates levels of significance after mitigation. None of the proposed measures or actions indicate locations where individual projects, such as utility-scale solar development projects, would be constructed, their size, or their specific characteristics, because the locations and design specifics of projects that would facilitate the Revised Draft 2045 CAP measures and actions are unknown at this time. (Recirculated Draft PEIR, p. ES-19.) However, the Recirculated Draft PEIR includes mitigation measures that would apply to utility-scale solar projects, such as Mitigation Measure 3.2-2: *Visual Screening and Other View Protection Measures*, which requires construction of a visual barrier of sufficient height to mitigate significant aesthetic impacts of projects that would have a substantial adverse effect on a scenic vista. (Recirculated Draft PEIR, p. ES-20.) See also Mitigation Measure 3.3-1: *Avoidance of Actively Farmed Lands When Siting Utility-Scale Solar and Energy Storage Development*, which would avoid siting-related impacts of utility scale renewable energy projects on agricultural resources (Recirculated Draft PEIR, p. ES-22), and Mitigation Measure 3.18-3: *Fire Safety During Construction and Operation*, which would require implementation of visual inspections protocol that includes the identification of fire safety and prevention measures for project-specific infrastructure that can ignite fires, such as power lines and battery storage facilities (Recirculated Draft PEIR, p. ES-50).

See Response O2-8 for a specific discussion regarding impact analyses of utility-scale solar projects and Response O2-17 for further, specific discussion of applicable mitigation measures.

O2-19 The Recirculated Draft PEIR adequately analyzes the impacts of utility-scale solar development projects that could be facilitated by the Revised Draft 2045 CAP measures and actions and, contrary to the statement in this comment, does not trivialize them. See Responses O2-8 and O2-17. Responding to the comment's concern regarding mitigation measures to address impacts of utility-scale solar projects that could be facilitated by Draft 2045 CAP measures and actions, please refer to Response to Comment O2-18. See also Response O2-16 regarding the Recirculated Draft PEIR's discussion of utility-scale solar development projects that could be implemented by facilitating the Revised Draft 2045 CAP measures and actions and speculation regarding quantification of renewable energy that could be facilitated. The comment relies on uncertain information (including the pending projections identified in Comment O2-16 that have not been finalized) through 2035. A CEQA-compliant analysis of the environmental impacts of the Revised Draft 2045 CAP must analyze the whole of the Project, i.e., through the year 2045. Because it would be speculative to quantify the amount of renewable energy that could be facilitated by the Revised Draft 2045 CAP for the whole of the Project, the County disagrees with the suggestion that the analysis approach within the Revised Draft 2045 CAP and Recirculated Draft PEIR is inadequate for purposes of CEQA.

O2-20 Within the bounds of CEQA, reasonable minds can reach different conclusions based on the same information. (See *Defend the Bay v. City of Irvine* (2004) 119 Cal.App.4th 1261.) Here, the statement in Recirculated Draft PEIR Section 3.1.3.6 (p. 3.1-14) that "[s]eparate from renewable energy provided by CPA, a substantial amount of solar energy generation would likely occur on rooftops within the County" is based on information presented and conclusions reached in a 2016 National Renewable Energy Laboratory (NREL) study and in a 2020 study by the Institute of the Environment and Sustainability at the University of California, Los Angeles (UCLA). (See Recirculated Draft PEIR, p. 3.1-14.) The statements in this comment that "rooftop solar only provides a small portion of current electrical demand" and that CPA's IRP indicate that "rooftop solar provides a negligible portion of CPA's electrical supply" actually further supports the Recirculated Draft PEIR's statement because it identifies rooftop solar as a potential area of development. The commenter's opinions about the outcome of the 2023 net metering regulations are acknowledged, but in light of substantial evidence cited and relied upon in the Recirculated Draft PEIR, the County disagrees with the opinions expressed in the comment that the Recirculated Draft PEIR is disingenuous or "patently false" and instead maintains that evidence supports a conclusion that a substantial amount of solar energy would likely occur on rooftops within the County. The CPUC's efforts to procure over 21,500 megawatts of new electricity resources from 2021 to 2026, including rooftop solar (CPUC 2021b), supports Measure ES3 and associated Actions ES3.1, ES3.2, and ES3.3, which would facilitate rooftop solar photovoltaic installations for both existing residential and commercial buildings. (See Recirculated Draft PEIR, p. 3.7-13.)

O2-21 For the reasons explained above, the Recirculated Draft PEIR, including Section 3.1.3.6, has provided correct information and properly addresses utility-scale solar projects such that the Recirculated Draft PEIR has not been revised.

O2-22 As explained in Recirculated Draft PEIR Section 1.3, *Program-level Analysis and Tiering* (at pp. 1-2 and 1-3), a program EIR is a type of EIR prepared pursuant to CEQA that is used to evaluate a plan or program that has multiple components or actions that are related either geographically; as logical parts in the chain of contemplated actions; in connection with application of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental impacts which can be mitigated in similar ways (Public Resources Code sections 21068.5 and 21093; CEQA Guidelines section 15168(a)). Consistent with CEQA, the Recirculated Draft PEIR evaluates general impacts of the plan or program (i.e., the Revised Draft 2045 CAP), but does not examine the potential site-specific impacts of the many individual projects implementing the Revised Draft 2045 CAP measures and actions that may be proposed in the future.

The County disagrees with the comment's suggestion that a program EIR is "supposed to" do any of the things identified in the comment on the basis of CEQA Guidelines section 15168(b). Instead of identifying aspirational goals for a program EIR, CEQA Guidelines section 15168(b) identifies potential advantages of using one ("Use of a program EIR can provide the following advantages…" (emphasis added). Further, the Recirculated Draft PEIR does evaluate a range of "broad policy alternatives" and does propose programmatic mitigation measures. The range of alternatives evaluated in the Recirculated Draft PEIR includes a breadth of policy outcomes, from achieving carbon neutrality faster than 2045 and taking no County-directed action to reduce GHG emissions in the unincorporated areas at all, and explores other approaches to achieve most of the basic Project objectives other than the approach identified by the Project as proposed in the Recirculated Draft PEIR. See Section 2.2.1, *General Response 1: CEQA Alternatives*, regarding the Recirculated Draft PEIR's discussion and analysis of alternatives, specifically addresses the comments about alternatives for achieving renewable energy targets, and explains why CEQA does not require consideration of such alternatives.

O2-23 See Section 2.2.1, *General Response 1: CEQA Alternatives*, which addresses comments about alternatives, including suggestions about renewable energy alternatives, and explains why CEQA does not require consideration of such alternatives. See Response O2-8 regarding renewable energy impact analyses and mitigations addressed in the Recirculated Draft PEIR.

O2-24 See Section 2.2.1, *General Response 1: CEQA Alternatives*, which addresses comments about alternatives, including suggestions about battery storage alternatives, and explains why CEQA does not require consideration of battery storage alternatives.

In response to the comment's general suggestion for programmatic mitigation measures, the comment does not provide specific examples of mitigation such that a specific response to suggestions are possible. Regardless, see Response O2-8 regarding the Recirculated Draft PEIR's analysis of the potential impacts of battery storage and Response O2-17 regarding feasible mitigation measures to avoid or reduce significant environmental impacts.

O2-25 In response to the comment's discussion regarding two alternative strategies for expanding and streamlining battery storage and each strategy's alleged environmental impacts, the Recirculated Draft PEIR project description could accommodate either strategy. One performance objective of Measure ES4: *Increase Energy Resilience* is to achieve community electricity storage and generation capacity equal to the community-wide 24-hour average usage by 2035/2045; this could be achieved through a variety of means and will likely need a combination of distributed storage and utility-scale storage. Specifically, Action ES4.4 calls for feasibility studies to identify priority areas for solar and storage, combined with building- and community-scale microgrids and alternative technologies such as fuel cells and grid paralleling, to support demand management and peak shaving to increase grid resilience. See Section 2.2.1, *General Response 1: CEQA Alternatives*, which addresses comments about alternatives, and explains why CEQA does not require consideration of battery alternatives.

To the extent this comment suggests that the County could require exclusively distributed energy development (generation or storage) as a mitigation measure to avoid or substantially reduce the significant impacts of utility scale energy facilities, see *General Response 1: CEQA Alternatives*, which explains that distributed energy systems also can cause significant adverse impacts and acknowledges that experts may differ about the proper balance of resource impacts between distributed energy facilities and utility-scale ones.

The Recirculated Draft PEIR identifies mitigation measures to reduce significant impacts of renewable energy projects; see response to comment O2-8 above for a discussion of wildfire and aesthetic impacts and programmatic mitigation measures. Regarding mitigation measures for energy storage projects, see Mitigation Measure 3.3-1, *Avoidance of Actively Farmed Lands When Siting Utility-Scale Solar and Energy Storage Development*, and Mitigation Measure 3.18-3, *Fire Safety During Construction and Operation*. Regarding mitigation measures specifically for solar energy projects, see Mitigation Measure 3.2-1, *Alternative Design*, and Mitigation Measure 3.10-2 ("The County shall require applicants of solar PV installation projects…"). Additionally, Mitigation Measure 3.4-1, *Construction Emissions*, expressly relates to renewable energy without distinguishing between storage projects and solar projects. As indicated in Table 4-6, *Summary of Impacts of the Project and Alternatives*, is clear when mitigation that was developed in the Project context also would apply to one or more of the alternatives. For example, see page 4-25 regarding Mitigation Measure 3.3-1 and page 4-46 regarding Mitigation Measure 3.18-3. The

mitigation measures identified in the Recirculated Draft PEIR to minimize impacts of renewable energy generation and storage projects would apply whether the cause of the significant impact were distributed or utility-scale.

O2-26 See Section 2.2.1, *General Response 1: CEQA Alternatives*, which addresses comments about alternatives, and explains why CEQA does not require consideration of battery alternatives. Regarding the applicability of mitigation measures identified in the Recirculated Draft PEIR, see Response O2-25. The Recirculated Draft PEIR's analysis of hazards and hazardous materials impacts took into consideration impacts associated with utility-scale solar projects. The Recirculated Draft PEIR determined the Project would result in less than significant impacts or less than significant impacts with mitigation incorporated on hazards and hazardous materials. (See Recirculated Draft PEIR, pp. 3.10-20-21, 3.10-24-32.)

Further, any utility-scale solar development that would occur in an unincorporated area of the County would be regulated by the County's Renewable Energy Ordinance and require discretionary review. The Recirculated Draft PEIR considers the County's Renewable Energy Ordinance as an independently enforceable regulation in the regulatory setting of the Revised Draft 2045 CAP. See, for example, discussion of how the ordinance relates to aesthetics (p. 3.2-6) and land use and planning (p. 3.12-11). The County's Renewable Energy ordinance contains a suite of provisions to minimize the impacts of utility-scale, ground-mounted solar energy facilities on visual resources, including setbacks, provisions requiring the placement of transmission lines underground, and the incorporation of measures to minimize fugitive dust. (Recirculated Draft PEIR, p. 3.2-10.) However, as discussed in the Recirculated Draft PEIR p. 3.2-11, depending on the size and scale of such utility-scale projects facilitated by the Revised Draft 2045 CAP measures and actions, compliance with applicable plans, policies, and regulations may not be sufficient to reduce impacts to a less than significant level; as such, the Recirculated Draft PEIR finds related aesthetic impacts to be significant. Such future projects would undergo independent CEQA analysis and mitigation measures to reduce this impact would be implemented if the projects have significant impacts.

O2-27 Regarding mitigation measures to minimize impacts of renewable energy, see Response O2-25.

Regarding the suggestion that the Recirculated Draft PEIR should have included a mitigation measure to preclude the location of utility-scale storage facilities outside of Very High Fire Hazard Severity Zones, see Mitigation Measure 3.18-3: *Fire Safety During Construction and Operation,* which requires all future applicants and/or their contractors for projects under the County's permitting authority to prepare and implement project-specific fire protection plans for projects located in a VHFHSZ to ensure that wildland fire-related hazards would not be exacerbated by installation or maintenance of infrastructure associated with future projects facilitated by the Revised Draft 2045 CAP measures and actions that may exacerbate fire risk (Recirculated

Draft PEIR, pp. 3.18-22 through 3.18-24). Because the implementation of this mitigation measure would ensure that the risk of fire from infrastructure associated with projects facilitated by the Revised Draft 2045 CAP would be managed through collaboration with LACoFD, and that the applicant and its contractors would implement fire safety measures to prevent wildland fire and would be prepared to respond immediately if a fire should ignite, the impact due to the introduction of development into VHFZSZs would be reduced to a less-than-significant level. While the suggested preclusion of renewable energy development from VHFHSZs would be feasible, the comment does not suggest, and provides no evidence concluding, that Mitigation Measure 3.18-3 would not be adequate to reduce the impact of concern to a less-than-significant level.

The County has considered the comment's suggestion that the Recirculated Draft PEIR should have included a mitigation measure to require the siting of utility-scale storage projects in remote areas where there are no residences, and declined to recommend it. While the Recirculated Draft the PEIR evaluates impacts to the public and the environment, the same types of impacts relating to explosion and fire that could result from utility scale energy storage also could result from distributed energy storage projects that are located closer to the end user. See General Response 1 for additional details. So, while it would be feasible to preclude utility-scale storage projects in all but remote areas, such a measure would not reduce the significance of potential impacts to a less than significant level. Further, such a measure would cause other impacts that commenters have found objectionable, including the conversion of open desert landscapes to renewable energy-related uses.

O2-28 The County agrees that an EIR can serve to inform and shape the project considered and should not analyze the project in isolation. The Recirculated Draft PEIR serves these purposes. See Section 2.2.1, *General Response 1: CEQA Alternatives*, which explains the Recirculated Draft PEIR's initial consideration of 11 potential alternatives and its focus on three alternatives in addition to the CEQA-required No Project Alternative. Responses to comments about the Revised Draft 2045 CAP are provided in Chapter 1. Comments expressing opinions about policies within the Revised Draft 2045 CAP and their relationship to the Recirculated Draft PEIR do not raise significant environmental issues and therefore, no further response is required pursuant to CEQA Guidelines section 15088(a).

O2-29 The County disagrees with the comment's suggestion that the Recirculated Draft PEIR does not properly discuss alternatives and mitigation measures. See Section 2.2.1, *General Response 1: CEQA Alternatives*, which addresses comments about the Recirculated Draft PEIR's analysis of alternatives, and Response O2-28, which addresses comments about mitigation measures to reduce impacts of renewable energy projects.

O2-30 In response to the comment's concerns with the Revised Draft 2045 CAP's long-term aspirational goal of carbon neutrality by 2045, see Responses to Comments O2-31 to O2-33 below.

O2-31 The Revised Draft 2045 CAP identifies a long-term aspirational goal of carbon neutrality by 2045. This aligns with the State of California's carbon reduction targets and goals, notably Assembly Bill 1279, which established a policy to reach net zero GHG emissions by no later than 2045. Further, the Board of Supervisors has committed to meeting carbon neutrality in their *We Are Still In* declaration. The Revised Draft 2045 CAP acknowledges that its framework is not enough to achieve carbon neutrality but rather provides the framework that puts the County on a path toward it. The current challenges toward carbon neutrality are discussed in detail on pages ES-7 and 3-10 through 3-13 of the Revised Draft 2045 CAP. As directed by the Board of Supervisors, actions will be implemented in the future toward achieving this goal. The Revised Draft 2045 CAP will be revisited every five years after adoption to adjust policies and programs, where needed, to account for changes in technology and address future federal and state regulations. (Revised Draft 2045 CAP, p. 1-7.) For a specific response to the comment's point regarding the Revised Draft 2045 CAP's relationship to the General Plan, please refer to General Response 2.

O2-32 For the purposes of developing a General Plan, the Office of Planning and Research's (OPR's) *General Plan Guidelines* defines a goal as "a general expression of community values and direction, expressed as ends (not actions)." OPR's guidance states that because goals may be abstract in nature, they are "*generally* not quantifiable or time-dependent" (emphasis added); however, an implementing program that carries out general plan policies is not prohibited from quantifying an expressed goal. Further, the 2045 carbon neutrality aspirational goal is included as a goal of a General Plan implementation program, rather than as a goal in the General Plan text. The County has discretion to determine the most appropriate approach for the contents of the Revised Draft 2045 CAP, which is an implementation program of the Air Quality Element of the County's General Plan. Further, the Revised Draft 2045 CAP's 2045 aspirational goal will not "direct all future plans and development decisions"; instead, it was used to guide development of the Revised Draft 2045 CAP measures and actions and will be used to guide future refinements of the Revised Draft 2045 CAP.

O2-33 In response to the comment's concern regarding the Revised Draft 2045 CAP's long-term aspirational goal of carbon neutrality by 2045, see Response to Comment O2-31. Also see General Response 4 for a discussion regarding how the County would achieve its carbon neutrality goal.

O2-34 to O2-40 The comments on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O2-41 The County acknowledges the comment's concern regarding Action E4.3 related to replacing heat-trapping surfaces at County-owned facilities; however, the measure's intent is not to replace *all* heat-trapping surfaces owned by the County, such as roads, highways, parking lots, and hardscapes. Rather, Action E4.3 refers to replacement of heat-trapping surfaces at County-owned buildings only. Measure E4 is described under the Building Energy and Water category and under Strategy 6, *Improve Efficiency of Existing Building Energy Use*, in the Revised Draft 2045 CAP, and is related to improving energy efficiency of existing buildings, as indicated by titles of both Strategy 6 and Measure 4 (*Improve Energy Efficiency of Existing Building*). Therefore, County-owned public infrastructure, such as roads, highways, parking lots, and other hardscape, are not required to be replaced under Action E4.3 nor does the measure result in a significant impact, as described in Section 3.7*, Energy*, under Section 3.7.2.7, *Project Impacts*.

O2-42 In response to the comment's concern related to programmatic CEQA documents and evaluated alternatives, Chapter 4, *Alternatives*, of the Recirculated Draft PEIR sufficiently evaluates four project alternatives per CEQA requirements. CEQA requires mitigation measures to substantially lessen or avoid a significant impact on the environment. (CEQA Guidelines, § 15370.) The Recirculated Draft PEIR evaluated the environmental impacts of the Project at a programmatic level and prescribed mitigation measures for significant impacts, which are provided in *Chapter 3, Environmental Setting, Impacts, and Mitigation Measures*. A summary of impacts and mitigation measures can be found in Table ES-2, *Summary of Impacts and Mitigation Measures*, in the Executive Summary of the Recirculated Draft PEIR.

Regarding the comment's concern regarding Action E4.3, the Recirculated Draft PEIR identified Action E4.3 as relevant to its analysis of energy-related impacts and did not conclude that there were significant impacts resulting from implementation of Action E4.3. (See Recirculated Draft PEIR, pp. 3.7-10-11.) Action E4.3 calls for converting existing County–owned heat-trapping surfaces to cool or green surfaces. Chapter 3.7, *Energy*, concluded that this action and other measures and actions relevant to the analysis of energy-related impacts would not result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with or obstruct a state or local plan for renewable energy or energy efficiency because they would largely result in the reduction in energy use. The comment does not present evidence of any specific adverse impacts related to Action E4.3. Further, as stated in Response O2-41 above, Action 4.3 does not apply to roadways and the alternative suggested is not applicable to the Project or its design.

Regarding the suggestion that the Recirculated Draft PEIR should have included an alternative to replace roadways with cool or green surfaces, see General Response 1 and Response O2-17.

O2-43 Agriculture as referenced in Strategy 9 as a part of the Agriculture, Forestry, and Other Land Uses (AFOLU) sector refers to agricultural production where there is continual soil disturbance, not personal agricultural uses or agricultural zoning.

Regarding the comment that Strategy 9 incorrectly conflates "residential" uses with "urbanized" uses, the County acknowledges and agrees with the comment. Chapter 3 of the Revised Draft 2045 CAP has been revised to address this comment in the following ways, as shown in the example below:

> *When these natural and working lands are converted to ~~residential~~ development and ~~other~~ urbanized uses, that stored CO2 is released into the atmosphere… Further, this strategy will consider the role rural communities play in preserving and enhancing carbon sequestration capacity.* (Revised Draft 2045 CAP, Chapter 3, p. 3-65.)

The Revised Draft 2045 CAP does not have any specific measures or actions that create goals or mandates for residential uses, including rural residential uses in places like Acton. For example, the performance objectives of Measure A1 are to reduce the amount of natural land converted for urbanized uses, conserve and restore new wildland, and manage new acres of wildland for wildfire risk reduction and carbon stock savings (Revised Draft 2045 CAP, Chapter 3, p. 3-67). Actions A1.1 and A1.2 do not directly affect rural residential communities.

O2-44 to O2-45 The comments on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on these issues pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O2-46 Measure T5 implements Assembly Bill 2097, which prohibits the County from imposing a minimum parking requirement for projects located within half a mile of a major transit stop. Major transit stops are defined in Public Resources Code section 21155 as an existing rail or bus rapid transit station, ferry terminal served by bus or rail transit service, or the intersection of two or more major bus routes with service intervals of 15 minutes or less during morning and afternoon peak commutes. Projects may choose to include parking in their project design, but it is no longer mandated. Measure T5 would reduce Countywide VMT by facilitating projects that reduce VMT and promote transit and active transportation, which is consistent with the transportation-related goals and policies of the SCAG RTP/SCS, Metro's Short- and Long-Range Transportation Plans, Step by Step Los Angeles County, Los Angeles County Bicycle Master Plan, and Los Angeles County General Plan. The comment states concern about eliminating parking minimums for commercial businesses in the vicinity of Crown Valley Road and Sierra Highway. The closest qualifying major transit stop is the Acton Metrolink Station located 4.5 miles away from the Crown Valley Road and Sierra Highway area. Commercial projects in the Crown Valley

Road and Sierra Highway area would not qualify for the parking elimination because they are not located within half a mile of a major transit stop. For these reasons, the County rejects the comment's suggestion to revise Measure T5 to limit its application to new commercial businesses in rural areas that lack high-quality transit and disagrees with the comment's statement that this measure would exacerbate traffic and safety hazards.

O2-47 The Revised Draft 2045 CAP released on March 16, 2023, retained the majority of the contents of the Revised Draft 2045 CAP that was released the prior year. The Revised Draft 2045 CAP was released with a tracked changes version to facilitate ease of review. The Recirculated Draft PEIR, released on March 30, 2023, listed the major changes to highlight for reviewers the major differences between the analysis contained in the Draft PEIR released on May 25, 2022, and the Recirculated Draft PEIR to facilitate ease of review (see Section 1.4.3 of the Recirculated Draft PEIR). For these reasons, the County believes that the 45-day public review period provided for the Recirculated Draft PEIR was sufficient to allow informed public comment.

Comment on the Draft 2045 Climate Action Plan
Traffic Safety and Mobility Committee, Altadena Town Council

The Altadena Town Council's Traffic Safety and Mobility Committee advocates for active transportation and traffic safety infrastructure with LA County, as well as providing community feedback on unsafe streets, intersections, and street crossings. O3-1

The Traffic Safety and Mobility Committee generally supports the 2045 Climate Action Plan to reduce greenhouse gas emissions from transportation as stated in the County's CAP Strategies 3 and 4. O3-2

Background on Altadena's Transportation

Fifty-two percent of GHG emissions in Unincorporated LA County come from transportation (reference CAP Executive Summary p.26, Fig ES.1). O3-3

In West San Gabriel Valley where Altadena is located, the majority of transportation is car use (driving alone at 79%), with transit making up only three percent. O3-4

Altadena is a suburban community with the majority of its residents living in single-family homes. O3-5

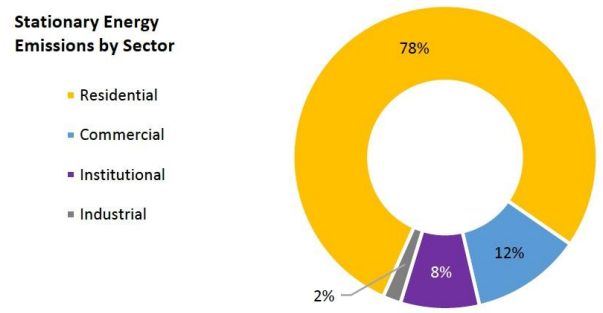
There is little density even around Metro bus corridors. O3-6

While many people, especially those over 65+, young people, and low income residents, depend on public transportation, the Metrobus service was reduced in 2022 and Metro micro transit has been experiencing low ridership. O3-7

Altadena is 8.4 sq miles with 118 miles of roadways that has high potential for a variety of methods for street networks that prioritize active mobility. O3-8

SECTOR/SUB-SECTOR	ALL UNINCORPORATED AREAS	WEST SAN GABRIEL VALLEY
Total Population	1,037,227	105,252
Estimated Population in HQTAs	330,000	13,000
Estimated Population in TODs	69,000	2,000
Drive Alone/Carpool/Transit	77% / 10% / 5%	79% / 10% / 3%
$PM_{2.5}$ Percentile	63.6	62.0
Pollution Burden Percentile	62.3	61.5
Asthma Percentile	51.4	32.6
Estimated Population in Disadvantaged Communities	383,000	16,000

O3-9



Key Climate Actions

- Actions supporting transportation electrification and improved transit service
- Actions to encourage transit for youth and seniors
- Actions to reduce residential emissions
- Actions focused on building decarbonization
- Actions targeting zero carbon energy in wildfire-prone areas

Source: CAP 2045 Appendix D: West San Gabriel Valley

There are many reasons for low ridership of public transportation, including high injury and fatality rates for pedestrians and cyclists. O3-10

The Traffic Safety and Mobility Committee is focused on advocating for safer streets for every user: pedestrians, cyclists, equestrians, transit users, and those with physical mobility issues in the areas of Altadena that have high rates of pedestrian and cyclist collisions, injuries, and fatalities. These areas tend to be corridors with high traffic, little or incomplete sidewalks, no bike lanes, and poorly designed, from a safety perspective, intersections and crosswalks. O3-11

These areas also tend to be near schools, parks, businesses, and transit corridors that could be redesigned with transportation equity in mind. O3-12

Climate Equity

O3-13

The 2045 Climate Action Plan puts climate equity at the center of its strategy by prioritizing frontline communities, Indigenous people, BIPOC, low income households, and communities affected by historically high environmental impacts. By digging into the data from the federal Climate and Economic Justice Screening Tool, the Committee found that Altadena is at high risk for building (95th percentile) and population loss (99th percentile) due to natural hazards like wildfires (83rd to 99th percentile); exposure to PM2.5 (88-90th percentile); proximity to O3-14

Superfund Sites (70th-90th percentile); and has a significant percentage of its population with linguistic isolation (88th percentile), economically burdened by housing costs (67th percentile); and education below a high school diploma (16th percentile; 10th percentile is considered high risk).

O3-14 (cont.)

As we consider equity among census tracts, we found that residents in Census Tract 4610, which borders the 210 freeway and Pasadena, are burdened with the most pollution, health disparities, unemployment, lack of education, and linguistic isolation. Given its location, these residents also experience the noise and pollution from traffic as well as experiencing the highest transportation barriers.

O3-15

Census Tract 4610 - Climate and Economic Justice Screening Tool

48th percentile	Low income
92nd percentile	PM2.5
67th percentile	Diabetes
39th percentile	Low life expectancy
87th percentile	Housing cost
60th percentile	Green space
80th percentile	Lack of indoor plumbing
94th percentile	Lead paint in the home
56th percentile	Proximity to hazardous waste facilities
95th percentile	Proximity to Superfund Site
47th percentile	Diesel particulate matter
61st percentile	Transportation barriers
61st percentile	Traffic volume and proximity
60th percentile	Proximity to leaking underground storage tanks
79th percentile	Linguistic isolation
74th percentile	Unemployment
17th percentile	Less than high school diploma

O3-16

Source: Climate and Economic Justice Screening Tool (https://screeningtool.geoplatform.gov/en/#12.6/34.20094/-118.13667)

2045 CAP Strategies

The Committee supports the 2045 CAP Strategies 3 and 4 that encourage walking, biking, taking public transportation, and micro transit options along with expanding EV infrastructure. O3-17

Meeting these goals would both reduce carbon emissions and increase traffic safety. O3-18

Strategy 3: Reduce single occupancy vehicle trips

O3-19

T3 Expand Bicycle and Pedestrian Network to Serve Residential, Employment, and Recreational Trips: Travel options that serve a variety of land uses and trip purposes can help shift some trips away from single-occupancy vehicles.

The Committee supports expanding the bicycle and pedestrian networks to access the many destination points throughout the community. In addition to common destinations such as schools, employment centers, transit hubs and entertainment, Altadena is surrounded by major outdoor recreation destinations including the Arroyo Seco, the Angeles National Forest to the north, and Eaton Canyon Natural Area to the East. However, to implement this strategy, the County will need to invest in sidewalks, protected bike lanes, and make crosswalks and intersections safer for those accessing these destination points. O3-20

Some specific needs the Committee has identified to date are:

- Contiguous sidewalks on all Metro Bus routes, including Lincoln Ave, Fair Oaks Ave, Altadena Dr, Mariposa St., Allen Avenue and Lake Ave should be prioritized which would connect Altadena to destinations in Pasadena including Metro L Line stations along the 210 Freeway corridor. O3-21

- Incorporating traffic calming principles into roadway prioritizing enhancement of crossings for pedestrians along high speed corridors which often are our transit corridors and rehabilitation projects to make the roadway more conducive to walking and biking. The intersections at Lincoln Ave and Altadena Dr; Fair Oaks and Altadena Dr; Loma Alta and Fair Oaks; Woodbury and its intersections at Lincoln, Fair Oaks, Windsor, as well as Washington and Lake Ave at Altadena Dr and NY Dr especially at Altadena, Allen, Lake Ave will need to be redesigned to reduce crashes and injuries. O3-22

- Encourage and promote Safe Routes to Schools in Altadena to those in positions of leadership within the 20+ public, charter, and private schools and child care facilities in Altadena in collaboration with LA County Public Health and Public Works Vision Zero Programs, including the next phase of the Slow Street Program. O3-23

- Washington Ave as a key connector route to PUSD schools, business districts, churches, trail access to the planned SGV Greenways, Metro LA and Pasadena Transit, and connecting the elderly to medical services and low income housing, especially near the intersection of Altadena Dr. O3-24

- Prioritizing Safe Routes to Parks and Schools including the corridors Loma Alta, Lincoln, Ventura, Fair Oaks, and Lake Ave for multi-benefit projects. | O3-25

- Neighborhood active transportation corridors are streets networks that can enhance diverse mobility options. Connector corridors such as Marengo, Fair Oaks, Lincoln Ave, Loma Alta, Mariposa, Windsor, Woodbury, New York Dr, Allen, Santa Anita, Mendocino, Washington can offer complete street opportunities. Installing safety measures on residential streets such as Wapello, Mountain View, Harriet, Ventura, Glenrose, Palm, Las Flores, and Casitas could improve pedestrian and cyclist access. O3-26

T3.1 Create a more connected and safer bikeway network by expanding bikeway facilities and implementing protected and separated lanes. O3-27

The Committee, along with Pasadena Complete Streets Coalition and Active San Gabriel Valley, is working with the County on updating the LA County Bicycle Master Plan. The LACBMP, last updated in 2012, proposes 27.9 miles of new bikeways, including 5.2 miles of Class II Bike Lanes and 22.6 miles of Class III Bike Routes. To date, only 1.7 miles of Class II facilities have been installed along Woodbury Road and approximately 2.7 miles of bike routes have been designated by placement of bike route signs periodically along two roadways. O3-28

County Public Works has informed Committee Members that the current paving project on Altadena Drive and Washington Ave will not include any bicycle infrastructure despite the fact that the LACBMP calls for placement of Class II facilities on these roadway segments. To have any chance of achieving milestones identified in the 2045 Climate Action Plan, County departments responsible for implementing the plan's objectives must be held accountable to implement it in a timely manner. O3-29

We are advocating to provide more Class II bike lanes where the plan currently identifies bike routes, as well as creating new bike lanes, including buffered bike lanes wherever feasible, to improve connections between Altadena and Pasadena, transit hubs, the Eaton Canyon Wash Trail (in the design stage), as well as the adjacent communities of Sierra Madre and La Canada-Flintridge. O3-30

The conversion of existing proposed bike routes to Class II would affect approximately 80% of the planned bike routes, or approximately 18 miles. O3-31

In addition, new bike lanes are being considered for East Loma Alta Drive, El Molino Avenue, Lower Fair Oaks Avenue (south of Altadena Drive), Windsor Avenue, Palm Street and Casitas Avenue. The addition of approximately six miles of bike lanes combined with the proposed upgrading of planned Class III bike routes to Class II bike lanes will mean that every resident of Altadena will be within .5 miles of a bike facility. O3-32

There is unprecedented federal funding available through the Department of Transportation to counties and cities for active transportation and complete streets planning, demonstration O3-33

projects, and implementing infrastructure upgrades. Active transportation is specifically supported through County Metro's Measure M Multi-Year Subregional program. This program dedicates funding in excess of 1 million dollars annually to active transportation and first/last mile projects throughout the San Gabriel Valley. The Committee encourages the County to prioritize Altadena when possible for funding through grants such as Federal Safe Streets for All and Measure M programs. O3-33 (cont.)

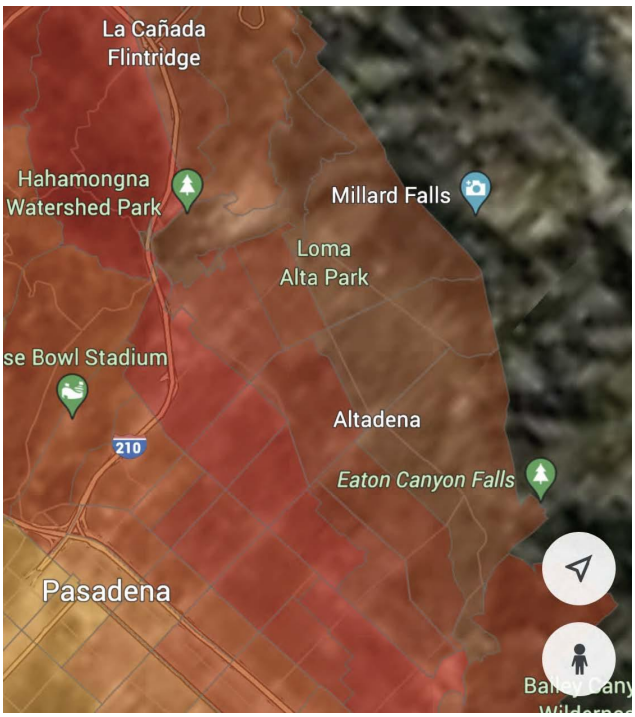
T3.2 Implement and regularly update LA County's Pedestrian Action Plan, Bicycle Master Plan, Active Transportation Plans, and Vision Zero Action Plan. O3-34

As previously mentioned, the Committee is working with the County to update the Bicycle Master Plan. The Pedestrian Action Plan, Active Transportation Plans, and Vision Zero Action Plan **do not mention Altadena**. The Committee would like to undertake supplemental planning with the County to create a pedestrian and active transportation plan for Altadena.

Implementation of active transportation improvements that remove barriers to walking and biking throughout the community have received little funding, despite being identified in County Planning Documents. O3-35 These documents should be required to include preliminary project estimates, rank each project according to its priority, and identify the variety of State, Federal and County-wide funding sources that would best match each project. O3-36

T3.3 Enhance pedestrian and bicycle environments through energy efficient pedestrian-scale lighting and shading to promote active transportation. Build shade structures at major transit stops, such as those identified in Metro's Active Transportation Strategic Plan, prioritizing communities with high heat vulnerability. Develop and implement a Shaded Corridors Program. O3-37

There are neighborhoods in Altadena that suffer from a lack of tree canopy resulting in little shade. The image below from CalEPA shows the high heat exposure for Altadena.



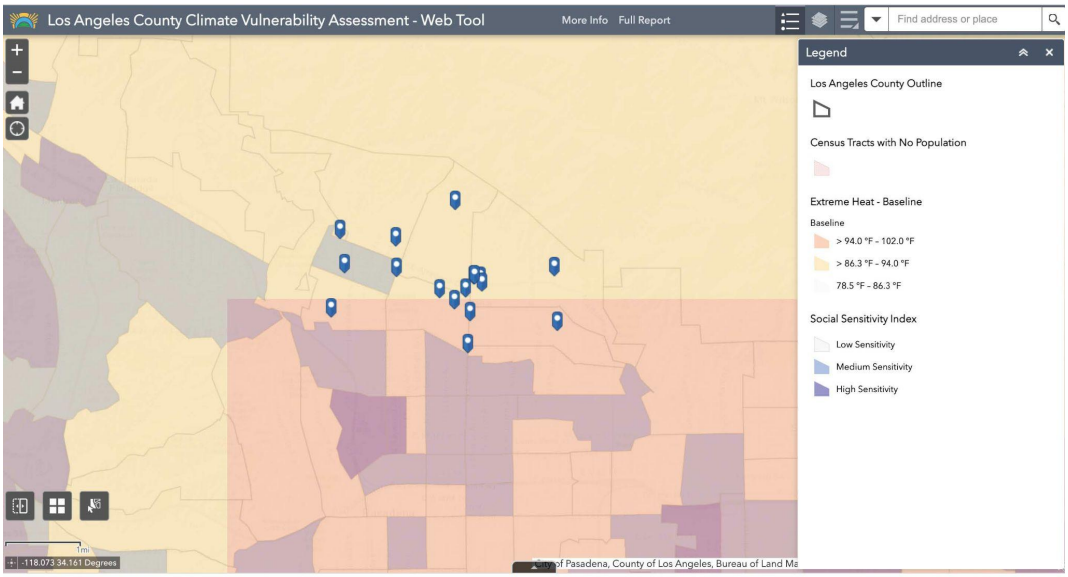
O3-37 (cont.)

Planting more trees on Altadena streets are critical for those waiting for the bus, walking and biking. Greening corridors can bring multi-benefits including improving biodiversity and water capture.

O3-38

In addition, the LA County Climate Vulnerability Assessment was used to map the vulnerability of Altadena schools. School-age children are particularly at risk for high heat exposure.

O3-39



O3-39 (cont.)

While shade and cooling neighborhoods is important, it is equally important to ensure there is adequate night lighting in Altadena. In 2022, an older resident exited a Metrobus and was struck and killed while crossing Fair Oaks Ave on his way home. Street lighting, reflective paint, and raised reflectors should be incorporated into lighting projects.

O3-40

T4 Broaden Options for Transit, Active Transportation, and Alternative Modes of Transportation: Transit service, micro mobility services (such as bike-share, scooter-share, and drone deliveries), and access to these transportation options can help reduce VMT.

O3-41

Metrobus and Microbus services are not well used among Altadena residents although these services are essential to our most vulnerable populations. To meet the County's transit goals, further study is needed to address why the transit rates in Altadena are so low and what can be done to increase them. The Committee agrees that active transportation planning and implementation of critical infrastructure is essential to encourage more residents to leave their cars and walk, bike, or ride a bus.

O3-42

T4.1 Expand and improve the frequency of service of County shuttles and explore new mobility services, such as micro transit, autonomous delivery vehicles, micro mobility, and on-demand autonomous shuttles.

O3-43

As discussed above, user rates for public transportation, including Metro micro, are low for Altadena. Better planning with the goal of understanding how to connect residents to schools, parks, libraries, trails, and businesses should be prioritized before adding more shuttles and mobility services. Investing in Safe Routes to Schools, Safe Routes to Libraries, Safe Routes to Parks, and Rail to Trails programs are essential.

T4.2 Install bus-only lanes and signal prioritization along major thoroughfares, and work with transit agencies and neighboring jurisdictions to plan and install full bus rapid transit infrastructure along priority corridors, as appropriate.

O3-44

Most streets in Altadena would not be wide enough to install bus lanes, however, better Metro bus signage, curb painting, and road painting that makes drivers more aware of bus stops and the presence of pedestrians would be beneficial. It is also necessary to ensure there are sidewalks that safely connect residents to bus stops, as well as adequate space on the sidewalk for people to wait for the bus. Encroachment of the public right of way is a major issue in Altadena and should be addressed.

O3-45

O3-46

T4.3 Develop a transportation technology strategy to proactively address how evolving tech-enabled mobility options can support public transit.

O3-47

Technology that helps to reduce Metro transit wait times would be beneficial and may lead to an uptick in transit use. However, ensuring there is a **safe route to reach a bus stop** is a more urgent issue for Altadena.

O3-48

T4.5 Develop and implement a transportation demand management (TDM) ordinance that requires projects to incorporate measures such as subsidized transit passes and car share.

O3-49

The Committee supports a transportation demand management ordinance in principle, however, transit infrastructure needs to exist prior to the ordinance. Development projects should be within ½ mile of transit and car share services should be available. Services like Blue LA, BlinkLA, and Getaround are not available in Altadena. Metrobus is only available on Lake Ave, Fair Oaks Ave, Altadena Dr between Lake and Lincoln, Washington Ave, and Allen Ave from Pasadena up to New York Dr in Altadena. Much of Altadena is not serviced by Metrobus within the ½ mile target area and in many cases, there are not safe ways to access a bus stop due to the lack of sidewalks and protected bike lanes.

O3-50

O3-51

O3-52

O3-53

T4.6 Offer free transit passes for students, youth, seniors, people with disabilities, and low-income populations.

O3-54

The Committee supports free transit passes for the groups mentioned above. There needs to be better outreach to ensure these groups receive the passes. The passes could be distributed through schools, libraries, and senior centers.

O3-54 (cont.)

T4.8 Establish temporary and permanent car-free areas.

The Committee supports demonstration projects and temporary car-free areas near surrounding streets at the Altadena Farmers Market, during County Parks programs, Christmas Tree Lane lighting ceremony, Juneteenth, Pride Parade, Mariposa evening shopping events, and in front of schools to improve traffic congestion during drop-off/pick-up times.

O3-55

T5 Limit and Remove Parking Minimums: Parking strategies such as parking maximums, unbundling parking, or market price parking can help reduce VMT.

T5.1 Implement a comprehensive parking reform strategy, which should include, but not be limited to: elimination of minimum parking requirements for all new residential units, establishment of parking maximums within one-half mile of high-quality transit stops, creation and expansion of parking benefit districts, and incentives for developers to provide less than maximum allowable parking.

O3-56

Altadena generally has free street parking. There are several unused parking spaces next to or behind buildings that have been vacant for a long time. These spaces could be reclaimed temporarily by the County for parking, reducing the need for street parking which would free up space for cyclists. These spaces could also be shared among businesses reducing the need for parking requirement minimums.

Strategy 4: Institutionalize low-carbon transportation

T6.1 Develop a Zero Emission Vehicle Master Plan.

O3-57

The Committee supports the creation of a ZEV Master Plan. There is little public ZEV infrastructure in Altadena although some residents drive ZEV.

T6.2 Install EVCSs at existing buildings and right-of-way infrastructure (e.g., lamp poles) throughout unincorporated Los Angeles County.

O3-58

T6.4 Install EVCSs at LA County facilities and properties for public, employee, and fleet use, prioritizing locations in BIPOC and disadvantaged communities. Complete an assessment of EV charging locations, identifying gaps in publicly accessible stations for BIPOC and disadvantaged communities.

Currently, there are no EVCS in Altadena except at the Community Center. Additional EVCS could be installed at LA Parks, Altadena libraries, grocery stores, churches, schools (coordinate with PUSD), Seniors Center, trailheads like Cobb Estate, and at or near apartment buildings. O3-58 (cont.)

T6.6 Expand electric options for active transportation, such as electric scooters and e-bikes.

Active SGV has a pilot “rent to own e-bike and e-cargo bike” program for residents in the San Gabriel Valley. This program could be expanded. O3-59

Although an excellent way to complete the last mile or two of a trip, e-scooters can cause conflicts with pedestrians on sidewalks and can clutter up sidewalk space. A program should be designed with best practices from cities that have experience with e-scooter programs. How e-scooters are charged (clean vs dirty grid) should also be taken into account. O3-60

T6.7 Increase the use of green hydrogen vehicles. Use biomethane and biogas created from organic waste as a "bridge fuel" to achieve 100% green hydrogen and electric vehicles. O3-61

There are few hydrogen stations in unincorporated LA. The closest one to Altadena is located in La Canada Flintridge. The next closest hydrogen fueling station is more than 10 miles away. There needs to be significant infrastructure built.

T7-7.2 Electrify LA County Fleet Vehicles: Electrify the LA County bus, shuttle, and light-duty vehicle fleet and shuttles. O3-62

Electrifying the LA County fleet vehicles would improve air quality in Altadena whose residents suffer from high PM2.5 air pollution.

A3 Expand Unincorporated Los Angeles County’s Tree Canopy and Green Spaces: Create an Urban Forest Management Plan to plant trees, increase the unincorporated County’s tree canopy cover, add green space, and convert impervious surfaces. O3-63

A3.2 Expand County tree planting both in the public right-of-way and on private property.

According to the UCLA Luskin Center for Innovation Healthy Places Index Heat Edition, all census tracts in Altadena will experience extreme heat (temperatures above 90F) above the state average of 79.9 days by 2035. Census Tract 4612 tops out at 125.3 days of extreme heat. The census tracts where tree canopy falls below the 80th percentile (according to the Healthy Places Index) are 4603.02, 4613, 4611, and 4610.

The lack of shade also corresponds to the major traffic and Metro bus corridors such as Lake Ave between Altadena Dr and Washington Ave, Woodbury Ave, and Fair Oaks between O3-64

Washington and Altadena Dr. Expanding the tree canopy along the public right of way would benefit transit users and residents. O3-64 (cont.)

Prioritizing a Pedestrian Plan for Altadena that takes into account County storm water drainage plans and increases permeable surfaces in line with a mobility plan can help define multi-benefit planning efforts toward sustainable solutions. O3-65

Signed on May 15, 2023 by,

Dorothy Wong, Chair, Traffic Safety & Mobility Committee, Altadena Town Council Member
Sarah Wolf, Committee Member
Seriina Corrubias, Committee Member
Tom Reilly, Committee Member
Sasha Anthome, Committee Member
June Cowgill, Committee Member
Ester Song, Committee Member
Gwen Yeager, Committee Member
Stephen Neptune, Committee Member

2.3.2.3 Letter O3: Altadena Town Council

This letter provides input on the Revised Draft 2045 CAP as well as CEQA comments on the Recirculated Draft PEIR. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4, *Comments on the Revised Draft 2045 CAP*, in Chapter 1, *Introduction*. PEIR-focused comments are addressed below.

O3-1 to O3-2 The County acknowledges the role of Altadena Town Council's Traffic Safety and Mobility Committee and its general support for the Revised Draft 2045 CAP; however, this comment does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this comment pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O3-3 to O3-12 These comments on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O3-13 to O3-16 The County agrees with the comment's statement that frontline communities are at the forefront of equitable implementation of the Revised Draft 2045 CAP measures and actions. The County appreciates the comment's discussion of data taken from the federal Climate and Economic Justice Screening Tool and acknowledges the statistics regarding Altadena. Environmental and equity screening tools such as the federal Climate & Economic Justice Screening Tool, the state's CalEnviroScreen, and the County's Equity Indicators Tool that can be used to inform investment and prioritization for the implementation of Revised Draft 2045 CAP measures and actions. In response to the comment's discussion of Census Tract 4610 and citation to the Climate and Economic Justice Screening Tool, the County acknowledges the data provided and statement that residents are burdened with the most pollution, health disparities, unemployment, lack of education, linguistic isolation, noise, and transportation barriers; however, this comment summarizes data and does not raise any specific concerns about the Recirculated Draft PEIR, such that the County cannot provide a specific response relating to these environmental issues.

O3-17 to O3-36 The comments on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O3-37 The current status of Altadena's tree canopy and heat exposure is part of the baseline condition. Both conditions could be improved for the benefit of human health and the environment through the implementation of projects facilitating the Revised Draft

2045 CAP measures and actions, such as community tree planting programs and tree planting on County property and in the public right-of-way within unincorporated Los Angeles County (Action A3.2). Measure A3 and Action A3.1 calls for the development of an Urban Forest Management Plan which would increase unincorporated Los Angeles County's tree canopy cover and prioritize tree- and parks-poor communities (Recirculated Draft PEIR p. 2-39). These policies would preserve existing open spaces that contribute to the visual quality of scenic vistas and would result in a beneficial impact (Recirculated Draft PEIR p. 3.2-10). This comment does not question the adequacy or accuracy of the Recirculated Draft PEIR and no change to the Recirculated Draft PEIR has been made in response.

O3-38 See Response O3-37 regarding baseline conditions particular to Altadena and the benefits of projects facilitated by the Revised Draft 2045 CAP pursuant to Action T3.3. The County agrees that tree planting and greening corridors can improve biodiversity and water capture.

O3-39 In response to the comment's concern related to the high heat exposure risk on vulnerable populations, including school-age children, the Recirculated Draft PEIR agrees that school-aged children are an environmentally sensitive population and has appropriately considered potential impacts to them from projects facilitated by the Revised Draft 2045 CAP measures and actions. Action T3.3 calls for building shade structures at major transit stops, prioritizing communities with high heat vulnerability. See, e.g., Section 3.4, *Air Quality*, which defines sensitive receptors to include this population (p. 3.4-11), explains that children are among the most at-risk from breathing air contaminants (pp. 3.4-3 to 3.4-9) including dust (p. 3.4-10), and identifies program-level mitigation to avoid or substantially reduce a significant impact to this population (p. 3.4-68). See also Section 3.9, *Greenhouse Gas Emissions*, which identifies children as a focus of the "Complete Streets" policy to meet the needs of all users of the streets, roads, and highways, including children (p. 3.9-26); and Section 3.10, *Hazards and Hazardous Materials*, which considers contamination cleanup sites in proximity to schools (pp. 3.10-3, 3.10-16, 3.10-24 et seq.) and provides information about the emission of electric and magnetic fields near schools (p. 3.10-32). See also, Section 3.15, *Transportation* (p. 3.15-11), which considers Los Angeles County General Plan Mobility Element Goal M 1, including Policy M 1.1 ("Provide for the accommodation of all users, including pedestrians, motorists, bicyclists, equestrians, users of public transit, seniors, children, and persons with disabilities when requiring or planning for new, or retrofitting existing, roads and streets.") and Policy M 1.2 ("Ensure that streets are safe for sensitive users, such as seniors and children.").

O3-40 Regarding the comment's concern related to pedestrian safety and the importance of night lighting and reflective materials in the Altadena community, current conditions relating to these nighttime safety elements are part of the baseline condition evaluated in the Recirculated Draft PEIR. See Section 3.2.1.2, *Environmental Setting*, in Section 3.2, *Aesthetics*, which explains that, while the more urbanized areas of Los Angeles County are heavily affected by nighttime lighting, nighttime light is less evident in

less densely populated parts of the County, such as in foothill communities located away from the Los Angeles Basin and in the Antelope Valley (p. 3.2-3). Projects facilitated by 2045 CAP Action T3.3 would include energy efficient lighting that would likely contribute to a safer nighttime environment because it includes consideration of energy-efficient pedestrian-scale lighting. (Recirculated Draft PEIR, p. 3.2-17.)

O3-41 to O3-62 The comments on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O3-63 to O3-64 Regarding the comment's concern regarding extreme heat in Altadena and expansion of the tree canopy along the public right of way, Draft 2045 CAP Measure A3, Expand Unincorporated Los Angeles County's Tree Canopy and Green Spaces, would result in an Urban Forest Management Plan to plant trees, increase tree canopy cover, add green space, and convert impervious surfaces. Measure A3 will focus tree planting on frontline communities with insufficient tree cover and green spaces. The Urban Forest Management Plan will help inform tree planting locations by assessing current tree canopy cover, considering locational ecology, and using the collected data to prioritize tree- and parks-poor communities. The Urban Forest Management Plan also addresses the conservation of mature trees and would assist the County in properly managing resources to ensure that trees thrive throughout the County. Consideration will be taken for multi-benefit plantings.

O3-65 The County is currently working on developing Pedestrian Plans. The first four communities of Lake Los Angeles, Walnut Park, Westmont/West Adams, and West Whittier-Los Nietos were selected based on criteria including high rates of pedestrian collisions resulting in death or injury, and a focus on communities that experience health inequities and challenges to safe walking. The next set of communities selected were East Los Angeles, East Rancho Dominguez, Florence-Firestone, and Willowbrook/West Rancho Dominguez-Victoria. Additional communities may be selected in the future pending funding. If a Pedestrian Plan is initiated for Altadena, community engagement opportunities will be available to discuss multi-benefit green infrastructure that may simultaneously address pedestrian safety, stormwater capture, and permeable surfaces.

AltadenaWILD's Comment on the 2045 Climate Action Plan Chief Sustainability Office, LA County

AltadenaWILD (AW), a public benefit corporation in California (currently moving towards 501(c)(3) federal tax-exempt status) was created in early 2023 to serve as an advocate for the precious Altadena foothills. Its creation was catalyzed by the October 2022 announcement that Polytechnic School in Pasadena seeks to build a sports complex on a portion of the 78 acres being offered by for sale by a family-owned nursery on Chaney Trail. AW represents a large segment of the Altadena community and is writing on behalf of those citizens in support of the County's Draft 2045 Climate Action Plan.

The proposed development in a State-designated Very High Fire Hazard Severity Zone -- even if constrained to the 13 acres of the current nursery -- will inalterably impact the remaining 65 acres of wildlands. AW believes such a development would be inconsistent with the 2045 CAP strategies to:

- A1 - Conserve agricultural and working lands, forest lands, and wildlands
- A1.2 - Employ vegetation management of wildlands to reduce wildfire risk and prevent carbon loss in forest lands

The land represents an opportunity to achieve three County strategies:

- A1.1 -Develop an open space conservation and land acquisition strategy to conserve lands for carbon sequestration
- A3 - Expand Unincorporated Los Angeles County's Tree Canopy and Green Spaces
- A3.1 - Create and implement an equitable Urban Forest Management Plan that prioritizes: (1) tree- and parks-poor communities; (2) climate- and watershed-appropriate and drought/pest-resistant vegetation; (3) appropriate watering, maintenance, and disposal practices; (4) provision of shade; and (5) biodiversity.

The Proposed Sports Complex Plan

While Poly has not yet submitted their plans to the County/DRP (although it is expected sometime in Summer 2023), it has shared its proposed plans with AltadenaWILD, which include:

- A soccer/football/track stadium, with seating for 500
- A baseball stadium, with TBD seating capacity
- Two-story underground parking facility
- Lighting for night games
- Amplified sound systems
- Storage building(s)
- One-story “bungalow style” facility (ies) for classrooms
- Public restrooms
- Interior road

Seventy percent of the Nuccio’s property falls within the Hillside Management Area (HMA, Title 22), and 80% falls within the Significant Ecological Area (SEA, Title 22.102), and Natural Open Space Provision (Title 22.102.100). The property transfer is currently in escrow through at least the end of 2023.

Climate Equity

The 2045 Climate Action Plan puts climate equity at the center of its strategy by prioritizing frontline communities, Indigenous people, BIPOC, low-income households, and communities affected by historically high environmental impacts.

Altadena has been affected by historically high environmental impacts due to wildfires and as a wildland-urban interface, will continue to do so into the future. Numerous wildfires have occurred recently in the surrounding areas, including the devastating 2009 Station fire.

According to the federal government’s Climate and Economic Justice Screening Tool, Census Tract 4603.1 which includes the land that Poly intends to buy and develop into a sports complex, is in the 98th percentile for wildfire risk and the 90th percentile for expected annual building loss rate. The area also suffers from poor air quality and is in the 91st percentile for PM2.5. The Census Tract is in the 48th percentile for low-income households.

A Conservation Plan in Line with the 2045 CAP

As an alternative to a sports complex, AltadenaWILD favors a plan that would preserve wildlands and support wildfire management, rewild the 13 acres currently used as nursery to expand the tree canopy, improve watershed health, reduce hard-scaped surfaces and act as a carbon sink, and conserve the land for at-risk wildlife and plants.

Such an alternative plan, funded through a consortium of land conservancies, supports the 2045 CAP measures A1, A1.1, A1.2, A3, and A3.1, as well as aligns to additional County and State measures including to:

- Provide critically needed Altadena parkland, in accordance with the goals of LA County's Measure A to increase park space and improve neighborhood access to open space for high park-need communities. Altadena has less than one-third park acres per person than the average for LA County, according to the Los Angeles Countywide Comprehensive Park and Recreation Needs Assessment report.
- Support LA County's initiatives to restore habitat and improve water infrastructure, to green urban interface areas, and to help capture and conserve storm water.
- Provide learning opportunities for the public, inclusive of all adults and children, about environmental sciences and horticulture.
- Build resilience and sustainability in increasingly challenging times for the environment and climate.
- Firmly align with the State of California's mandate to preserve 30 percent of open lands by 2030, also known as the 30X30 initiative.
- Reduce population density in a State-designated Very High Fire Hazard Severity Zone
- Preserve access to the Angeles National Forest (a portion of which is designated a federal Monument)
- Preserve a Significant Ecological Area (80% of property is within Altadena Foothills and Arroys SEA)
- Preserve a County-designated Hillside Management Area (70% of property falls within HMAs)
- Preserve five County-designated Significant Ridgelines
- Preserve wetlands that contain seasonal streams that drain into the Arroyo Seco
- Conserve biodiversity and protect the highly threatened Coastal Sage Scrub and nine rare native plant species; the federally-designated threatened Coastal California Gnatcatcher, as well as an additional 40 rare and sensitive animal species.
- Preserve vital wildlife migration corridors between the San Gabriel Mountains and Altadena Foothills for mountain lions, grey foxes, bobcats, and black bears.

2045 CAP Measures

A1 Conserve Agricultural and Working Lands, Forest Lands, and Wildlands: Preserve, conserve, and restore agricultural lands, working lands, rangelands, forest lands, wetlands, and other wildlands in unincorporated Los Angeles County.

> To meet the goal of reducing the amount of natural land converted for urban uses (and a sports complex would qualify as an urban use), the 78 acres owned by the Nuccio's family could be acquired and preserved in line with the 2045 CAP's "25% by 2030" goal.

A1.1 Develop an open space conservation and land acquisition strategy to conserve lands for carbon sequestration.

> The 78 acres could be acquired and conserved for carbon sequestration to help meet the goal of "2,000 acres by 2030." An easement on this land where 80% of the property is already an SEA contributes to meeting the County's stated goals and metrics of the 2045 CAP.

A1.2 Employ vegetation management of wildlands to reduce wildfire risk and prevent carbon loss in forest lands.

> The alternative conservation plan for Nuccio's would include vegetation management to reduce wildfire risk and carbon stock savings that would help to meet the County's stated goal of managing "10,000 acres by 2030".

A3 Expand Unincorporated Los Angeles County's Tree Canopy and Green Spaces: Create an Urban Forest Management Plan to plant trees, increase the unincorporated County's tree canopy cover, add green space, and convert impervious surfaces.

> There is an opportunity to rewild the 13 acres that currently occupy the nursery by removing the buildings, concrete slabs, parking areas, and other impervious surfaces. By planting native trees within the 13 acres, the county tree canopy would increase and contribute to the County's stated goals of planting 5,000 trees by 2030 and increasing the tree canopy cover by 10% by 2030.

A3.1 Create and implement an equitable Urban Forest Management Plan that prioritizes: (1) tree- and parks-poor communities; (2) climate- and watershed-appropriate and
drought/pest-resistant vegetation; (3) appropriate watering, maintenance, and disposal practices; (4) provision of shade; and (5) biodiversity.

> Preserving and rewilding the Nuccio's nursery would contribute to the Urban Forest Management Plan priorities 1 (tree- and park-poor communities) as Altadena has less than one-third park acres per person than the average for LA County, and priority 5 (biodiversity) to conserve and protect State Species of Special Concern such as the Burrowing Owl, Black Swift, Coast Range Newt, Coastal Western Whiptail, Two-Striped Garter Snake, San Diego Mountain King Snake, and Coastal Rosy Boa.

In conclusion, the proposed plan to purchase 78 acres in the Altadena foothills and develop a portion of the property into a sports complex is contrary to the stated goals of the 2045 CAP. Instead, AltadenaWILD is proposing a plan that focuses on conservation, rewilding, protecting biodiversity, and increasing the tree canopy, while advancing a more equitable and sustainable vision for unincorporated LA County.

Signed May 15, 2023

Dr. Michael D. Bicay
President, AltadenaWILD

Sarah Wolf
Member, AltadenaWILD

2.3.2.4 Letter O4: Altadena Wild

This letter provides input on the Revised Draft 2045 CAP only. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4, *Comments on the Revised Draft 2045 CAP*, in Chapter 1, *Introduction*.

May 9, 2023

Los Angeles County Department of Regional Planning
Attn: Amy Bodek and Thuy Hua
320 W. Temple Street, 13th Floor
Los Angeles, CA 90012
climate@planning.lacounty.gov

RE: LA County Climate Action Plan: Respectfully Requesting Additional Time for Public Review Based on Limited Details and Deferred Proposals

On behalf of the Los Angeles County Business Federation (BizFed), the Building Industry Association of LA/Ventura (BIA), and the Valley and Industry Commerce Association (VICA), we strongly support the County's and California's climate leadership. We remain committed to implementing feasible state and local climate GHG reduction measures while advancing complimentary policies to further equality, employment, infrastructure and housing. As California leads on global climate policies and technologies, any homes and jobs generated in Los Angeles will be among the most sustainable and climate-friendly in the world. Conversely, any unintended consequences that harm housing and job growth in Los Angeles will undercut local and state climate goals. O5a-1

Our members are deeply concerned about the many unanswered questions raised by the Revised Draft 2045 County Climate Action Plan (Draft CAP) and its potentially far-reaching impact on housing, jobs, mobility and infrastructure. The Draft CAP would create a sweeping, ***mandatory*** regulatory program applicable to any new project triggering the California Environmental Quality Act. Our members and expert environmental consultants have carefully reviewed the lengthy documents and technical appendices, and we continue to have fundamental questions and concerns about the proposal. O5a-2

- The Draft CAP's wind-ranging measures cause unexpected and adverse consequences to housing, jobs, infrastructure and other County priorities, as highlighted by two examples among many:
    - The Draft CAP creates an effective moratorium on small business, advanced manufacturing, and dozens of other vibrant and high priority economic development priorities that serve as the employment engine by requiring a "jobs density" of 300 jobs per acre. This job density metric can be met only in exceptional circumstances (e.g., high rise, high service employer like a hospital). It cannot be achieved by small business retailers, modern manufacturing facilities, many hybrid workforces with remote employees, entertainment or religious venues, etc. O5a-3
    - The Draft CAP demands that 90% of all water consumed within the unincorporated County boundaries, and 80% of agricultural irrigation water, be supplied exclusively by local water sources consisting of O5a-4

reclaimed water, graywater, and potable recycled water by 2045, which is well within the life of new housing, commercial and infrastructure projects. Not only is this CAP Measure legally and technically infeasible, it would hamstring County priorities of expanding housing and economic diversification dependent on reliable water supplies.

O5a-4 (cont)

- The Draft CAP defers numerous requirements to an unknown future date and does not quantify many other measures. As just one example, the Draft CAP defers a centerpiece "Offsite GHG Reduction Program" that is necessary for compliance when local GHG reduction programs are unavailable or infeasible. Recent precedent demonstrates that very few local GHG reduction programs are viable at scale. Even if available, many local programs are extremely expensive and time consuming to implement—effectively rendering the programs prohibitive for many projects. It is impossible to assess the feasibility and effectiveness of the Draft CAP until this Offsite GHG Reduction Program is adopted by the County and demonstrated feasible.

O5a-5

- The Draft CAP does not quantify GHG emission reductions or the estimated costs and sources of funding for almost all of the myriad mandatory measures. Neither the Draft CAP, its Technical Appendices, nor the 1000+ page PEIR, disclose the quantity, cost, or revenue source for each of CAP measure except for a handful of "core" measures that are largely based on statewide laws and regulations required to be implemented with or without any County CAP. Our members believe that CAP measures, which are fully enforceable General Plan mandates, will impose prohibitively high costs on employers and residents of new housing without any significant GHG reductions beyond those already required by state laws and regulations.

O5a-6

- The Draft CAP includes a web of overlapping documents that are difficult to understand and assess the ramifications on housing, jobs, mobility and infrastructure. For example, the Draft CAP mandates compliance or an infeasibility determination for well over 50 measures that are linked to various "strategies" that may or may not be binding on all projects. What is more, the PEIR includes many Mitigation Measures that further expand the list of mandatory obligations.

O5a-7

- The Draft CAP explains that any project that fails to comply with **all** CAP measures would be inconsistent with the CAP, and under CEQA would accordingly result in a significant adverse GHG impact precluding use of CEQA streamlining tools, and would further need to adopt "all feasible" mitigation measures as well as justify with "substantial evidence in the record" why the project could not comply with each and every CAP measure. Each such substitute measure, and each finding of infeasibility, would invite CEQA litigation known to slow or stop housing and new jobs. The CAP should be revised to include a full assessment of the feasibility of each measure for the myriad of housing, employment, and infrastructure projects required to fulfill other General Plan, economic development, equity and environmental priorities.

O5a-8

O5a-9

- The Draft CAP does not provide meaningful relief through alternative compliance strategies. The limited alternative options are not fully defined or deferred to future development, while the feasibility of achieving "all local" reductions remains unproven.

O5a-10

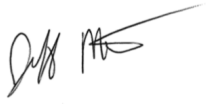
Given the significant consequences of this mandatory program on housing, jobs, mobility and infrastructure, we respectfully request that the County provide ***at least 60 days more for public review and a series of workshops*** with stakeholders. On March 13, 2023, BizFed previously asked that the County provide at least a 60-day comment period. Given the complexity of the CAP and PEIR (released after the Draft CAP, on March 30), as well as the significant ramifications from this proposal, it is infeasible for the public and business community to review, understand and provide meaningful comments without another 60-day review period and public workshops. O5a-11

We also ask that mandatory compliance with the CAP be delayed until the CAP's implementation programs have been proposed by staff, reviewed by the public, and adopted by the Board (e.g., the Offsite GHG Reduction Program). County staff should involve stakeholders when developing such programs. O5a-12

We look forward to continuing working with the County on these important issues. Please feel free to reach out to us with any questions. If you have any questions, please contact sarah.wiltfong@bizfed.org.

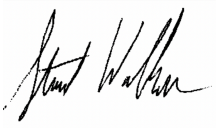
Best regards,

Tracy Hernandez,
Founding CEO, Los Angeles County Business Federation



Jeff Montejano
Chief Executive Officer, Building Industry Association of Southern California

Maria S. Salinas
President & CEO, Los Angeles Area Chamber of Commerce



Stuart Waldman
President, Valley Industry and Commerce Association

May 15, 2023

Via e-mail at:
climate@planning.lacounty.gov

Thuy Hua
320 W. Temple Street, 13th Floor
Los Angeles, CA 90012

Re: Comments on Los Angeles County Revised Draft 2045 Climate Action Plan (Draft CAP)

Dear Ms. Hua,

We are contacting you on behalf of BizFed, the Los Angeles County Business Federation. We are an alliance of over 200 business organizations who represent over 400,000 employers in Los Angeles County, including large and small businesses from a wide range of industries throughout the South Coast Air Basin (SCAB). We are writing to comment on the LA County Revised Draft 2045 Climate Action Plan (Draft CAP).[1] Many of the businesses we represent have or will be writing their own individual comment letters that specifically address the impacts to their industries. Our comments address the impacts to the business community as a whole and include overarching concerns of our diverse membership.

O5b-1

The Draft CAP identifies 10 strategies, 25 measures, and implementing actions to reduce GHG emissions in unincorporated LA County. The Draft CAP requires project applicants to demonstrate compliance with each implementing action. Project applicants that cannot implement these actions would be expected to demonstrate equivalency or participate in the County's proposed Offsite Reduction Program, or their greenhouse gas (GHG) emissions impacts will be determined to be "significant and unavoidable" under the California Environmental Quality Act (CEQA).

Certain actions proposed in the Draft CAP would appear to directly conflict with other significant County priorities, such as economic growth and housing availability, and it is not currently feasible to implement many of the required actions. Additionally, several proposed measures would rely upon State and Federal actions that are outside the County's jurisdiction. The Draft CAP also fails to consider the implementation challenges associated with the proposed Offsite Reduction Plan. As detailed below, the enforceability of the Draft CAP will create significant problems for the County. For these reasons, BizFed recommends that the Draft CAP not be adopted into the General Plan.

O5b-2

We provide the following detailed comments.

[1] LA County Revised Draft 2045 Climate Action Plan. Available at: https://planning.lacounty.gov/long-range-planning/climate-action-plan/documents/. Accessed: May 2023.

1. **The Draft CAP is inconsistent with the County's economic goals, and inconsistent with the goals of the General Plan and Housing Element.[2,3]**

The 2045 CAP Consistency Review Checklist (Checklist) provides a list of measures with which project applicants must comply.[4] These measures are inconsistent with the economic goals and General Plan goals, including those stated in the Housing Element. For example:

- Checklist Item 12, "Achieve a High Jobs/Housing Balance," would require project applicants to describe how their project will achieve a job density of 300 jobs per acre. This creates an effective moratorium on small business, advanced manufacturing, and other businesses that serve as the employment engine of the County. Such a job density metric can only be achieved in exceptional circumstances (e.g., in a high rise, high service employer like a hospital). It cannot be achieved by small businesses, modern manufacturing facilities, businesses that utilize a hybrid workforce, the goods movement sector, entertainment or religious venues, schools, recreational facilities, or on college and university campuses. O5b-3

  Table 1 provides the average employment densities of common categories of commercial use, none of which come close to the 300 employee per acre requirement in the Draft CAP.[5]

Table 1. Employment Density Measures of Select NAICS Sectors *(Employees per acre)*

Sector (NAICS Codes)	Mean	Median	Interquartile Range	Sample Size
Manufacturing (31, 32, 33)	18.8	11.0	15.7	217
Transportation and Warehousing (48, 49)	11.2	8.0	10.8	34
Construction (23)	19.4	9.9	18.4	122
Wholesale Trade (42)	12.8	8.0	11.1	132
Retail Trade (44,45)	13.0	7.1	11.6	65
Real Estate and Rental and Leasing (53)	5.7	2.2	5.8	24
Administrative Support and Waste Management and Remediation Services (56)	22.5	20.3	22.0	25

O5b-4

  New commercial, manufacturing, infrastructure, tourism, entertainment, church, and educational uses that do not have 300 employees per acre would be inconsistent with the Draft CAP as proposed. The projects would therefore be required to complete a comprehensive GHG analysis which could lead to a costly legal battle about what substitute measure(s) can be implemented to achieve the GHG performance target. The Draft CAP does not include a methodology to demonstrate equivalency with the job density per acre requirement. Therefore, prospective employers would not know how to demonstrate compliance with this CAP mandate**.** O5b-5

- The Draft CAP counts GHG emissions that occur within the geographic boundaries of unincorporated Los Angeles county lands in the County's GHG inventory, and then O5b-6

[2] LA County General Plan. Available at: https://planning.lacounty.gov/wp-content/uploads/2023/03/gp_final-general-plan.pdf. Accessed: May 2023.
[3] Revised County of Los Angeles Housing Element (2021-2029). Available at: https://planning.lacounty.gov/wp-content/uploads/2022/11/housing-element-20220517.pdf. Accessed: May 2023.
[4] Draft CAP Appendix F: 2045 Climate Action Plan Consistency Review Checklist. Available at: https://planning.lacounty.gov/wp-content/uploads/2023/03/LA-County-2045-CAP_Rev_PublicDraft_AppendixF-Checklist.pdf. Accessed: May 2023.
[5] Rohan, Catherine. Industrial Zoning & Employment Density: A Missed Connection? June 2020. Available at: https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/26252/CRohan_ExitProj_Final.pdf?sequence=1&isAllowed=y . Accessed: May 2023.

demands that these GHG emissions become net-zero by 2045. When jobs or families move out of the County, the reduction in GHG emissions counts toward meeting the net zero targets. The County's GHG inventory methodology rewards the de-growth of the county, penalizes growth in housing, jobs, and population. This is inconsistent with the County's General Plan, which includes a guiding principle to provide the foundation for a strong and diverse economy. It is also inconsistent with the Housing Element, which includes goals to ensure housing availability, ensure housing affordability, and stabilize the housing supply.

O5b-6 (cont)

O5b-7

2. The Draft CAP would require project applicants to comply with measures that are infeasible and conflict with other County mandates and policies.

The development of Los Angeles County was and remains dependent on a diverse, resilient water supply that includes imported water. Draft CAP Measure E5, "Increase Use of Recycled Water and Graywater Systems" includes a performance objective that 90% of the water demands of Unincorporated Los Angeles County must be met by recycled water, graywater, or potable reuse, and that 80% of water for agricultural irrigation or and industrial uses must be supplied exclusively by recycled or graywater by 2045. Under this CAP Measure, no imported water source – including water delivered directly to the County, and water purchased and stored for use in the County, and no de-salinization technology or other technology falling outside the three designated technologies, can supply more than 10% of the County's total water demand.

O5b-8

This measure is legally infeasible. The County has and is party to numerous water infrastructure, supply, and management contracts that govern imported water, which is by far the largest source of water to the County and cities within the County. This measure is also technically infeasible. While all three of the exclusively-sanctioned water treatment technologies have already been invented and implemented on a very small scale in limited areas, all of these treatment technologies effectively concentrate nitrate and other residual chemicals in the treated water supply, and these treated waters must be blended with fresh water to be potable.

O5b-9

Finally, this measure conflicts with other County General Plan, policy, and state law legal mandates. The County is required by its own General Plan as well as state law to implement its approved Housing Element, and plan for and approve plan-compliant housing for many thousands of new homes. New homes cannot be built without adequate water supplies. The Draft CAP would cause the County to violate housing laws by disapproving new housing that are not supplied by a minimum of 90% recycled, grey water, and potable recycled water, none of which are currently available to meet the potable drinking water needs of housing built today. The County also cannot achieve its economic diversification goals, including attracting additional advanced manufacturing, battery and climate-tech, aerospace, research, medical, and technology employers, without providing an adequate, secure, and high-quality water supply.

O5b-10

The Draft CAP, if adopted into the General Plan as proposed, applies directly and immediately to the County's own projects, and to the County's approval of project applications. The legal risks and compliance costs of the water mandate will result in immediate challenges to County funded projects (e.g., infrastructure, arts, parks), and County-approved and applicant-proposed housing and job-creation projects that meet other urgent County needs and legal obligations.

O5b-11

The Draft CAP blocks the County's access to innovative, climate-resilient, and clean technologies with mandatory prescriptions for which technologies are acceptable and which are not. In the context of water supply, the Draft CAP locks decades-old recycling, grey water, and potable water re-use technologies into the General Plan, proactively depriving

O5b-12

the County and its residents and businesses from using safe, clean, affordable, and reliable water supply solutions that have not yet been deployed at scale, or even invented. O5b-12 (cont)

3. Several measures rely upon State and Federal actions that are outside the County's jurisdiction.

The Draft CAP includes a web of overlapping documents, each of which adds new mandates and complexities to the compliance obligations. For example, the Draft CAP itself lists only 10 high level "Strategies" in 5 sectors for reducing GHG.[6] The Draft CAP includes 25 "Measures" within those strategies, and "over 90 implementation actions". The Program Environmental Impact Report (PEIR) mitigation measures add dozens of additional mandates to the total CAP measure list.[7] O5b-13

While the Draft CAP states the County's GHG reduction target will be achieved by successfully implementing five core measures,[8] it imposes more than 100 additional measures on future County projects. Moreover, the Draft CAP fails to disclose quantified GHG emission reductions, estimated costs, or sources of funding for almost all of the 100 mandatory CAP measures. Even if the County were inclined to allow "equivalent" GHG reductions in lieu of CAP-prescribed measures, the CAP provides no methodology for calculating how much GHG reduction is attributable to each measure. O5b-14 O5b-15

The Draft CAP explains that any project that fails to comply with all CAP measures would be inconsistent with the CAP, be deemed to have a significant adverse GHG impact and need to adopt "all feasible" mitigation measures as well as justify with substantial evidence why the project could not comply with each and every measure.[9] However, of the five core measures that result in the bulk of the GHG reductions, only Measure W1, "Institutionalize Sustainable Waste Systems and Practices," falls within the jurisdictional control of the County. The remaining four core measures fall outside of County control: O5b-16 O5b-17

- Measure T6: "Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales." The County's role in achieving this objective is most clear in the vehicle purchasing decisions by the County, and in mandating ZEV-charging infrastructure. The County cannot lawfully ban the sale or use of non-ZEV vehicles, yet the Draft CAP demands that 68% of all light duty vehicles (pickup trucks, vans, and cars) sold in the County be ZEVs by 2030 and 100% by 2035. This is state law, authorized only with approval by the US EPA, but its inclusion accounts for 30.5% of the GHG reductions stated in the Draft CAP. These reductions would be achieved with or without the Draft CAP. O5b-18
- Measure ES2: "Procure Zero-Carbon Electricity." The County's performance metrics for this goal rely on state laws that already require a renewable energy electric grid, and state and local utility mandates and programs already in place and slated for expansion. The Draft CAP can commit the County to procure only zero carbon electricity, but the Draft CAP also requires 96% of community participation in this zero-carbon electricity mandate by 2030. The County lacks the legal jurisdiction to mandate this outcome for existing and future residents and businesses. O5b-19
- Measure E1: "Transition Existing Buildings to All-Electric." The Draft CAP demands that 80% of existing residences, 60% of existing non-residential buildings, and O5b-20

[6] Draft CAP. Table 3-1, Page 3-3. Available at: https://planning.lacounty.gov/wp-content/uploads/2023/03/LA_County_2045-CAP_Rev_Public_Draft_March_2023_Chapters.pdf. Accessed: May 2023.
[7] Draft CAP Recirculated Draft Program Environmental Impact Report, Table ES-2, Page ES-20. Available at: https://planning.lacounty.gov/wp-content/uploads/2023/04/LA-2045-CAP-Recirculated-Draft-Program-EIR.pdf. Accessed: May 2023.
[8] Draft CAP. Page 3-5. Available at: https://planning.lacounty.gov/wp-content/uploads/2023/03/LA_County_2045-CAP_Rev_Public_Draft_March_2023_Chapters.pdf. Accessed: May 2023.
[9] Draft CAP. Page 1-5. Available at: https://planning.lacounty.gov/wp-content/uploads/2023/03/LA_County_2045-CAP_Rev_Public_Draft_March_2023_Chapters.pdf. Accessed: May 2023.

100% of renovations, include only electric, not natural gas, service. While the County can mandate this transition for its own buildings, the United States Court of Appeals for the Ninth Circuit has recently confirmed that local governments cannot prohibit the use of natural gas in buildings or appliances in new buildings because this has been preempted under federal law.[10] Removing natural gas service from existing structures is likewise preempted. Therefore, this CAP measure is beyond the County's jurisdiction.

O5b-20 (cont)

- Measure T8: "Accelerate Freight Decarbonization." State and federal litigation is pending over the extent to which the state can mandate heavy duty EV trucks. The County CAP can require measures such as installation of EV chargers to facilitate this transition, but achieving this freight decarbonization outcome will be dependent on legal proceedings that are outside the County's jurisdiction and control.

O5b-21

4. The Draft CAP fails to consider the implementation challenges associated with the proposed Offsite Reduction Plan.

The CAP requires that project applicants that cannot demonstrate consistency with every item in the Checklist instead fund projects that will generate equivalent reductions in LA County via the County's Offsite GHG Reduction Program. The County plans to create its own GHG offsite registry so that project applicants can comply with this requirement. At the time of this Draft CAP publication, the County has not yet created this offset registry, nor provided any details about its methodology or implementation. The Draft CAP has not demonstrated that this offsite GHG reduction program would be available or able to achieve the required GHG reductions.

O5b-22

Appendix F of the Draft CAP provides examples of six offsite project types that would qualify under this program. However, these examples are either already required under existing State or County regulations, or for that matter the Draft CAP. For example, the Draft CAP proposes that project applicants can fund local building solar programs as part of their offsite GHG reduction program. However, the Draft CAP would require that new projects utilize 100% zero-carbon electricity on-site and the Title 24 2022 Building Energy Efficiency Standards already contain mandatory requirements for solar readiness (Note, these are not the same requirement). Therefore, an applicant could not use funding of local building solar programs as part of the offsite GHG reduction program, as the reductions would not be in addition to reductions required by existing requirements.

O5b-23

The Draft CAP also rejects use of the CARB-approved Net-Zero GHG compliance pathway by expressly disallowing GHG reductions achieved by CARB-approved GHG offsets. Instead, the Draft CAP allows for a County-only GHG reduction offset credit program, but includes zero information about the cost, feasibility, schedule, or scale of any such future program. The Draft CAP demands that GHG reductions achieved by projects must be fully additional to federal, state, and local law mandates in order to count as GHG reductions in any future County offset program.

O5b-24

Given the existing comprehensive regulatory requirements, it will be extremely difficult (and expensive) for project applicants to implement GHG reduction programs within the County. The Draft CAP has neglected to report the potential cost of their proposed offsite GHG reduction program, which could potentially be at much higher costs than comparable programs that could be equally effective at reducing GHG emissions.

O5b-25

[10] California Restaurant Association vs. City of Berkeley. No. 21-16278. United States Court of Appeals for the Ninth Circuit, 2022. Available at: https://cdn.ca9.uscourts.gov/datastore/opinions/2023/04/17/21-16278.pdf. Accessed: May 2023.

The Draft CAP misleadingly references the Scoping Plan to suggest that only local reductions are recommended. The Scoping Plan recommends a tiered approach that offers applicants some flexibility. The exact language of the Scoping Plan reads:

> *"If a project needs further GHG reductions after adoption of all feasible local, off-site mitigation options,* ***applicants should next consider non-local, off-site mitigation****…"*[11]

O5b-26

The Scoping Plan prioritizes onsite and local measures but allows non-local measures and offset credits. The Draft CAP should follow the precedent set by the Scoping Plan and allow a tiered approach to offset credit mitigation to address the need for GHG reduction.

5. The Draft CAP should not be adopted as a component of the County's General Plan

The County approved the only major mixed use master planned communities recognized by the California Air Resources Board (CARB) to have achieved Net Zero GHG. The Draft CAP does not create any feasible new Net Zero GHG compliance pathway for any project, undermining CARB's resolution to endorse net zero GHG project outcomes similar to those already achieved. The Draft CAP only creates a net zero GHG compliance pathway for like-kind replacement projects that emit less GHG on the same site. This outcome is easily achieved for replacement projects, but there is no pathway provided for projects that would include new uses on the same site or increase land use densities. The Draft CAP would result in housing projects that are in full compliance with the Housing Element and every existing GHG reduction mandate being in violation of the County's General Plan.

O5b-27

O5b-28

CARB's Scoping Plan encourages local Climate Action Plans to support the State's goals, stating:

> *"California's overall state goal of achieving carbon neutrality no later than 2045 can inform GHG reduction targets at individual community levels, and some communities regions may be able to reach neutrality themselves. However, it is important to targets in ways that support overall state goals, recognizing that each region distinctive sources and systems."*[12]

O5b-29

The Draft CAP should be revised to exclude measures that are in conflict with other County-approved plans, policies, and projects. Once included in the General Plan, compliance with the Draft CAP would be mandatory. Neither elected officials nor staff could authorize deviations from the Draft CAP without amending the General Plan. Third parties seeking to block funding or approvals of infrastructure, job-creation, and housing projects could also sue the County by alleging failure to fully comply with the General Plan; applicants receiving County approvals for such projects would also be targets for such lawsuits.

O5b-30

O5b-31

Inclusion of the Draft CAP in the General Plan would also create new County obligations and expand litigation risks under CEQA. As the Draft CAP itself explains, any project that failed to comply with all applicable requirements would be deemed to conflict with an environmental component of the General Plan. These conflicts would trigger the necessity for an Environmental Impact Report (EIR), and preclude the County or applicants from making use of less costly, less time-consuming, and less litigious CEQA compliance pathways. The Draft CAP specifies that for each non-compliant CAP measure, the "infeasibility" of such a measure must be demonstrated with substantial evidence. Each one

O5b-32

O5b-33

[11] California Air Resource Board, 2022 Scoping Plan. Appendix D – Local Actions, Page 31. Available at: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed: May 2023.

[12] California Air Resource Board, 2022 Scoping Plan. Appendix D – Local Actions, Page 18. Available at: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed: May 2023.

of these "infeasibility" findings, as well as the sufficiency of any alternative CAP measure, is also subject to challenge in CEQA and General Plan compliance lawsuits. O5b-34

The Draft CAP locks county elected and appointed officials, and voters, into rigid and long-term compliance obligations. Once adopted, the CAP cannot be amended without undergoing further CEQA review inclusive of adoption of "all feasible mitigation" to achieve either the same or a modified GHG reduction goal. O5b-35

San Diego County adopted what its Board of Supervisors believed to be an aspirational CAP into its General Plan in 2018.[13] The CAP was fully-enforceable under the General Plan and was considered a CEQA mandate. Litigants have an unbroken string of lawsuit successes in blocking multiple new housing projects in San Diego County. San Diego County attempted to amend its CAP and allow the use of CARB-approved and other GHG offsets to mitigate GHG emissions, but that was unsuccessful. O5b-36

An aspirational CAP vote taken decades ago by the San Diego County Board of Supervisors has become one of the most formidable anti-housing, anti-growth tools in California history. Solano County suffered the same fate when its General Plan aspirational CAP also failed to pass a no-growth advocacy CEQA lawsuit challenge. O5b-37

Looking at this woeful record of local agency losses when CAPs were included in General Plans, even the most pro-climate jurisdictions in California (e.g., San Francisco), have recently opted not to include CAPs in their General Plans, while others have carefully drafted CAPs to assure that they are clear, feasible, implementable, and operate in alignment with and support other approved General Plan elements, as well as other policy priorities, plans and obligations. O5b-38

The County's current General Plan CAP was carefully crafted to be fully attainable, and the County has prevailed in CEQA lawsuits challenging projects based on alleged inconsistency with the present CAP. In contrast, this Draft CAP's inclusion of technically and legally infeasible measures, as well as undefined and unquantified measures, and its rejection of lawful and feasible climate compliance mandates, will result in litigation challenging infrastructure, housing, job-creation, and other projects. There is no federal, state or County obligation to approve even an aspirational policy CAP, let alone adopt a CAP into the General Plan. O5b-39

Once adopted into the General Plan, the Draft CAP cannot be modified without additional CEQA review. Future amendments that may make the CAP feasible can themselves be litigated for many years while progress on projects comes to a grinding halt. O5b-40

The Draft CAP should be substantially revised into an aspirational policy document that focuses solely on feasible GHG reduction measures which are within the jurisdiction of the County to implement, operate in full alignment and support of the County's economic development, housing, and infrastructure goals, and do not increase the cost, time, or litigation risks for the County or applicants. O5b-41

The Draft CAP should separately quantify GHG reductions from the successful implementation of statewide laws and mandates, and present what additional measures, if any, should be undertaken by the County. We ask that the county do an economic impact study prior to any final adoption of the plan. O5b-42

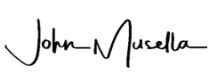
BizFed supports California's global climate leadership, and our members are committed to assuring that state and local climate measures can be feasibly implemented in furtherance of other critical California priorities such as the continued growth of the California economy, the increased equity and upward mobility for our working families and employers, the funding and timely completion of urgently needed transportation, water and other infrastructure, and the implementation of the housing elements approved by our cities and counties to solve our regional housing crisis. We look forward to continuing our work with LA County to see progress made in a way that is equitable and lasting. O5b-43

[13] San Diego County 2018 Climate Action Plan. Available at: https://www.sandiegocounty.gov/content/sdc/sustainability/climateactionplan/2018cap.html. Accessed: May 2023.

Thank you for your consideration of our letter and we look forward to meeting with you in the near future to review our letter and talk in detail about our concerns. If you have any questions, please contact Sarah Wiltfong, BizFed's Director of Policy and Advocacy, at sarah.wiltfong@bizfed.org.

O5b-44

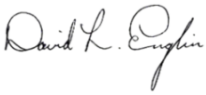
Sincerely,



John Musella
BizFed Chair

David Fleming
BizFed Founding Chair

Tracy Hernandez
BizFed Founding CEO



David Englin
BizFed President

BizFed Association Members

7-11 Franchise Owners Association for SoCal
Action Apartment Association
Alhambra Chamber
American Beverage Association
Antelope Valley Chamber formerly Lancaster Chamber of Commerce
Apartment Association of Greater Los Angeles
Apartment Association, CA Southern Cities, Inc .
Arcadia Association of Realtors
AREAA North Los Angeles SFV SCV
Armenian Trade & Labor Association
Arts District Los Angeles
Associated Builders & Contractors SoCal (ABC SoCal)
Association of Club Executives
Association of Independent Commercial Producers
AV Edge California
Azusa Chamber
Beverly Hills Bar Association
Beverly Hills Chamber
BioCom
Black Business Association
BNI4SUCCESS
Bowling Centers of SoCal
Boyle Heights Chamber of Commerce
Building Industry Association - LA/Ventura Counties
Building Industry Association of Southern California
Building Industry Association- Baldyview
Building Owners & Managers Association of Greater Los Angeles
Burbank Association of Realtors
Burbank Chamber of Commerce
Business and Industry Council for Emergency Planning and Preparedness
Business Resource Group
CABIA California Business and Industrial Alliance
Calabasas Chamber of Commerce
CalAsian Chamber
CalChamber
California Apartment Association- Los Angeles
California Asphalt Pavement Association
California Bankers Association
California Business Properties
California Business Roundtable
California Cannabis Industry Association
California Cleaners Association
California Contract Cities Association
California Fashion Association
California Gaming Association
California Grocers Association
California Hispanic Chamber
California Hotel & Lodging Association
California Independent Oil Marketers Association (CIOMA)
California Independent Petroleum Association
California Life Sciences Association
California Manufacturers & Technology Association
California Metals Coalition
California Natural Gas Producers Association
California Restaurant Association
California Retailers Association
California Self Storage Association
California Small Business Alliance
California Society of CPAs - Los Angeles Chapter
California Trucking Association+
Carson Chamber of Commerce
Carson Dominguez Employers Alliance
Central City Association
Century City Chamber of Commerce
Cerritos Regional Chamber of Commerce
Chatsworth Porter Ranch Chamber of Commerce
Citrus Valley Association of Realtors
Claremont Chamber of Commerce
Commercial Industrial Council/Chamber of Commerce
Compton Chamber of Commerce
Construction Industry Air Quality Coalition
Construction Industry Coalition on Water Quality
Council on Infil Builders
Crenshaw Chamber of Commerce
Culver City Chamber of Commerce
Downey Association of REALTORS
Downey Chamber of Commerce
Downtown Alhambra Business Association
Downtown Center Business Improvement District
Downtown Long Beach Alliance
El Monte/South El Monte Chamber
El Segundo Chamber of Commerce
Employers Group
Encino Chamber of Commerce
Energy Independence Now EIN
Engineering Contractor's Association
FastLink DTLA
Filipino American Chamber of Commerce
Friends of Hollywood Central Park
FuturePorts
Gardena Valley Chamber
Gateway to LA
Glendale Association of Realtors
Glendale Chamber
Glendora Chamber
Greater Antelope Valley AOR
Greater Bakersfield Chamber of Commerce
Greater Lakewood Chamber of Commerce
Greater Leimert Park Crenshaw Corridor BID
Greater Los Angeles African American Chamber
Greater Los Angeles Association of Realtors
Greater Los Angeles New Car Dealers Association
Greater San Fernando Valley Chamber
Harbor Association of Industry and Commerce
Harbor Trucking Association
Historic Core BID of Downtown Los Angeles
Hollywood Chamber
Hong Kong Trade Development Council
Hospital Association of Southern California
Hotel Association of Los Angeles
Huntington Park Area Chamber of Commerce
ICBWA- International Cannabis Women Business Association
Independent Cities Association
Industrial Environmental Association
Industry Business Council
Inglewood Board of Real Estate
Inland Empire Economic Partnership
International Franchise Association
Irwindale Chamber of Commerce
Kombucha Brewers International
La Cañada Flintridge Chamber
LA Coalition
LA Fashion District BID
LA South Chamber of Commerce
Larchmont Boulevard Association
Latin Business Association
Latino Food Industry Association
Latino Restaurant Association
LAX Coastal Area Chamber
League of California Cities
Long Beach Area Chamber
Long Beach Economic Partnership
Los Angeles Area Chamber
Los Angeles Economic Development Center
Los Angeles Gateway Chamber of Commerce
Los Angeles Latino Chamber
Los Angeles LGBTQ Chamber of Commerce
Los Angeles Parking Association
Los Angeles World Affairs Council/Town Hall Los Angeles
MADIA
Malibu Chamber of Commerce
Manhattan Beach Chamber of Commerce
Marketplace Industry Association
Monrovia Chamber
Motion Picture Association of America, Inc.
MoveLA
MultiCultural Business Alliance
NAIOP Southern California Chapter
NAREIT
National Association of Minority Contractors
National Association of Tobacco Outlets
National Association of Women Business Owners
National Association of Women Business Owners - LA
National Association of Women Business Owners- California
National Federation of Independent Business Owners California
National Hookah
National Latina Business Women's Association
Orange County Business Council
Orange County Hispanic Chamber of Commerce
Pacific Merchant Shipping Association
Panorama City Chamber of Commerce
Paramount Chamber of Commerce
Pasadena Chamber
Pasadena Foothills Association of Realtors
PGA
PhRMA
Pico Rivera Chamber of Commerce
Planned Parenthood Affiliates of California
Pomona Chamber
Rancho Southeast REALTORS
ReadyNation California
Recording Industry Association of America
Regional CAL Black Chamber, SVF
Regional Hispanic Chambers
San Dimas Chamber of Commerce
San Gabriel Chamber of Commerce
San Gabriel Valley Economic Partnership
San Pedro Peninsula Chamber
Santa Clarita Valley Chamber
Santa Clarita Valley Economic Development Corp.
Santa Monica Chamber of Commerce
Sherman Oaks Chamber
South Bay Association of Chambers
South Bay Association of Realtors
South Gate Chamber of Commerce
South Pasadena Chamber of Commerce
Southern California Contractors Association
Southern California Golf Association
Southern California Grantmakers
Southern California Leadership Council
Southern California Minority Suppliers Development Council Inc.
Southern California Water Coalition
Southland Regional Association of Realtors
Sportfishing Association of California
Structural Engineers Association of Southern California
Sunland/Tujunga Chamber
Sunset Strip Business Improvement District
Torrance Area Chamber
Tri-Counties Association of Realtors
United Cannabis Business Association
United Chambers – San Fernando Valley & Region
United States-Mexico Chamber
Unmanned Autonomous Vehicle Systems Association
US Green Building Council
US Resiliency Council
Valley Economic Alliance, The
Valley Industry & Commerce Association
Venice Chamber of Commerce
Vermont Slauson Economic Development Corporation
Veterans in Business
Vietnamese American Chamber
Warner Center Association
West Hollywood Chamber
West Hollywood Design District
West Los Angeles Chamber
West San Gabriel Valley Association of Realtors
West Valley/Warner Center Chamber
Western Electrical Contractors Association
Western Manufactured Housing Association
Western States Petroleum Association
Westside Council of Chambers
Whittier Chamber of Commerce
Wilmington Chamber
Women's Business Enterprise Council
World Trade Center

Key Issues for the County of Los Angeles 2045 Climate Action Plan (2045 CAP) Recirculated Draft Program EIR (DPEIR)

1. The DPEIR does not adequately quantify greenhouse gas (GHG) reductions associated with the 2045 CAP's proposed measures and actions.
    a. The 2045 CAP identifies 10 strategies, 25 measures, and many implementing actions to reduce GHG emissions in unincorporated LA County. The DPEIR does not quantify reductions from 7 of the 25 measures listed in the CAP.
        i. Appendix D of the DPEIR, also included as Appendix B of the 2045 CAP, describes anticipated emission reductions resulting from the CAP.[1] However, the analysis in this appendix is incomplete. This appendix does not quantify emissions from any of the following measures listed in the CAP: O5-45
            I. ES4: Increase Energy Resilience
            II. S5: Establish GHG Requirements for New Development
            III. T5: Limit and Remove Parking Minimums
            IV. E3: Other Decarbonization Actions
            V. E5: Increase Use of Recycled Water and Gray Water Systems
            VI. W2: Increase Organic Waste Diversion
            VII. A2: Support Regenerative Agriculture
        ii. The DPEIR does not adequately support the 2045 CAP as it has not demonstrated the GHG reduction value of these measures. O5-46
    b. Appendix D of the DPEIR also does not quantify reductions from any of the mandatory actions cited in the 2045 CAP checklist, which is included as Appendix F of the 2045 CAP.[2]
        i. Several of the checklist items cannot be quantified because they rely on future ordinances or plans that have not yet been developed. The DPEIR relies upon future programs to generate reductions, but as those programs have not been evaluated as part of CEQA, adopted, or demonstrated to be successful, the DPEIR similarly cannot be approved under CEQA. Programs that have been cited in the 2045 CAP but were not evaluated as part of the DPEIR or other CEQA documentation include the following: O5-47
            I. Zero Emission Vehicle Master Plan
            II. Building Performance Standards O5-48
            III. Carbon Intensity Limits
            IV. ZNE Ordinance
            V. All-Electric New Buildings Ordinance

[1] LA County Revised Draft 2045 Climate Action Plan Appendix B: Emissions Forecasting and Reduction Methods. Available at: https://planning.lacounty.gov/wp-content/uploads/2023/03/LA-County-2045-CAP_Rev_PublicDraft_AppB-Reductions.pdf. Accessed: May 2023.
[2] LA County Revised Draft 2045 Climate Action Plan Appendix F: 2045 Climate Action Plan Consistency Review Checklist. Available at: https://planning.lacounty.gov/wp-content/uploads/2023/03/LA-County-2045-CAP_Rev_PublicDraft_AppendixF-Checklist.pdf. Accessed: May 2023.

VI. Net Zero Water Ordinance

O5-48 (cont)

ii. The DPEIR is inadequate as it has not substantiated how these 2045 CAP checklist items will help achieve the GHG reduction goals and it cannot be assessed if these are feasible. Per CEQA Statute Article 9, §15126.4, an EIR shall only include feasible mitigation measures.[3] If the plans that govern the mitigation measures are not in place, and the mitigation measure requirements are still unknown, then complying with these measures would automatically be considered infeasible.

O5-49

O5-50

O5-51

c. Since the DPEIR does not evaluate GHG emissions reductions for several required 2045 CAP measures and actions, the DPEIR has not adequately provided a basis in support of the 2045 CAP such that project applicants can propose equivalent alternatives for these measures as allowed for in the CAP.

O5-52

i. The 2045 CAP allows project applicants to identify alternative project emission reduction measures if they do not comply with certain items in the checklist. However, if the checklist items are not quantified in the DPEIR, or if they rely on ordinances and plans that have not been vetted or approved through CEQA, then project applicants cannot demonstrate that proposed alternatives are quantitively equivalent to these measures.

O5-53

ii. Unless the DPEIR is updated to quantify reductions from the 2045 CAP checklist items, project applicants will be unable to demonstrate conformity with the plan, and be determined to have "significant and unavoidable" GHG impacts.

O5-54

d. Overall, the DPEIR has not adequately evaluated the GHG reductions associated with the 2045 CAP. It relies on plans and ordinances that have not been approved through CEQA, and does not quantify reductions associated with several actions and measures that are required within the 2045 CAP. At a minimum, the DPEIR should be updated and recirculated for review with a revised analysis and checklist approach that makes conformance with unadopted programs voluntary until the programs have been evaluated under CEQA, adopted, and demonstrated to be successful. The DPEIR's GHG analysis has not adequately supported the reduction targets the 2045 CAP has stated it will achieve.[4]

O5-55

O5-56

2. The DPEIR does not provide adequate information to assess GHG impacts because the essential alternative compliance pathways are not quantified and the DPEIR omits the critical element—a future Offsite GHG Reduction Program to facilitate LA County offsite reductions that will be adopted sometime in the future but with no additional details. This Program lacks technical details and cannot be meaningfully evaluated from a technical standpoint:

O5-57

a. First, neither the 2045 CAP nor the DPEIR provides any assessment of feasibility to identify and implement GHG reduction programs within Los Angeles County. While it is laudable to prioritize such projects, it is likely to be difficult, and perhaps impossible, for projects to meaningfully obtain GHG emissions reductions through programs located solely in the County. For that reason, the CARB Scoping Plan has a tiered approach to mitigation, prioritizing onsite and local measures, followed by non-local

O5-58

O5-59

[3] Association of Environmental Professionals. 2023 California Environmental Quality Act Statute & Guidelines. Available at: https://www.califaep.org/docs/CEQA_Handbook_2023_final.pdf. Accessed: May 2023.

[4] LA County Revised Draft 2045 Climate Action Plan. Page ES – 4. Available at: https://planning.lacounty.gov/wp-content/uploads/2023/03/LA_County_2045-CAP_Rev_Public_Draft_March_2023_Chapters.pdf. Accessed: May 2023

measures.[5] The CAP provides no technical justification nor feasibility assessment for deviating from the Scoping Plan's recommended prioritization. O5-59 (cont)

b. Second, neither the 2045 CAP nor the DPEIR provides any assessment of cost feasibility of such a program. The current lack of such programs is a clear indication of the likely higher costs associated with local programs compared to non-local programs. The 2045 CAP and the DPEIR do not technically demonstrate that any such programs are feasible at reasonable costs. Until the cost effectiveness of such a program is proven, there is no basis to assume this alternative offers a viable pathway for the 2045 CAP. O5-60

c. Specifically, the documents released by the LA County for the 2045 CAP have not adequately demonstrated feasibility for the offsite reduction measure cited in Appendix F: O5-61

   i. Energy storage and microgrids: The Checklist proposes funding for or creation of a microgrid to balance generation from renewable sources and distributed controllable generation, or to deploy a battery storage system. The CAP should demonstrate that this is feasible and cost effective for projects to employ and what emission reductions are achievable with this action. O5-62

   ii. Truck and bus electrification programs:
      1. Checklist item 9 requires that projects decarbonize their truck fleets.
      2. CARB has passed or proposed many regulations that also work towards this goal, notably Innovative Clean Transit, Advance Clean Trucks, and Advanced Clean Fleets.
      3. South Coast Air Quality Management District's Warehouse Indirect Source Rule promotes heavy-duty fleet decarbonization. O5-63
      4. All of these programs have recognized that there is a period of phase in that needs to occur with this new technology. The CAP has not demonstrated that the requirement is feasible in the context of these existing regulations and what reductions could be achieved by any such programs.

   iii. Hydrogen fuel: The CAP proposes that projects to fund or develop programs that provide renewable hydrogen fueling stations for nearby truck fleets.
      1. This action is already required at goods movement facilities by checklist Item 9.
      2. Hydrogen fuel projects would come at a huge cost to project applicants. Generating enough emission reductions to offset emissions could require applicants to fund hydrogen fuel infrastructure, distribution equipment, fueling stations, new vehicles that utilize hydrogen, and system maintenance. To date, the CEC has spent $166 million to support 86 hydrogen stations in California, according to their 2022 Joint Agency Staff Report on AB 8. O5-64
      3. The CAP has not demonstrated that this is feasible for projects to achieve and what reductions could be achieved by any such programs.

   iv. The Offsite Reduction Program's requirement to perform all offsite reduction projects within LA County and prohibit other forms of offset credits creates unnecessary limitations for projects and LA County to effectively achieve GHG reductions to address global climate change. O5-65

[5] California Air Resource Board, 2022 Scoping Plan. Appendix D – Local Actions, Page 31. Available at: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed: May 2023.

1. First, it is extremely difficult and expensive to identify and implement GHG reduction programs within Los Angeles County. Given the parameters required in the 2045 CAP, the 2045 CAP has not demonstrated what amount of GHG reductions are feasible in this program. The Scoping Plan has a tiered approach to offset credit mitigation to address the need for GHG reduction, prioritizing onsite and local measures, followed by non-local measures and offset credits. O5-66
2. Second, the 2045 CAP has ignored the potential cost of the offsite GHG reduction program, which likely will carry much higher costs than comparable programs that are equally effective at reducing GHG emissions. The 2045 CAP should demonstrate that the offsite GHG program is feasible in terms of cost. O5-67
3. Third, creating and obtaining non-local offsite reductions through voluntary market credit registries is a multi-year process, and includes identification of reduction opportunities, funding of these opportunities, quantification of reductions, and verification of reductions. Most projects will need to fund offsite reductions prior to beginning construction, and thus the timing requirements may render this an infeasible requirement. The 2045 CAP thus needs to demonstrate how this will be feasible from a timing perspective. O5-68

3. The DPEIR does not properly analyze the adverse impacts on population and housing, nor the inconsistency with the Project Objective of providing a diverse range of housing. The DPEIR should analyze how the CAP may impair many types of housing projects by imposing a mandatory regulatory framework on every new CEQA project. O5-69 The DPEIR and 2045 CAP should (1) demonstrate the link between the mandatory mitigation and the impact or (2) establish that a project will only be responsible for its proportional contribution to address the cumulative impact. In particular: O5-70
    a. The checklist, as currently designed, obligates an applicant to implement certain types of GHG reduction strategies for *policy grounds unrelated to GHG reductions*. While this may be an aspirational goal for the County, it does not establish a nexus between the required mitigation and a project's impacts if equally effective mitigation is available to address the impact. O5-71
    b. The checklist, as currently designed, imposes significant costs and procedural hurdles on the applicant without evidence from the County that those burdens will be roughly proportional to the impact, particularly in light of the availability equally effective GHG mitigation that is less burdensome. O5-72
    c. To address this concern, the County should establish greater flexibility to allow an applicant to identify appropriate alternatives for the project based on performance standards or criteria based on climate science and not other policy grounds. O5-73
4. The DPEIR did not properly analyze project alternatives and did not select the environmentally superior alternative. O5-74
    a. ***Alternative 1 (Carbon Offset Alternative) is the appropriate environmentally superior alternative***. The DPEIR does not explain in enough detail why Alternative 1, Carbon Offset Alternative, is not the environmentally superior alternative. The DPEIR acknowledges that the "no project alternative" would have the least environmental impacts because it would not implement the CAP and therefore there would be no physical changes to the environment associated with its policies. But, it does not acknowledge that the same logic would apply to Alternative 1, which reduces the number of projects needed in the County because offsets could be used in place of O5-75

some CAP measures. The County takes credit for reduced impacts from Alternative 3 (Lower Targets Alternative) because fewer projects would be built, but it doesn't take credit for any reduction in projects associated with Alternative 1, despite acknowledging that "offsets could be used to replace any of the measures in the 2045 CAP."[6] Therefore, the County's conclusion that Alternative 3 (Lower Targets Alternative) is the environmentally superior alternative is not supported. O5-75 (cont)

b. ***The County's characterization of Alternative 3 (Lower Targets Alternative) is misleading***. The DPEIR states that Alternative 3, which is what the DPEIR recognizes is the "environmentally superior alternative," would "likely facilitate the same number of projects through 2045, resulting in the same impacts through 2045."[7] However, this ignores the fact that by delaying the implementation of GHG reduction activities that have other environmental impacts, new, less impactful technologies may be developed that have the same or greater GHG reduction potential. In other words, back-loading the required reductions will not necessarily result in the same overall impact to the environment as the proposed Project because it will give more time for new technologies (e.g., direct air capture) to emerge. O5-76

c. ***Increasing co-benefits is not a project objective and is therefore not relevant for comparing alternatives.*** While Alternative 1 would result in fewer co-benefits, it does not appear that increasing co-benefits is a Project Objective. Therefore, that factor should not be used to discount Alternative 1. O5-77

d. ***The analysis of impacts was cursory***. The DPEIR only includes a cursory analysis of impacts compared to the proposed Project. For example, the aesthetic impacts are determined to be the same as the proposed Project. However, this ignores the fact that fewer projects would be constructed with Alternative 1. Another example is that the analysis found that Alternative 1 would have greater impacts with respect to hazards associated with projects in an airport land use plan because "projects facilitated by Alternative 1 could include wind projects built in the region."[8] The DPEIR offers no evidence why Alternative 1 would include more wind projects than the proposed Project. O5-78

5. The 2045 CAP creates an overall approach and requirement that will be challenging for most projects to achieve. The overly ambitious approach has created implementation challenges for projects, which will create an undue burden on projects. O5-79

a. The 2045 CAP provides no technical justification for why GHG reductions must occur in the prescriptive categories identified by the Appendix F checklist. Additionally, many of the prescriptive strategies in the checklist are not quantified in the DEIR GHG analysis. The 2045 CAP should provide additional calculations to demonstrate the effect of all categories and measures for proper public review. O5-80

b. An individual project's GHG emissions can be avoided, reduced or mitigated through a variety of mechanisms and programs. While the County may have non-GHG policy reasons to encourage reductions across a variety of sectors—and it may implement Countywide programs to achieve those objectives—individual projects should not be forced into a one-size-fits-all framework without a technical basis under. For example, if Project A is able to achieve GHG reductions by avoiding and reducing all of its GHG emissions through comprehensive water and energy conservation and alternative O5-81

[6] 2045 Climate Action Plan Recirculated Draft Program Environmental Impact Report. Page 4-14. Available at: https://planning.lacounty.gov/wp-content/uploads/2023/04/LA-2045-CAP-Recirculated-Draft-Program-EIR.pdf. Accessed: May 2023.

[7] 2045 Climate Action Plan Recirculated Draft Program Environmental Impact Report. Page 4-21. Available at: https://planning.lacounty.gov/wp-content/uploads/2023/04/LA-2045-CAP-Recirculated-Draft-Program-EIR.pdf. Accessed: May 2023.

[8] 2045 Climate Action Plan Recirculated Draft Program Environmental Impact Report. Page 4-37. Available at: https://planning.lacounty.gov/wp-content/uploads/2023/04/LA-2045-CAP-Recirculated-Draft-Program-EIR.pdf. Accessed: May 2023.

technologies, there is no technical basis to require Project A to implement other measures addressing GHG emissions in other sectors, such as solid waste or agricultural resources. Under this hypothetical, Project A would have already eliminated its potential to impact climate change in accordance with CEQA. Forcing Project A to implement further GHG mitigation measures would "double mitigate" the impact, which is not technically justified in the 2045 CAP and/or require onerous (potential impossible) demonstrations of equivalency to the measures listed in the 2045 CAP. O5-81 (cont)

c. To the contrary, it is common best practice to account for the inherent differences between a wide range of projects by providing flexibility and alternative compliance pathways. CAPCOA's Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity provides a suite of GHG reduction measures, but says that projects are '*encouraged to carefully review the measure factsheets to determine which measures are most applicable to their project and capable of achieving their GHG reduction goals.*'[9] The CAP Checklist creates an inflexible framework with a burden of proof that may be impossible to meet, which neither the Scoping Plan nor the CAPCOA Handbook require. O5-82

d. The 2045 CAP does not provide adequate guidance on the significance threshold a GHG analysis should assess if a Project does not fully complete the check list requirements. The wording and approach of the 2045 CAP creates an enormous burden on any project in this situation. In combination with a checklist that may not be able to met by most projects, this is creates additional burden for analysis and litigation risk for projects. O5-83

    i. Page F-14: Project Not Consistent with the 2045 CAP. Language suggests a project will have to show how it can reduce emissions equivalent to what the Checklist requires. And while the 2045 CAP uses the word "option to participate" in the Offsite Program, the approach of the 2045 CAP represents this as a mitigation measure to achieve reductions if the project cannot comply with all checklist items. O5-84

e. The 2045 CAP structure appears to disqualify projects from demonstrating less-than-significant impacts unless they incorporate all required Checklist items. As such, there is no incentive (or ability) for projects to conduct a 'full GHG analysis' in the case of Checklist inconsistency. O5-85

    i. If a project cannot demonstrate consistency with the CAP, the project must prepare a "full" GHG analysis. However, even under that scenario, the CAP states that a project may cause a significant and unavoidable impact for not complying with an approved local GHG plan. Thus, a project would not be able to demonstrate less than significant impacts even with a full GHG analysis. O5-86

    ii. Further, the CAP would still impose all the checklist measures "to the extent feasible," which does not have a scientific basis. O5-87

    iii. The point of the full GHG analysis would be to demonstrate whether the project has a less than significant GHG impact despite not being consistent with the checklist. Projects that conduct a full GHG analysis should be allowed to demonstrate whether the non-checklist approach results in less than significant GHG impacts. The current 2045 CAP structure does not provide a reasonable path forward for projects to comply, and good projects that do O5-88

[9] California Air Pollution Control Officers Association. Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity. Chapter 3: Measures to Reduce GHG Emissions. Available at: https://www.caleemod.com/documents/handbook/full_handbook.pdf. Accessed: April 2023. Page 47.

achieve meaningful GHG reductions could be mired in onerous evaluations or CEQA challenges.

O5-88 (cont)

2.3.2.5 Letter O5: BizFed

This letter contains input on both the Revised Draft 2045 CAP and the Recirculated Draft PEIR. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4, *Comments on the Revised Draft 2045 CAP*, in Chapter 1, *Introduction*. PEIR-focused comments are addressed below.

O5a-1 The County acknowledges the commenter's support for the County and state's climate leadership, commenter's commitment to implementing feasible state and local GHG reduction measures, and statements regarding policies regarding housing, infrastructure, employment, and equality. In response to the comment's assertion that unintended consequences that harm housing and job growth would undercut local and state climate goals, the comment does not provide specific detail or evidence as to how climate goals would be undercut such that no specific response can be provided.

O5a-2 In response to the comment's concerns about the Revised Draft 2045 CAP, the Revised Draft 2045 CAP neither creates a mandatory regulatory program for all projects that require CEQA review, per updated language, nor does it create a "moratorium" on small business, etc. To the contrary, the Revised Draft 2045 CAP is not a regulatory document but is rather a plan-level framework for the County to implement to achieve Countywide GHG reduction targets for 2030, 2035, and 2045 that are consistent with the state's GHG reduction targets and related legislative actions. (Recirculated Draft PEIR, p. 2-8.) Demonstrating consistency with the Checklist is no longer mandatory for new development projects, but is rather a voluntary option that project applicants can utilize to streamline their project's GHG impact analysis. See General Response 3 for further discussion regarding the process for project applicants.

O5a-3 As discussed in response to comment O15-18 and in General Response 3, the Checklist does not mandate that all new projects achieve 300 jobs per acre. Draft 2045 CAP measure T2 (Develop Land Use Plans Addressing Jobs-Housing Balance and Increase Mixed Use) includes a *Countywide* performance goal of 300 jobs per acre by 2030; this is a goal for the entire County to meet by 2030 and represents an average value for Countywide job density. This is not a mandate for every individual new project. Please refer to responses to comments O15-18 and O15-19, along with General Response 3, which addresses how the Revised Draft 2045 CAP and Checklist applies to development projects. Also see General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan.

O5a-4 As discussed in General Response 3, the Checklist does not mandate that all new projects ensure that 90 percent of their water demand is met by alternative water sources or that 80 percent of agricultural irrigation uses be supplied exclusively by local water sources. Draft 2045 CAP Measure E5 includes a *Countywide* performance goal that 90

percent of total Countywide water demand is met by recycled water graywater, or potable reuse by the year 2045 (25 percent by 2030 and 50 percent by 2035) (Revised Draft 2045 CAP Chapter 3, p. 3-54). This is not a project-level mandate. Checklist item #21, *TIER 2: Use Recycled Water and Graywater for Non-potable Uses and Include Rainfall Capture*, is a voluntary Tier 2 item that encourages projects to implement water reuse strategies on-site through certain design elements such as using reclaimed water for outdoor uses and installing residential graywater systems. A project that could not meet this metric could still use the Checklist to streamline its GHG impact evaluation under CEQA. Please refer to General Response 3, which addresses how the Revised Draft 2045 CAP and Checklist applies to development projects.

O5a-5 See General Response 6, which addresses concerns regarding the proposed Offsite GHG Emissions Reduction Program. This general response also includes a list of several existing offsite mitigation programs that are being used in a CEQA context to mitigate the direct impacts of a project on air quality or climate change. Refer to General Response 5, which addresses the comment's concern regarding future ordinances and quantification of Revised Draft 2045 CAP measures and actions.

O5a-6 See General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan. Regarding the comment's allegation regarding "prohibitively high costs" related to implementation of Revised Draft 2045 CAP measures and actions, CEQA states that economic effects of a project shall not be treated as significant effects on the environment. (CEQA Guidelines, § 15131.) Also see General Response 5, which addresses the Revised Draft 2045 CAP's quantification of GHG emission reductions for strategies, measures, and actions.

O5a-7 The Recirculated Draft PEIR is adequate under CEQA because it is written in plain language so as to be comprehensible to decisionmakers and the public. (See CEQA Guidelines, § 15140; *San Franciscans for Reasonable Growth v. City* (1987) 193 Cal.App.3d 1544, 1549.) In response to the comment's concern regarding "mandatory obligations", see General Response 3, which comprehensively addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects.

O5a-8 See General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan as well as potential litigation. Also see General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects and addresses the concern regarding mandatory requirements of implementing the Revised Draft 2045 CAP strategies, measures, and actions.

O5a-9 See General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan. Also see General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects, as well as the feasibility of Revised Draft 2045 CAP measures and actions.

O5a-10 The County understands these concerns and has added a new subsection in Revised Draft 2045 CAP Appendix F in Section F.2 under Step 4 titled, "Guidance for Quantifying GHG Reductions from Alternative Measures" to help project applicants choose this pathway. This new section provides guidance for how applicants can quantify the GHG reduction benefits of a Checklist streamlining requirement for an individual project to determine the amount of GHG emissions reduction that an alternative project emissions reduction measure must achieve. See Revised Draft 2045 CAP Appendix F, pages F-13 to F-15 for more detail. The addition of this subsection does not constitute significant new information that would trigger recirculation of the Recirculated Draft PEIR under CEQA Guidelines section 15088.5. Rather, it serves to clarify and amplify the content of the Recirculated Draft PEIR.

Also see General Response 3, which addresses concerns regarding the CEQA Streamlining Checklist, the use of alternative project emissions reduction measures, and the feasibility of Revised Draft 2045 CAP measures and actions as well as General Response 5, which addresses the Revised Draft 2045 CAP's quantification of GHG emission reductions for strategies, measures, and actions.

O5a-11 Regarding the comment's request for an additional 60 days of public review and a series of workshops with stakeholders, CEQA presumes the adequacy of a 45-day review period for a Draft PEIR (Pub. Resources Code, § 21091(a); CEQA Guidelines, § 15105) and explains that the public review period should not be longer than 60 days except in "unusual circumstances." There are no extenuating circumstances here and as such, the standard 45-day review period is sufficient. Additionally, during those 45 days, the County hosted seven open meeting hours advertised as lunchtime office hours, posted on the project website and distributed via email an informational video on the Project, and held meetings with responsive stakeholder groups to facilitate review and discussion. In order to provide stakeholders additional time to review and understand the Revised Draft 2045 CAP and Recirculated Draft PEIR, and since changes to the Recirculated Draft PEIR were predicated on changes to the Revised Draft 2045 CAP, the Revised Draft 2045 CAP was released prior to the Recirculated Draft PEIR to offer additional review time to read the changes driving the analysis in the Recirculated Draft PEIR. For these reasons, the County believes that the 60-day public review period provided for the Revised Draft 2045 CAP and the 45-day public review period provided for the Recirculated Draft PEIR were sufficient to allow informed public comment.

O5a-12 As discussed in General Response 3, demonstrating consistency with the Checklist is no longer mandatory for new development projects, but is rather a voluntary option that project applicants can utilize to streamline their project's GHG impact analysis. Projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist. Such projects would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist. Please see General Response 3 for further discussion regarding the process for project applicants. Also see General Response 6, which addresses

concerns regarding the proposed Offsite GHG Emissions Reduction Program. The County values stakeholder involvement and considers such participation an important component in the development of future County-initiated ordinances, policies, and programs implementing the Revised Draft 2045 CAP measures and actions.

O5b-1 The Revised Draft 2045 CAP offers a voluntary CEQA streamlining opportunity for projects wishing to streamline their GHG impact analysis by demonstrating consistency with the Checklist. However, demonstrating compliance with the Checklist is not the exclusive path to achieve CEQA compliance, as projects that do not intend to streamline their GHG impact analysis would prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist. See General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan as well as General Response 3, which addresses the process for project applicants.

O5b-2 In response to the comment's specific concerns regarding alleged Revised Draft 2045 CAP conflicts with County priorities and feasibility of Revised Draft 2045 CAP measures and actions, please see Responses to Comments O5b-3 to O5b-26. Regarding the comment's concern with the Offsite GHG Reduction Program, please see General Response 6.

O5b-3 Regarding the comment's concern regarding the County's economic goals and goals of the General Plan, the Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan. General Plan consistency would be determined by comparing a future project to the Air Quality Element goals and policies rather than with the detailed implementation programs identified in the Revised Draft 2045 CAP. The Revised Draft 2045 CAP measures are not inconsistent with General Plan goals, including those stated in the Housing Element. Rather, the Revised Draft 2045 CAP is a policy document that supports development allowed under the General Plan. No changes to General Plan land use designations, zoning, or land use–specific projects are proposed as part of the Revised Draft 2045 CAP.

Regarding the comment's concern about incorporation of Revised Draft 2045 CAP measures in future projects, there is a critical difference between Revised Draft 2045 CAP performance objectives (as identified in the Revised Draft 2045 CAP strategies, measures, and actions) and the requirements in the Checklist in order for new projects to use CEQA GHG analysis streamlining. The Recirculated Draft PEIR is intended to provide CEQA compliance for the County's measures and actions as described in the Revised Draft 2045 CAP. As such, the performance objectives in the Revised Draft 2045 CAP are *Countywide goals*, not requirements or mandates for individual projects; all project-level requirements in order for projects to use CEQA streamlining are identified in the Checklist itself. The Checklist would ***not*** be used as a tool for evaluating a project's consistency with the County's General Plan. Demonstrating consistency with the Checklist is no longer mandatory for new development projects, but is rather a voluntary option that project applicants can utilize to streamline their

project's GHG impact analysis. Please see General Response 3 for further discussion regarding the process for project applicants.

The comment incorrectly asserts that a project's failure to meet a job density of 300 jobs per acre would be deemed to conflict with the General Plan and the 2021-2029 Housing Element. As discussed in response to comment O15-18 and in General Response 3, the Checklist does not mandate that all new projects achieve 300 jobs per acre. Please refer to responses to comments O15-18 and O15-19, along with General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Climate Action Plan Checklist apply to development projects. Also see General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan.

O5b-4 The Checklist does not mandate that all new projects achieve 300 jobs per acre. Please refer to responses to comments O15-18 and O15-19, along with General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist apply to development projects. Also see General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan.

O5b-5 As discussed in response to comment O15-18 and in General Response 3, the Checklist does not mandate that all new projects achieve 300 jobs per acre. Please refer to responses to comments O15-18 and O15-19, along with General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist apply to development projects. Also see General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan.

O5b-6 to O5b-7 The Revised Draft 2045 CAP is consistent with the County's General Plan and its Housing Element, as it is a policy document that support development allowed under the General Plan and supports the General Plan's guiding principal to provide the foundation for a strong and diverse economy. In fact, one of the Project's objectives encourages sustainable housing production at all levels of affordability, including increasing housing densities near transit to the extent allowed in the General Plan. No changes to General Plan land use designations, zoning, or land use–specific projects are proposed as part of the Revised Draft 2045 CAP. The remainder of the comments relate to the Revised Draft 2045 CAP and do not raise significant environmental issues related to the Recirculated Draft PEIR, such that no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O5b-8 Performance objectives represent guideposts for the successful implementation of each measure and the Revised Draft 2045 CAP as a whole. However, they are not specific mandates. This explanation is provided at the beginning of Appendix E of the Revised Draft 2045 CAP. As the Revised Draft 2045 CAP is implemented and adapted over time, many of the performance objectives may change. Measure E5 was

not quantified for GHG emission reductions for the target years. However, implementation of all measures contributes to the 2045 aspirational goal of carbon neutrality. As indicated in supporting Actions 5.1 through 5.4, use of recycled water is required only where the recycled water is available indicating a prioritization of recycled water use because increasing the use of alternative water sources reduces the demand for water sources with higher energy and carbon intensities. Implementation of Measure E5 does not preclude inclusion of viable future technologies that meet GHG reduction goals in future updates to the Revised Draft 2045 CAP. Should future technologies such as desalinization meet GHG emission reduction goals, they can be considered in the next 2045 CAP update.

O5b-9 Actions 5.1 through 5.4 are the supporting actions for Measure E5. They state that recycled water should be required where recycled water is available. As technologies improve over time, recycled water may be more widely available and should be prioritized over the use of imported water because increasing the use of alternative water sources reduces the demand for water sources with higher energy and carbon intensities. The County is developing strategies to expand recycled water supply and treat concentrates, a byproduct of the advanced water treatment of wastewater. Additional strategies related to recycled water are under development through the Draft County Water Plan: https://lacountywaterplan.org.

The performance goals of Measure E5 are to increase the use of alternative water sources such that 25 percent of Unincorporated Los Angeles County demand is met by recycled water, graywater, or potable reuse by 2030, 50 percent by 2035, and 90 percent by 2045. The comment does not provide specific evidence as to why this measure is legally or technically infeasible and the examples given do not support the claim that these goals are legally or technically infeasible such that a specific response cannot be provided. However, see Response O2-5, explaining that all dual waste piping to be installed in new residential developments to allow for future graywater irrigation systems would meet regulatory standards for nitrate concentrations in septic system effluent.

O5b-10 See Responses O5b-8 and O5b-9. The commentor argues that the Revised Draft 2045 CAP violates housing laws by disapproving new housing not supplied by 90% recycled water. This is an incorrect assessment since the performance objectives are *Countywide goals*, not regulations applied to individual development projects. They are guideposts for assessing the overall performance of measures. As discussed in General Response 3, the Checklist does not mandate that all new projects ensure that 90 percent of their water demand is met by alternative water sources or that 80% of agricultural irrigation uses be supplied exclusively by local water sources. Draft 2045 CAP Measure E5 includes a *Countywide* performance goal that 90 percent of total Countywide water demand is met by recycled water graywater, or potable reuse by the year 2045 (25 percent by 2030 and 50 percent by 2035) (Revised Draft 2045 CAP Chapter 3, p. 3-54). This is not a project-level mandate. Checklist item #21, *TIER 2: Use Recycled Water and Graywater for Non-potable Uses and Include Rainfall Capture*, is a

voluntary Tier 2 item that encourages projects to implement water reuse strategies on-site through certain design elements such as using reclaimed water for outdoor uses and installing residential graywater systems. A project that could not meet this metric could still use the Checklist to streamline its GHG impact evaluation under CEQA. Please refer to General Response 3, which addresses how the Revised Draft 2045 CAP and Checklist applies to development projects.

Further, the Housing Element notes that sustainable development needs to be incorporated into housing. The reliability of imported water to serve local development is subject to global climatic changes, water restrictions, and annual snow and precipitation levels. As variability in water availability from imported sources increases, reliability decreases. To manage existing and future water supplies, the County coordinates with state agencies and local water districts to operate a complex system that conserves, manages, and efficiently utilizes existing water resources. One such management technique that will be employed is the expansion and reuse of recycled water. The County agrees that housing and jobs-producing uses cannot be built without adequate water supplies. However, a dominant reliance on imported water that is becoming less reliable makes housing vulnerable. Expanding recycled water opportunities and use increases local water resiliency. As such, recycled water should be used where it is feasible.

O5b-11 See Response O5b-10. In response to the comment's concerns regarding legal risks and challenges to future projects, these concerns are speculative. While potential litigation challenging future projects is always a possibility, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. The comment raising potential legal challenges does not raise environmental issues related to the Recirculated Draft PEIR and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O5b-12 The Revised Draft 2045 CAP acknowledges that technological progress contributing to GHG emission reductions may be made in the future. The County expects that new technologies developed over the next 25 years, along with evolving state regulations and financial incentives, will further reduce emissions. The County will continually monitor the state of these technologies and will update the Revised Draft 2045 CAP every five years to adjust policies and programs to take advantage of these advancements (Revised Draft 2045 CAP, p. ES-7.) At the time of drafting, the Revised Draft 2045 CAP addresses current and reasonably foreseeable technologies.

O5b-13 In response to the comment's general concern that Revised Draft 2045 CAP measures rely upon state and federal actions outside the County's jurisdiction, the County disagrees. Please see responses to individual comments below for detailed discussion addressing concerns raised regarding specific measures raised in subsequent comments. Responding to the comment's discussion of the Revised Draft 2045 CAP strategies, measures and actions, climate action is complex and touches upon the interconnected nature of both our built and natural environment. This is reflected in

the Revised Draft 2045 CAP. The Revised Draft 2045 CAP lays out the reduction strategies, measures, and actions for County implementation within Chapter 3. The Revised Draft 2045 CAP provides definitions for *strategies* (overall sector-level goals of the Revised Draft 2045 CAP that aim for overarching goals within each emissions sector), *measures* (focused, sub-sector-specific programs and goals that include performance standards that are designed to be quantified for GHG emission reductions), and *actions* (specific policies, programs, or tools that will be implemented to support long-range planning). (Revised Draft 2045 CAP, p. 1-2.) The strategies, measures and actions are for the County to implement, and do not create "compliance obligations" for private development projects.

The Revised Draft 2045 CAP Recirculated Draft PEIR is intended to provide CEQA compliance for the County measures and actions as described in the Revised Draft 2045 CAP; additional CEQA compliance may be required for impacts of implementing Revised Draft 2045 CAP measures and actions not analyzed in the Revised Draft 2045 CAP Recirculated Draft PEIR.

The Revised Draft 2045 CAP also includes a voluntary consistency checklist for applicants who chose to streamline CEQA GHG analyses for their projects. (This checklist was proposed to be mandatory for all discretionary projects in the Revised Draft 2045 CAP, but in response to public comments, it has been made voluntary in the proposed Final 2045 CAP.) The Checklist in Appendix F represents the requirements a discretionary project must implement should such a project elect to streamline their project-specific CEQA GHG impact analysis. Please refer to General Response 3 for further discussion of the use of the Checklist.

O5b-14 The framework for the Revised Draft 2045 CAP consists of a hierarchy of strategies, measures, and actions. Each prior level serves as an umbrella for the next level of related items. Actions which are specific policies, activities, or tools are intended to be implemented in a coordinated manner to make meaningful progress toward the associated measure and strategy. For example, "Complete enrollment of the community in the Clean Power Alliance's (CPA's) 100% Green Power option or Southern California Edison's (SCE's) Green Rate option" is an action (i.e., Action ES2.2 associated with Measure ES2 and Strategy 1). (Recirculated Draft PEIR, p. 2-13.) The Revised Draft 2045 CAP Recirculated Draft PEIR is intended to provide CEQA compliance for the County measures and actions as described in the Revised Draft 2045 CAP. For additional discussion, please see General Response 3, which addresses project-level requirements for CEQA streamlining as identified in the Checklist. The over 90 actions comprehensively address the major GHG emissions sectors, reflects the broad reach of GHG emissions found in the unincorporated County, and guides the County's climate action to toward carbon neutrality. They describe how the 25 measures will be implemented. Actions show how the County will achieve the measures.

O5b-15 See General Response 5, which addresses quantification, estimated costs, and sources of funding for the Revised Draft 2045 CAP measures. Regarding the ability to achieve equivalent reductions using alternative measures in place of the Checklist requirements, please see General Response 3.

O5b-16 As discussed in General Response 3, in response to comments received, the County has revised the Checklist to clarify that the Checklist will be used only for projects that voluntarily wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis under CEQA.

O5b-17 The County acknowledges BizFed's comment regarding the County's jurisdictional control over the implementation of the Revised Draft 2045 CAP's top 5 core measures (i.e., those that represent the bulk of reductions toward the County's GHG emission targets) and concurs that Measure W1 (Institutionalize Sustainable Waste Systems and Practices) falls within the jurisdictional control of the County, and that the County does not have *direct* control over the remaining four measures (T6, ES2, E1, and T8); however, the County does have considerable control or influence over those measures, as explained in the responses to comments O5b-18, O5b-19, O5b-20, and O5b-21 below.

O5b-18 Regarding the comment regarding the County's ability to implement Revised Draft 2045 CAP Measure T6: "Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales," the County concurs that its most direct role in implementing this measure is through its vehicle purchasing decisions and in mandating ZEV-charging infrastructure. The County also concurs that the County cannot ban the sale or use of non-ZEVs and recognizes that only state or federal law can mandate such a requirement. The relevant performance goal for Measure T6 (increase the sales of new light-duty vehicles in unincorporated Los Angeles County that are ZEVs to 68 percent by 2030 and 100 percent by 2035) is based on CARB's Advanced Clean Cars II regulation, which calls for 100 percent of in-state sales of new passenger cars and trucks to be zero-emission by 2035 and directs CARB to develop new regulations to achieve that goal.[12] The commentor conflates this Countywide performance goal with a Revised Draft 2045 CAP mandate, which is not the case. The performance goal represents a reasonable target for ZEV sales based on the Advanced Clean Cars II regulation and is supported by the County's goal to install 37,000 new public and private shared electric vehicle charging stations (EVCS) by 2030, and 74,000 by 2035. The County agrees with the commentor that the reductions counted under Measure T6 could occur with or without implementation of the Revised Draft 2045 CAP; however, these reductions are not accounted for in the Revised Draft 2045 CAP's Adjusted

[12] California Air Resources Board, 2023. Advanced Clean Cars II Regulations: All New Passenger Vehicles Sold in California to be Zero Emissions by 2035. https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii. Accessed July 2023.

BAU forecast that considers the impact of California's Advanced Clean Cars Regulations and Pavley Vehicle Efficiency Standards (as explained on p. B-9 of the Revised Draft 2045 CAP), nor are they accounted for in any other CAP measure. Thus, it is appropriate to account for these ZEV-related reductions in Measure T6, which includes performance goals for public and private shared EVCS installation.

O5b-19 Regarding the comment regarding the County's ability to implement Measure ES2: "Procure Zero-Carbon Electricity," the County agrees with the commentor that the County cannot mandate that every single member of the community purchase zero carbon electricity through Clean Power Alliance's (CPA's) Green Power rate option (100 percent Renewables), SCE's Green Rate option, or other available 100 percent zero carbon electricity service by 2030. However, the County has already implemented this measure: since October 2022, all customers in unincorporated Los Angeles County are automatically enrolled in CPA's 100 percent renewable energy option and all residents and businesses in unincorporated Los Angeles County have been receiving 100 percent renewable energy—wind, solar, geothermal—from CPA (Revised Draft 2045 CAP, p. 3-17). The modeled 96 percent participation rate (4 percent opt-out rate), which represents the performance goal for this measure, is based on data supplied by the CPA to the County.[13]

O5b-20 The commenter is correct that Revised Draft 2045 CAP Measure E1 includes performance goals to transition increasing percentages of existing Countywide buildings to all-electric buildings by 2030, 2035, and 2045 (e.g., 80 percent of the residential building stock and 60 percent of the nonresidential building stock by 2045).

The commenter is correct that in *California Restaurant Association v. City of Berkeley*, No. 21-16278, 2023 WL 2962921 (Apr. 17, 2023) (hereafter, *CRA*), the Ninth Circuit Court of Appeals found the City of Berkeley's ordinance prohibiting on natural gas infrastructure in new buildings was preempted by the federal Energy Policy and Conservation Act (EPCA). The Ninth Circuit's decision is binding authority for all cities in the Ninth Circuit. The City of Berkeley has since petitioned the Ninth Circuit for an "en banc" rehearing of the case, which may result in a different outcome. The Biden Administration filed an Amicus Brief in support of the City of Berkeley's ordinance, stating that the panel's opinion is flawed by wrongly interpreted the preemption provision of EPCA.[14,15]

13 Clean Power Alliance. 2021. *Member Status Report: Los Angeles County*. July 28, 2021.

14 City of Berkeley, 2023. Appeal from the United States District Court For the Northern District of California. Defendant-Appellee City Of Berkeley's Petition For Rehearing En Banc. May 31. https://newspack-berkeleyside-cityside.s3.amazonaws.com/wp-content/uploads/2023/06/9th-Cir.-No.-21-16278-City-of-Berkeley-Petition-for-Rehearing-En-Banc-FILE-STAMPED-1-2.pdf. Accessed July 2023.

15 U.S. Department of Energy, 2023. Brief For The United States As Amicus Curiae In Support Of Petition For Rehearing. June 12. https://newspack-berkeleyside-cityside.s3.amazonaws.com/wp-content/uploads/2023/06/biden-amicus-in-berkeley-gas-ban-en-banc.pdf. Accessed June 2023.

However, the commenter is incorrect that this ruling means that implementing 2045 CAP Measure E1 is beyond the County's jurisdiction.

The CRA decision is narrow and only addressed a single type of approach to building electrification: a non-building code prohibition on gas infrastructure in new construction (Berkeley's ordinance leveraged "police powers" to amend the City's Health and Safety Code). The CRA decision did not address other approaches used by local governments such as air quality standards that regulate air pollutant emissions from appliances, reach codes that encourage all-electric construction (for example, the California Green Building Standards Code—Part 11, Title 24, California Code of Regulations), and policies that require reductions in GHG emissions or air pollution from new construction that provide for flexibility for achieving such requirements. Further, although EPCA preempts many state and local energy conservation standards for appliances, the law also contains a statutory exemption to EPCA preemption for state and local building codes. (41 U.S.C., § 6297.) Specifically, building code requirements are not preempted if they meet seven conditions, which was not addressed in the *CRA* decision. Given these considerations, the comment's conclusion that *all* state and local regulations on natural gas are fully preempted by EPCA is speculative.

Building performance standards (BPS), such as air emission standards for buildings similar to the state of New York's Local Law 97 would not implicate the *CRA* decision.[16] Performance standards such as this are anticipated to achieve similar GHG reduction results as building electrification without restricting fuel type.

However, out of an abundance of caution, to address this comment and to provide further clarity regarding the Revised Draft 2045 CAP's goals for building decarbonization, the County has revised sections of the Draft 2045 CAP in the following ways, as shown in the examples below:

> ***E1: ~~Transition~~ Decarbonize Existing Buildings ~~to All-Electric~~****: As the carbon intensity of grid-supplied energy decreases, decarbonization of the electrical grid must be combined with building ~~electrification~~ decarbonization, shifting the energy load from fossil ~~natural gas~~ fuels to ~~cleaner~~ carbon-free sources while taking into consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face. This measure aims to ~~electrify~~ decarbonize applicable existing buildings. A primary alternative to fossil natural gas is renewable electricity supplied by CPA. Biomethane is another preferred alternative to fossil natural gas; however, existing opportunities for widespread use of biomethane are currently limited. The use of other zero-emission fuel sources for buildings ~~should~~ will also be considered* (Revised Draft 2045 CAP, Chapter 3, p. 3-47)

[16] City of New York, 2023. Local Law 97. Available at https://www.nyc.gov/site/sustainablebuildings/ll97/local-law-97.page. Accessed July 2023.

***E1.1**—Adopt Building Performance Standards for existing buildings and reach code requirements for major retrofits and renovations that require zero-GHG emission appliances ~~electric water and space heating~~. Require buildings to retrofit natural gas water and space heating to zero-GHG emission ~~electric~~ water and space heating at the point of sale.* (Revised Draft 2045 CAP, Chapter 3, p. 3-47.)

***E2: ~~Standardize All-Electric~~ Decarbonize New Development:** This measure aims to ~~electrify~~ decarbonize all applicable new buildings, while taking into consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face.* (Revised Draft 2045 CAP, Chapter 3, p. 3-50.)

***E2.1**—Adopt an ordinance requiring all applicable new buildings to be ~~fully electric with no natural gas hookups~~ zero-GHG emission. Include affordable housing considerations in these requirements, and develop supporting measures (financial support, technical assistance, or other incentives) to defray potential additional first costs in order to maintain housing affordability.* (Revised Draft 2045 CAP, Chapter 3, p. 3-50.)

15. TIER 2~~1~~: Decarbonize Existing Buildings.

This action applies only to projects that include a retrofit, remodel, or redesign of an existing building. If the proposed project does not include a retrofit, remodel, or redesign, select "Not Applicable" in the Project Consistency column. The project must incorporate the following design elements:

A) Achieve zero GHG emissions for on-site energy use ~~All space heating and water heating must be electric~~.

~~B) With the exception of restaurants, all cooking appliances must be electric.~~

~~C) For restaurants, use electric cooking appliances to the maximum extent feasible.~~

~~D~~B) Comply with all applicable Building Performance Standards.[2]

~~E~~C) Comply with all building carbon intensity limits.[3]

~~F~~D) If the project is a major renovation, achieve ZNE and/or comply with the City's ZNE ordinance.[4] (Revised Draft 2045 CAP, Appendix F, p. F-25.)

16. TIER 2~~1~~: Decarbonize New Buildings.

For projects under construction before 2030, the project must achieve zero GHG emissions for on-site energy use ~~be fully electric with no natural gas infrastructure or appliances~~, and/or comply with ~~as specified in~~ the County's building decarbonization ordinance ~~all-electric buildings~~ ordinance, unless the project meets specific exemptions identified in the ordinance.[5]

> *For projects under construction after 2030, the project must be zero-net-energy and achieve zero GHG emissions for on-site energy use ~~fully electric with no natural gas infrastructure or appliances~~, and/or comply with ~~as specified in~~ the County's ZNE ordinance, unless the project meets specific exemptions identified in the ordinance.*[6] (Revised Draft 2045 CAP, Appendix F, p. F-25.)

These revisions accomplish several things. First, the all-electric requirement of Measures E1 and E2 are changed to zero GHG emissions requirements. Measure E1 and E2 now focus on building decarbonization, not electrification. Building owners can decarbonize their buildings using a variety of means, including by using renewable natural gas/biomethane and other renewable fuels. As such, the goals of these measures would not be preempted by EPCA pursuant to the *CRA* decision because they do not require specific energy source types. Second, the Checklist is revised to make zero GHG buildings voluntary Tier 2 measures, instead of mandatory Tier 1 measures, at least until such time that the County adopts a building decarbonization ordinance or building performance standards. The use of zero GHG appliances, zero GHG buildings, or all-electric buildings can now be used as alternative GHG reduction measures. As such, the Revised Draft 2045 CAP Measures E1 and E2 are not inconsistent with the *CRA* holding and are not beyond the County's jurisdiction to implement. These revisions do not result in changes to environmental impact analyses or conclusions presented in the Recirculated Draft PEIR, and therefore do not constitute significant new information that would trigger recirculation under CEQA Guidelines section 15088.5.

O5b-21 In response to the comment regarding the County's ability to implement Measure T8: "Accelerate Freight Decarbonization," the performance objectives for Measure T8 include increasing the fleetwide percentage of medium- and heavy-duty vehicles in unincorporated LA County that are ZEVs to 40 percent by 2030, 60 percent by 2035, and 90 percent by 2045. To achieve these goals, the Revised Draft 2045 CAP includes five implementing actions, including T8.2, which would create an ordinance requiring new goods movement facilities to install alternative fueling infrastructure and T8.4, which would streamline permitting of ZEV charging and fueling infrastructure for medium- and heavy-duty vehicles. The comment is correct that the County cannot directly mandate all existing businesses to replace their medium- and heavy-duty vehicles with ZEVs, but it can implement actions which facilitate this transition. This is the Revised Draft 2045 CAP's approach.

The commenter also states that there is pending state and federal litigation over the extent to which the state can mandate heavy-duty ZEV trucks. However, the commenter does not cite litigation or provide any references to support this statement such that a specific response cannot be provided. However, on July 6, 2023, CARB announced a Clean Truck Partnership with truck manufacturers and Engine Manufacturers Association that advances the development of ZEVs for the commercial trucking industry. The Clean Truck Partnership commits the truck manufacturers to meeting CARB's zero-emission and criteria pollutant regulations in

the state regardless of any attempts by other entities to challenge California's authority.

CARB and EPA have both approved the Advanced Clean Trucks regulation, which requires manufacturers to sell an increasing percentage of zero emission heavy-duty trucks into the market starting in Model Year (MY) 2024 and establishes a clear timeline for 100 percent zero emission truck sales across Class 2b/3, 4-8 Vocational and Class 7/8 Tractor categories.[17] CARB is also in the rulemaking process for the Advanced Clean Fleets regulation, which includes several requirements including that manufacturers may sell only zero-emission medium- and heavy-duty vehicles starting in 2036, all drayage trucks entering seaports and intermodal railyards would be required to be zero-emission by 2035, and high-priority and federal fleets must aggressively transition their truck fleets to zero-emission vehicles starting in 2024.[18]

O5b-22 See General Response 6, which addresses concerns regarding the proposed Offsite GHG Emissions Reduction Program.

O5b-23 See General Response 6, which addresses concerns regarding the proposed Offsite GHG Emissions Reduction Program, and explains that to be a valid offsite project, a project must not already be required by law or regulation, County building performance standard, or reach code requirement. Such a project would either accelerate measures, actions, and/or programs that are already identified in the Revised Draft 2045 CAP by providing additional funding to that program or would provide additional GHG reductions beyond those of the Revised Draft 2045 CAP measures and actions.

O5b-24 See General Response 6, which addresses concerns regarding the proposed Offsite GHG Emissions Reduction Program. In addition, see General Response 4, which addresses concerns regarding the use of voluntary GHG offset credits in the Revised Draft 2045 CAP and as an alternative GHG reduction measure in the Checklist.

O5b-25 See General Response 6, which addresses concerns regarding the proposed Offsite GHG Emissions Reduction Program.

O5b-26 The comment is correct that CARB, in the 2022 Scoping Plan, supports the use of non-local offsite GHG reduction measures, such as voluntary GHG offset credits, for projects that need further GHG reductions after adoption of all feasible local, off-site mitigation options.[19] The Revised Draft 2045 CAP does not prohibit projects from using GHG offset credits to mitigate their GHG impacts pursuant to CEQA's

[17] California Air Resources Board, 2021. FINAL REGULATION ORDER: Advanced Clean Trucks Regulation https://ww2.arb.ca.gov/sites/default/files/2023-06/ACT-1963.pdf. Accessed July 2023.

[18] California Air Resources Board, 2023. Advanced Clean Fleets Regulation Summary. https://ww2.arb.ca.gov/resources/fact-sheets/advanced-clean-fleets-regulation-summary. Accessed July 2023.

[19] California Air Resources Board. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in June 2023.

requirements and CARB's recommendations. This approach may be used by any project applicant that chooses not to streamline but rather conduct a project-level GHG impact analysis pursuant to CEQA. However, if a project applicant elects to streamline environmental review of their project's GHG impacts using the Revised Draft 2045 CAP's PEIR pursuant to CEQA Guidelines section 15183.5(b), the project applicant must use the Checklist, and the Checklist does not permit the use of voluntary GHG offset credits. This is because the use of voluntary GHG offset credits would not contribute toward the Revised Draft 2045 CAP's GHG emission reduction targets, which apply to direct, in-county GHG emissions. See General Response 4 for additional discussion, which addresses concerns regarding the use of voluntary GHG offset credits in the Revised Draft 2045 CAP and as an alternative GHG reduction measure in the Checklist.

Also see General Response 6, which addresses the Checklist's Offsite GHG Reduction Program Framework and the use of offsite programs in the Checklist.

O5b-27 See General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan. See also General Response 4, which addresses the use of voluntary GHG offset credits in the Revised Draft 2045 CAP and as an alternative GHG reduction measure in the Checklist. The County disagrees with the comment that the Revised Draft 2045 CAP undermines CARB's resolution to endorse net zero GHG project outcomes similar to those that have already been approved (e.g., Newhall). The Revised Draft 2045 CAP does not preclude a project from using GHG offsets to demonstrate net zero emissions (or carbon neutrality) or to attain any other CEQA significance threshold. A project can choose to conduct its own CEQA review of GHG impacts and may determine such impacts would be less than significant based on substantial evidence and valid CEQA mitigation, which (as previous projects have demonstrated) may include the use of voluntary GHG offset credits.

O5b-28 The Revised Draft 2045 CAP would not result in housing projects that are in full compliance with the Housing Element and in every existing GHG mandate to be in "violation" of the General Plan. The Revised Draft 2045 CAP has been revised to remove Measure ES5.3 (Revised Draft 2045 CAP, p. 3-25.) For projects consistent with the General Plan, use of the Checklist is now voluntary. All new development projects requiring a General Plan Amendment must prepare their own GHG impact analysis under CEQA. Please see General Response 3 for additional discussion.

O5b-29 The Revised Draft 2045 CAP aligns with CARB's 2022 Scoping Plan's encouragement that local CAPs support state goals while recognizing each region's distinct sources and systems. (CARB 2022 Scoping Plan, Appendix D, p. 14.) The Revised Draft 2045 CAP is a plan to achieve Countywide GHG reduction targets for 2030, 2035, and 2045 that are consistent with the state's GHG reduction targets and related legislative actions, as explained starting on page 2-9 through 2-12 of the Revised Draft 2045 CAP and page 2-6 of the Recirculated Draft PEIR. See also General Response 2, which addresses the relationship between the Revised Draft 2045

CAP and the General Plan. The County has reviewed CARB's Scoping Plan (cited in footnote 12 of the comment letter) and has drafted Revised Draft 2045 CAP Appendix H, *2022 Scoping Plan Recommendations Consistency*, which provides a comprehensive review of all project attributes listed in the 2022 Scoping Plan.

O5b-30 The Revised Draft 2045 CAP's measures are not in conflict with other County plans, policies, and projects and the commenter does not state which County-approved plans, policies and projects are in conflict with the Revised Draft 2045 CAP such that a specific response is not possible.

Regarding the comment's issues related to the General Plan and future amendments, the Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan and would be adopted by General Plan amendment together with proposed revisions to the Air Quality Element. As such, a specific future project's General Plan consistency will be determined by comparing such future project to the Air Quality Element goals and policies rather than with the detailed implementation programs identified in the Revised Draft 2045 CAP. The Revised Draft 2045 CAP is not a regulatory document but is rather a plan-level framework for the County to implement to achieve Countywide GHG reduction targets for 2030, 2035, and 2045 that are consistent with the state's GHG reduction targets and related legislative actions. (Recirculated Draft PEIR, p. 2-8.) The Revised Draft 2045 CAP recognizes that future amendments to Revised Draft 2045 CAP measures may be needed to address future federal and state regulations. (Revised Draft 2045 CAP, p. 1-7.) Amendments to the Revised Draft 2045 CAP would represent a change to the County's General Plan implementation program and would be a discretionary action subject to CEQA compliance.

For further discussion regarding the relationship between the Revised Draft 2045 CAP and the County's General Plan, please refer to General Responses 2 and 3.

O5b-31 In response to the comment's concerns regarding future lawsuits, while potential litigation challenging future projects is always a possibility, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. Any project approval is subject to legal challenge and there is no evidence presented by the commenters suggesting that it is more likely that future projects implementing the Revised Draft 2045 CAP would be challenged. This comment does not raise significant environmental issues related to the Recirculated Draft PEIR and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O5b-32 The comment incorrectly asserts that a project's failure to comply with all Revised Draft 2045 CAP requirements would be deemed to conflict with an environmental component of the General Plan. As stated above, since the Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan, future project General Plan consistency would be determined by comparing such project with the policies in the Air Quality Element goals and policies rather than with the

detailed implementation programs identified in the Revised Draft 2045 CAP. Demonstrating consistency with the Checklist is no longer mandatory for new development projects, but is rather a voluntary option that project applicants can use to streamline their GHG impact analysis with the Revised Draft 2045 CAP pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist. Such projects would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist. Please see General Response 3 for further discussion regarding the process for project applicants.

The comment raises the issues of new County obligations and litigation risks under CEQA. It is true the Revised Draft 2045 CAP would create new County obligations–which include specific County policies, programs, or tools–necessary to achieve the emissions reduction targets consistent with AB 1279 and the 2022 Scoping Plan. The Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan and would be adopted by General Plan amendment together with proposed revisions to the Air Quality Element. For further discussion regarding how the Revised Draft 2045 CAP relates to the General Plan, please refer to General Response 2.

As stated above, projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate compliance with the Checklist and would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist. Such projects can demonstrate CEQA compliance in the most appropriate way tailored to the project, which may not necessitate a full EIR. As such, project applicants may make use of what the comment describes as "less costly, less time-consuming, and less litigious CEQA compliance pathways." While potential litigation challenging future projects is always a possibility, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. Any project approval is subject to legal challenge and there is no evidence presented by the commenters suggesting that it is more likely that future projects implementing the Revised Draft 2045 CAP would be challenged.

O5b-33 Regarding the comment's concern regarding incorporation of CAP measures in future projects, the Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan. As such, General Plan consistency would be determined by comparing a future project to the Air Quality Element goals and policies rather than with the detailed implementation programs identified in the Revised Draft 2045 CAP. The Revised Draft 2045 CAP is an implementation program for County GHG emission reduction strategies, measures, and actions and use of this program is limited. A subcomponent of the Revised Draft 2045 CAP implementation program is the Checklist, Appendix F, which the County will utilize to determine the consistency of future projects that wish to streamline their GHG impact analysis with the Revised Draft 2045 CAP pursuant to CEQA Guidelines sections 15064(h)(3),

15064.4 and 15183.5(b). If a project is consistent with the General Plan, the project would be eligible for CEQA streamlining of its project-level GHG analysis. (Recirculated Draft PEIR, p. 2-40.) The Checklist will be used *only* for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Please see General Response 3 for further discussion regarding the process for project applicants.

Regarding the comment regarding CEQA and General Plan compliance lawsuits, the Revised Draft 2045 CAP has been revised to clarify that General Plan consistency would be determined by comparing a future project to the Air Quality Element goals and policies rather than with the detailed implementation programs identified in the Revised Draft 2045 CAP. It is speculative at this time to presume that there would be imminent lawsuits challenging future projects. Any project approval is subject to legal challenge and there is no evidence presented by the commenters suggesting that it is more likely that future projects implementing the Revised Draft 2045 CAP would be challenged, for example, by challenges to "infeasibility" findings.

O5b-34 In response to the comment's concern regarding incorporation of CAP measures in future projects, for a discussion on future project's consistency with the Revised Draft 2045 CAP, please refer to Comment O5b-33 and General Response 3 for further discussion regarding the process for future project applicants.

In response to the comment regarding CEQA and General Plan compliance lawsuits, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. Any project approval is subject to legal challenge and there is no evidence presented by the commenters suggesting that it is more likely that future projects implementing the Revised Draft 2045 CAP would be challenged.

O5b-35 In response to the comment's issues of long-term compliance obligations and future amendments to the Revised Draft 2045 CAP, the Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan. The Revised Draft 2045 CAP project will amend the *Los Angeles County General Plan 2035* to update goals and policies of the Air Quality Element and replace the existing implementation strategy of the Air Quality Element, known as the *Unincorporated Los Angeles County Community Climate Action Plan 2020* (2020 CCAP). The Revised Draft 2045 CAP builds on previous climate action work from the 2020 CCAP, adopted in October 2015 as a subcomponent of the Air Quality Element of the *Los Angeles County General Plan 2035* and includes new emissions reduction targets consistent with AB 1279 and the 2022 Scoping Plan. Future amendments to the Revised Draft 2045 CAP would represent a change to the County's General Plan implementation program and would be a discretionary action subject to CEQA compliance. If the Revised Draft 2045 CAP is amended in the future, the need for and feasibility of additional mitigation measures would be determined at that time, consistent with CEQA requirements. For further discussion on the Revised Draft 2045

CAP's relationship to the General Plan and how the Revised Draft 2045 CAP applies to development projects, please refer to General Responses 2 and 3.

O5b-36 The Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan and would be adopted by General Plan Amendment together with proposed revisions to the Air Quality Element. As such, future projects' General Plan consistency would be determined by comparing a future project to the Air Quality Element goals and policies rather than with the detailed implementation programs identified in the Revised Draft 2045 CAP.

Regarding the comment's concern regarding San Diego County's CAP and related litigation, the facts regarding the Revised Draft 2045 CAP are significantly different from those surrounding the County of San Diego's CAP. As such, the holdings in *Golden Door Properties, LLC v. County of San Diego* (2020) 50 Cal.App.5th 467 ("*Golden Door*") do not directly apply to the Revised Draft 2045 CAP here. In *Golden Door*, the court found the County of San Diego's CAP was inadequate because it improperly relied on an ineffective supplemental EIR mitigation measure to eliminate net GHG emissions from general plan amendments not included in the Revised Draft 2045 CAP emissions inventory. The court determined this *Golden Door* mitigation measure was invalid in that its emissions offsets provisions, which included international offsets, were not enforceable and were improperly deferred. Unlike the County of San Diego's CAP, the County's Draft 2045 CAP does not include GHG offsets as a quantified measure for achieving the County's GHG reduction targets (see Appendix B, Emissions Forecasting and Reduction Methods) and the Recirculated Draft PEIR does not include an offset mitigation measure to eliminate GHG emissions. The use of GHG offsets occurring outside of County boundaries would not contribute toward the Revised Draft 2045 CAP's reduction targets, which would only result from actual and direct GHG emissions reductions that occur within County boundaries. The Revised Draft 2045 CAP has been revised to remove Measure ES5.3 (Revised Draft 2045 CAP, p. 3-25) such that all new development projects requiring a General Plan Amendment must prepare project-specific GHG impact analyses as required by CEQA. However, for projects intending to use the Revised Draft 2045 CAP CEQA Streamlining Checklist to streamline CEQA require of their GHG impacts, the use of GHG offsets is not an option because, as explained above, the use of voluntary GHG offset credits would not contribute toward the Revised Draft 2045 CAP GHG emission reduction targets. Please see General Response 4 for additional discussion.

While potential litigation challenging future projects is always a possibility, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. Any project approval is subject to legal challenge and there is no evidence presented by the commenters suggesting that it is more likely that future projects implementing the Revised Draft 2045 CAP would be challenged. These comments raising potential legal challenges do not raise significant environmental

issues related to the Recirculated Draft PEIR and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O5b-37 The Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan and would be adopted by General Plan amendment together with proposed revisions to the Air Quality Element. As such, General Plan consistency would be determined by comparing a future project to the Air Quality Element goals and policies rather than with the detailed implementation programs identified in the Revised Draft 2045 CAP. Please refer to Response to Comment O5b-36 for more detailed discussion regarding the County of San Diego's Climate Action Plan, related litigation, and potential for similar challenges to the Revised Draft 2045 CAP.

O5b-38 The County notes the comment's examples of other jurisdictions' actions in adopting their own climate action plans. In California, local governments regulate many activities that contribute to GHG emissions and air pollutants, including land use and transportation planning, zoning and urban growth decisions, implementation of building codes and other standards, and control of municipal operations. Local governments have typically addressed climate change either in policies in the general plan itself, or through adoption of a CAP.

The Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan and would be adopted by General Plan amendment together with proposed revisions to the Air Quality Element. The Revised Draft 2045 CAP is a policy document that would support development allowed under the General Plan. In addition to the proposed Revised Draft 2045 CAP, the proposed project evaluated in the Recirculated Draft PEIR includes proposed revisions to the General Plan's Air Quality Element. The revisions to the General Plan's Air Quality Element are set forth in Table 2-1, *Proposed Updates to the Los Angeles County General Plan 2035 Air Quality Element*, and Table 2-2, *Proposed Updates to the Los Angeles County General Plan 2035 Implementation Program*, in Chapter 2, *Project Description*. The Revised Draft 2045 CAP is consistent with these revisions and helps implement them. As such, the Revised Draft 2045 CAP operates in alignment with and supports other General Plan elements, as well as other policy priorities, plans and obligations. Please refer to General Response 2 for more discussion regarding the Revised Draft 2045 CAP's relationship to the County's General Plan.

O5b-39 The Revised Draft 2045 CAP was drafted to include measures that are technically and legally feasible, and to quantify the effectiveness of Tier 1 Checklist measures. The comment does not identify which measures it believes are infeasible, such that a specific response cannot be provided. For a discussion of the legal feasibility and quantification of 2045 CAP measures and actions, please refer to General Response 3 and General Response 4, which also address the use of voluntary GHG offset credits in the Revised Draft 2045 CAP and as an alternative GHG reduction measure in the Checklist. The comment does not identify specific "lawful and feasible climate

compliance mandates" that the commenter wishes the County to include in the Revised Draft 2045 CAP, so a specific response to this comment cannot be provided. Nevertheless, the County reiterates that the Revised Draft 2045 CAP is a plan-level framework for the County to implement to achieve Countywide GHG reduction targets for 2030, 2035, and 2045 that are consistent with the state's GHG reduction targets and related legislative actions, including AB 1279 and the 2022 Scoping Plan. (Recirculated Draft PEIR, p. 2-8.) The Revised Draft 2045 CAP builds on previous climate action work from the 2020 CCAP, adopted in October 2015 as a subcomponent of the Air Quality Element of the *Los Angeles County General Plan 2035* and includes new emissions reduction targets consistent with AB 1279 and the 2022 Scoping Plan.

Regarding the comment's statement regarding an obligation to approve an aspirational CAP or adopt a CAP into the General Plan, the Revised Draft 2045 CAP is an implementation program of the Air Quality Element of the County's General Plan. In California, local governments regulate many activities that contribute to GHG emissions and air pollutants, including land use and transportation planning, zoning and urban growth decisions, implementation of building codes and other standards, and control of municipal operations. Local governments have typically addressed climate change either in policies in the general plan itself, or through adoption of a CAP. Please refer to General Response 2 for more discussion regarding the Revised Draft 2045 CAP's relationship to the County's General Plan.

The comment's allegation that the Revised Draft 2045 CAP would result in litigation challenging infrastructure, housing, job creation, and other projects is speculative. While potential litigation challenging future projects is always a possibility in California, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. Any project approval is subject to legal challenge and there is no evidence presented by the commenters suggesting that it is more likely that future projects implementing the Revised Draft 2045 CAP would be challenged. These comments raising potential legal challenges do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O5b-40 Regarding the comment's concern regarding the Revised Draft 2045 CAP's adoption into the General Plan, the Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan and would be adopted by General Plan amendment together with proposed revisions to the Air Quality Element. However, the Revised Draft 2045 CAP is not a regulatory document but is rather a plan-level framework for the County to implement to achieve Countywide GHG reduction targets for 2030, 2035, and 2045 that are consistent with the state's GHG reduction targets and related legislative actions. (Recirculated Draft PEIR, p. 2-8.) Future amendments to the Revised Draft 2045 CAP would represent a change to the County's General Plan implementation program and would be a discretionary action subject to CEQA compliance. For further discussion on the Revised Draft 2045 CAP's

relationship to the General Plan and how the Revised Draft 2045 CAP applies to development projects, please refer to General Responses 2 and 3.

While potential litigation challenging potential future amendments to the Revised Draft 2045 CAP is a possibility, it is speculative at this time to presume that there would be imminent lawsuits challenging future amendments. The comment raising potential legal challenges does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O5b-41 In response to the comment's point about changing the Revised Draft 2045 CAP to an aspirational policy document, the County has discretion to determine the most appropriate approach for the contents and use of the Revised Draft 2045 CAP. The Revised Draft 2045 CAP is an implementation program of the Air Quality Element of the County's General Plan and would be adopted by General Plan amendment together with proposed revisions to the Air Quality Element. In California, local governments regulate many activities that contribute to GHG emissions and air pollutants, including land use and transportation planning, zoning and urban growth decisions, implementation of building codes and other standards, and control of municipal operations. Local governments have typically addressed climate change either in policies in the general plan itself, or through adoption of a CAP.

The Revised Draft 2045 CAP includes feasible GHG reduction measures within the County's ability to implement. The Revised Draft 2045 CAP's measures and actions support the County's goals, including ones related to economic development, housing, and infrastructure: general goals and policies relevant to the Revised Draft 2045 CAP include those related to infill development (Goal LU 4), vibrant, livable and healthy communities that contain a mix of community-serving uses (Goal LU 5), and land use patterns and community infrastructure that promote health and wellness for all neighborhoods (Goal LU 10). Please refer to General Response 4 for further discussion regarding the feasibility of the Revised Draft 2045 CAP reduction measures and actions and the use of voluntary GHG offset credits in the Revised Draft 2045 CAP and as an alternative GHG reduction measure in the Checklist.

The comment's concern with an increase in cost, time, or litigation risks associated with the Revised Draft 2045 CAP are speculative and does not raise significant environmental issues related to the Recirculated Draft PEIR, such that no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O5b-42 The comments on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O5b-43 to O5b-44 The County acknowledges the commenter's shared vision in equitable and lasting climate measures.

O5b-45 The Recirculated Draft PEIR adequately quantifies GHG reductions associated with implementation of the Revised Draft 2045 CAP. See General Response 5, which addresses the quantification of GHG emission reductions for the Revised Draft 2045 CAP strategies, measures, and actions.

O5b-46 See General Response 5, which addresses the quantification of GHG emission reductions for the Revised Draft 2045 CAP strategies, measures, and actions.

O5b-47 The Revised Draft 2045 CAP Recirculated Draft PEIR is intended to provide CEQA compliance for the County measures and actions as described in the Revised Draft 2045 CAP. The Recirculated Draft PEIR is a program EIR that evaluates the general environmental impacts of planned activities that would implement the Revised Draft 2045 CAP as comprehensively as possible, but it does not examine the specific potential impacts of individual, future projects. Later activities facilitating Revised Draft 2045 CAP measures and actions will be examined in light of this programmatic EIR to determine whether additional environmental review is needed and may be required. (Recirculated Draft PEIR, p. 1-3.) See General Response 3, which addresses future County-initiated ordinances or plans implementing the Revised Draft 2045 CAP measures and actions that have not yet been developed to achieve the County's GHG reduction targets. Also see General Response 5, which addresses the quantification of GHG emission reductions for the Revised Draft 2045 CAP strategies, measures, and actions.

O5b-48 See Response to Comment O5b-47 and General Response 3, which addresses future ordinances or plans implementing the Revised Draft 2045 CAP strategies, measures and actions that have not yet been developed to achieve the County's GHG reduction targets. Also see General Response 5, which addresses the quantification of GHG emission reductions for the Revised Draft 2045 CAP strategies, measures, and actions.

O5b-49 The Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan and would be adopted by General Plan amendment together with proposed revisions to the Air Quality Element. The Revised Draft 2045 CAP is not a regulatory document but is rather a plan-level framework for the County to implement to achieve Countywide GHG reduction targets for 2030, 2035, and 2045 that are consistent with the state's GHG reduction targets and related legislative actions. (Recirculated Draft PEIR, p. 2-8.) Similar to General Plan elements, the Revised Draft 2045 CAP is not obligated to quantify or substantiate every single GHG reduction strategy, measure, and action needed to achieve its overall policy goals. As discussed in General Response 5, CEQA does not obligate lead agencies to quantify every single measure and action within a CAP to allow for future streamlining. CEQA only requires that CAPs identify measures that can achieve the CAP's targets and that CAPs should "specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level." (CEQA Guidelines, § 15183.5(b)(1)(D).) The Revised Draft 2045 CAP does this by

quantifying GHG emission reductions associated with 18 different measures, which cumulatively would allow the County to meet the GHG reduction targets identified in the Revised Draft 2045 CAP, and by including project-specific requirements in the Checklist.

See Response to Comment O5b-47 and General Response 3, which addresses future ordinances or plans implementing the Revised Draft 2045 CAP measures and actions that have not yet been developed to achieve the County's GHG reduction targets. Also see General Response 5, which addresses quantification of GHG emission reductions for the Revised Draft 2045 CAP strategies, measures, and actions.

O5b-50 The commenter conflates the mitigation measures contained within the Recirculated Draft PEIR with the programmatic Revised Draft 2045 CAP's strategies, measures, and actions necessary to achieve Countywide GHG reduction targets for 2030, 2035, and 2045. (Recirculated Draft PEIR, p. 2-8.) The former (mitigation measures contained within the Recirculated Draft PEIR) must meet CEQA Guidelines section 15126.4(a) standards for mitigation measures, which requires mitigation measures be feasible, not deferred, and fully enforceable. All Recirculated Draft PEIR mitigation measures meet these requirements, and the commenter does not challenge this. The latter (programmatic Revised Draft 2045 CAP strategies, measures, and actions) are not required by CEQA to achieve the same CEQA standards for mitigation measures, contrary to the commenter's claim.

As discussed in General Response 5, CEQA does not obligate lead agencies to quantify every single measure and action within a CAP to allow for future streamlining pursuant to CEQA Guidelines section 15064. (See CEQA Guidelines, § 15183.5(b).) CEQA only requires that CAPs identify measures that can achieve the CAP's targets and that CAPs should "specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level" (CEQA Guidelines, § 15183.5(b)(1)(D).) The Revised Draft 2045 CAP does this by quantifying GHG emission reductions associated with 18 different measures, which cumulatively would allow the County to meet the GHG reduction targets identified in the Revised Draft 2045 CAP, and by including project-specific requirements in the Checklist.

O5b-51 Please see response to comments Ob-49 and Ob-50 above. See General Response 3, which addresses future ordinances or plans implementing the Revised Draft 2045 CAP measures and actions that have not yet been developed to achieve the County's GHG reduction targets. Also see General Response 5, which addresses quantification of GHG emission reductions for the Revised Draft 2045 CAP strategies, measures, and actions.

O5b-52 The County understands these concerns regarding alternative GHG reduction measures and has added a new subsection in Revised Draft 2045 CAP Appendix F in

Section F.2 under Step 4 titled, "Guidance for Quantifying GHG Reductions from Alternative Measures" to help project applicants choose this pathway. This new section provides guidance for how applicants can quantify the GHG reduction benefits of a Checklist streamlining requirement for an individual project to determine the amount of GHG emissions reduction that an alternative project emissions reduction measure must achieve. See Revised Draft 2045 CAP Appendix F, pages F-13 to F-15 for more detail. The addition of this subsection does not constitute significant new information that would trigger recirculation of the Recirculated Draft PEIR under CEQA Guidelines section 15088.5. Rather, it serves to clarify and amplify the content of the Recirculated Draft PEIR.

Also see General Response 3, which addresses use of the Checklist and discusses the use of alternative project emissions reduction measures, as well as General Response 5, which addresses quantification of GHG emission reductions for the Revised Draft 2045 CAP strategies, measures, and actions.

O5b-53 The County understands these concerns regarding alternative GHG reduction measures and has added a new subsection in Revised Draft 2045 CAP Appendix F in Section F.2 under Step 4 titled, "Guidance for Quantifying GHG Reductions from Alternative Measures" to help project applicants choose this pathway. This new section provides guidance for how applicants can quantify the GHG reduction benefits of a Checklist streamlining requirement for an individual project to determine the amount of GHG emissions reduction that an alternative project emissions reduction measure must achieve. See Revised Draft 2045 CAP Appendix F, pages F-13 to F-15 for more detail. The addition of this subsection does not constitute significant new information that would trigger recirculation of the Recirculated Draft PEIR under CEQA Guidelines section 15088.5. Rather, it serves to clarify and amplify the content of the Recirculated Draft PEIR.

Also see General Response 3, which addresses use of the Checklist and discusses the use of alternative project emissions reduction measures, as well as General Response 5, which addresses quantification of GHG emission reductions for the Revised Draft 2045 CAP strategies, measures, and actions.

O5b-54 The County understands these concerns regarding alternative GHG reduction measures and has added a new subsection in Revised Draft 2045 CAP Appendix F in Section F.2 under Step 4 titled, "Guidance for Quantifying GHG Reductions from Alternative Measures" to help project applicants choose this pathway. This new section provides guidance for how applicants can quantify the GHG reduction benefits of a Checklist streamlining requirement for an individual project to determine the amount of GHG emissions reduction that an alternative project emissions reduction measure must achieve. See Revised Draft 2045 CAP Appendix F, pages F-13 to F-15 for more detail. The addition of this subsection does not constitute significant new information that would trigger recirculation of the Recirculated Draft PEIR under

CEQA Guidelines section 15088.5. Rather, it serves to clarify and amplify the content of the Recirculated Draft PEIR.

See General Response 3, which addresses concerns regarding the CEQA Streamlining Checklist and the use of alternative project emissions reduction measures. As discussed in General Response 3, in response to comments received, the County has revised the Checklist to clarify that the Checklist will be used only for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064, and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis.

Also see General Response 5, which addresses quantification of GHG emission reductions for the Revised Draft 2045 CAP strategies, measures, and actions.

O5b-55 The Recirculated Draft PEIR has adequately evaluated the GHG emissions reductions associated with the Revised Draft 2045 CAP. Please see response to comments Ob-47, Ob-49, and Ob-50 above. See General Response 3, which addresses concerns regarding the CEQA Streamlining Checklist and addresses future ordinances or plans implementing the Revised Draft 2045 CAP measures and actions that have not yet been developed to achieve the County's GHG reduction targets. Also see General Response 5, which addresses quantification of GHG emission reductions for the Revised Draft 2045 CAP strategies, measures, and actions.

O5b-56 Recirculation is not required for the reasons explained in response to comments Ob-47 through Ob-55 above. See General Response 3, which addresses concerns regarding the CEQA Streamlining Checklist and addresses future ordinances or plans implementing the Revised Draft 2045 CAP measures and actions that have not yet been developed to achieve the County's GHG reduction targets. Projects need not comply with such regulations and ordinances until they have been developed and adopted by the County. Therefore, in these instances, projects using the Checklist must only comply with currently adopted ordinances and requirements at the time of project approval. Also see General Response 5, which addresses quantification of GHG emission reductions for the Revised Draft 2045 CAP strategies, measures, and actions.

O5b-57 The Recirculated Draft PEIR adequately assesses GHG impacts associated with implementation of the Revised Draft 2045 CAP strategies, measures, and actions. See General Response 3, which addresses concerns regarding alternative compliance pathways in the CEQA Compliance Checklist. Also see General Response 6, which addresses the Checklist's Offsite GHG Reduction Program Framework and the use of offsite programs in the Checklist.

O5b-58 to O5b-60 Section F.4 of the Checklist describes the Offsite Program Framework, including key concepts and principles that are consistent with CARB guidance in

Appendix D of the 2022 Scoping Plan. As written on page 30 of Appendix D, CARB states that "[i]f implementation of all feasible on-site GHG reduction measures is insufficient to reduce a project's impact to a less-than-significant level, the state recommends that the lead agency next explore options to fund or implement ***local***, off-site direct GHG reduction strategies."[20] (See Revised Draft 2045 CAP Appendix F, p. F-24.)

As discussed in General Response 6, the Revised Draft 2045 CAP does not prohibit projects from using GHG offset credits to mitigate their GHG impacts pursuant to CEQA's requirements and CARB's recommendations. This approach may be used by any project applicant elects to conduct a project-level GHG impact analysis pursuant to CEQA. However, if a project applicant elects to streamline environmental review of their project's GHG impacts using the Revised Draft 2045 CAP's PEIR pursuant to CEQA Guidelines section 15183.5(b), the project applicant must use the Checklist, and the Checklist does not permit the use of voluntary GHG offset credits. This is because the use of voluntary GHG offset credits would not contribute toward the Revised Draft 2045 CAP's GHG emission reduction targets, which apply to direct, in-county GHG emissions.

Regarding the comment's concerns about potential costs of the Offsite Program, the Revised Draft 2045 CAP presents a *framework* for the Offsite GHG Reduction Program and does not represent the program itself. As stated on page F-35, the actual program will be developed after the Revised Draft 2045 CAP is adopted. Given that the program itself has not been developed, it would be speculative to estimate the implementation costs of such a program at this point. Further, the Offsite GHG Reduction Program itself is not a Revised Draft 2045 CAP measure that is quantified for GHG reductions and it is not relied upon to achieve the Revised Draft 2045 CAP's GHG emission reduction targets. Use of the Offsite GHG Reduction Program is not mandatory for project applicants wishing to streamline environmental review of their project's GHG impacts using the Revised Draft 2045 CAP's PEIR pursuant to CEQA Guidelines section 15183.5(b).

See General Response 6 for further discussion of the proposed Offsite GHG Emissions Reduction Program.

O5b-61 Regarding the comment's concerns that the Revised Draft 2045 CAP does not demonstrate the feasibility and cost-effectiveness of the offsite reduction program, in particular the example projects listed in Section F.4 of the CEQA Compliance Checklist, the Revised Draft 2045 CAP presents a *framework* for the Offsite GHG Reduction Program, listing example offsite projects that could potentially be included (as on page F-36) and does not represent the program itself. As stated on page F-35, the actual program will be developed after the Revised Draft 2045 CAP is adopted.

[20] Ibid., emphasis added.

See also General Response 6, which addresses the comment's concerns regarding the proposed Offsite GHG Emissions Reduction Program.

O5b-62 Regarding the feasibility of energy storage and microgrids as projects which could be used under the Offsite GHG Emissions Reduction Program, this is an example provided for illustrative purposes only. Because the Checklist presents a *framework* for the Offsite GHG Reduction Program and does not represent the program itself, it is not possible or appropriate to demonstrate the feasibility and cost effectiveness of such example projects. Further, the Offsite GHG Reduction Program itself is not a Revised Draft 2045 CAP measure that is quantified for GHG reductions and it is not relied upon to achieve the Revised Draft 2045 CAP's GHG emission reduction targets. Therefore, the County has no obligation to demonstrate the feasibility and costs associated with potential future hypothetical offsite project types.

O5b-63 Regarding the feasibility of truck and bus electrification programs as projects which could be used under the Offsite GHG Emissions Reduction Program, this is an example provided for illustrative purposes only. The Checklist includes a Tier 1 streamlining requirement (#9) that projects which include goods movement facilities and/or warehouses must incorporate freight decarbonization technologies and infrastructure, such as installing EVCSs at all new warehouse loading docks. The example truck and bus electrification program listed as a potential offsite project would be intended for a wider variety of projects that cannot achieve net-zero GHG emissions or are unable to comply with all required CEQA streamlining requirements. Further, such programs would only be allowed if they are not already required by law or regulation, County building performance standards, or reach code requirements. Revised Draft 2045 CAP Appendix F has been revised to clarify this condition.

Because the Checklist presents a *framework* for the Offsite GHG Reduction Program and does not represent the program itself, it is not possible nor appropriate to demonstrate the feasibility and cost effectiveness of such example projects. Further, the Offsite GHG Reduction Program itself is not a Revised Draft 2045 CAP measure that is quantified for GHG reductions and it is not relied upon to achieve the Revised Draft 2045 CAP's GHG emission reduction targets. Therefore, the County has no obligation to demonstrate the feasibility and costs associated with potential future hypothetical offsite project types.

O5b-64 Regarding the feasibility of providing renewable hydrogen fueling stations for nearby truck fleets as projects which could be used under the Offsite GHG Emissions Reduction Program, this is an example provided for illustrative purposes only. The Checklist includes a Tier 1 streamlining requirement (#9) that projects which include goods movement facilities and/or warehouses must incorporate freight decarbonization technologies and infrastructure, such as installing alternative fueling infrastructure like EVCSs, green hydrogen fueling stations, and/or biomethane fueling stations. The example hydrogen fuel program listed as a potential offsite project would be intended for a wider variety of projects that cannot achieve net-zero GHG

emissions or are unable to comply with all required CEQA streamlining requirements. Further, such programs would only be allowed if they are not already required by law or regulation, County building performance standards, or reach code requirements. Revised Draft 2045 CAP Appendix F has been revised to clarify this condition.

Regarding the comment that hydrogen fueling stations would be costly for project applicants to implement, the County recognizes this possibility. The comment is correct that current costs for hydrogen fueling infrastructure is high on a dollar-per-ton GHG reduction basis. As such, it may not be financially feasible for every project to use hydrogen fueling as a viable offsite reduction project for compliance with the Checklist. However, the cost effectiveness and feasibility of such projects is likely to change in the future. Further, there is no requirement for projects electing to use the Checklist for CEQA streamlining to incorporate hydrogen fueling infrastructure; this is merely an example of the type of project that could be considered a valid offsite reduction project, should the County develop the Offsite GHG Emissions Reduction Program in the future.

Additionally, because the Checklist presents a *framework* for the Offsite GHG Reduction Program and does not represent the program itself, it is not possible nor appropriate to demonstrate the feasibility and cost effectiveness of such example projects. Further, the Offsite GHG Reduction Program itself is not a Revised Draft 2045 CAP measure that is quantified for GHG reductions and it is not relied upon to achieve the Revised Draft 2045 CAP's GHG emission reduction targets. Therefore, the County has no obligation to demonstrate the feasibility and costs associated with potential future hypothetical offsite project types.

O5b-65 Regarding the concern that requiring offsite reduction projects within LA County and prohibiting other forms of offset credits creates unnecessary limitations for projects and LA County to effectively achieve GHG reductions to address global climate change, please see General Response 4 and General Response 6 for explanation and technical justification regarding the Offsite GHG Reduction Program Framework's requirement that offsite GHG reduction projects be located within the jurisdictional boundaries of the County.

O5b-66 Regarding the concerns about the cost of implementing GHG reduction programs within Los Angeles County, the commenter provides no evidence to support this claim or any examples of the types of measures that would impose high costs and for what reasons, such that a specific response cannot be provided. The County has not yet developed the Offsite GHG Reduction Program, as explained in Appendix F. It would therefore be speculative to estimate the cost, timing, scale, or other specific characteristics of the Offsite GHG Reduction Program.

As discussed in General Response 6, the Revised Draft 2045 CAP does not prohibit projects from using GHG offset credits to mitigate their GHG impacts pursuant to CEQA's requirements and CARB's recommendations. This approach may be used by

any project applicant elects to conduct a project-level GHG impact analysis pursuant to CEQA. However, if a project applicant elects to streamline environmental review of their project's GHG impacts using the Revised Draft 2045 CAP's PEIR pursuant to CEQA Guidelines section 15183.5(b), the project applicant must use the Checklist, and the Checklist does not permit the use of voluntary GHG offset credits. This is because the use of voluntary GHG offset credits would not contribute toward the Revised Draft 2045 CAP's GHG emission reduction targets, which apply to direct, in-county GHG emissions.

For more discussion regarding GHG offsets and the proposed framework for the Offsite GHG Emissions Reduction Program, please see General Response 4 and General Response 6.

O5b-67 Regarding the concern that the Revised Draft 2045 CAP does not demonstrate the feasibility and cost-effectiveness of the offsite reduction program, the Revised Draft 2045 CAP presents a *framework* for the Offsite GHG Reduction Program, listing example offsite projects that could potentially be included (as on page F-36) and does not represent the program itself. Further, the Offsite GHG Reduction Program itself is not a Revised Draft 2045 CAP measure that is quantified for GHG reductions and it is not relied upon to achieve the Revised Draft 2045 CAP's GHG emission reduction targets. Therefore, the County has no obligation to demonstrate the feasibility and costs associated with potential future hypothetical offsite project types. See General Response 6 for additional discussion.

O5b-68 Regarding the concern that creating non-local offsite reductions through voluntary market credit registries is a multi-year process, please note that the Offsite GHG Reduction Program Framework as described in Section F.4 of the CEQA Compliance Checklist does not specify the use of voluntary market credit registries and specifically states on page F-35 that "projects that generate carbon offset credits to be traded on a voluntary market registry are not permitted to be used in this program." It is the County's intent to make such offsite programs easier and faster to develop than traditional voluntary market carbon offsets developed using registry protocols. The County acknowledges the commentor's suggestion that a program for creating GHG reductions through an offsite reduction program should be designed to be feasible with respect to the time required to develop and verify reduction projects.

O5b-69 Contrary to the comment's claim, the Recirculated Draft PEIR thoroughly and properly analyzes the Revised Draft 2045 CAP's environmental impacts on population and housing in Recirculated Draft PEIR Chapter 3.14, *Population and Housing*, consistent with CEQA's requirements. The comment does not identify any specific deficiencies in the Recirculated Draft PEIR's analysis of impacts on population and housing. The comment states that the Revised Draft 2045 CAP would conflict with the project objective to provide a diverse range of housing, but this is not a project objective, and the commenter does not specifically identify how the Revised Draft 2045 CAP conflicts with any project objective.

The Revised Draft 2045 CAP does not "impair" types of housing projects by mandating new regulatory requirements on such projects. The Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan and is not a regulatory document but is rather a plan-level framework for the County to implement to achieve Countywide GHG reduction targets for 2030, 2035, and 2045 that are consistent with the state's GHG reduction targets and related legislative actions. (Recirculated Draft PEIR, p. 2-8.) As discussed in General Response 3, in response to comments received, the County has revised the Checklist to clarify that the Checklist will be used only for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis.

O5b-70 Regarding the link between the CEQA streamlining requirements in the Checklist and a project's environmental impact, as described in Recirculated Draft PEIR Chapter 2, Project Description (p. 2-42), a project's incremental contribution to a cumulative impact may not be cumulatively considerable if the project would comply with the requirements in a previously approved plan or mitigation program (including plans or regulations for the reduction of GHG emissions) that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area in which the project is proposed. (CEQA Guidelines, §§ 15064(h)(3); 15064.4(b).) The County has developed the Checklist to assist with determining the consistency of projects with the Revised Draft 2045 CAP for purposes of CEQA streamlining. The Checklist ensures that future projects would achieve their proportion of emissions reductions consistent with the assumptions of the Revised Draft 2045 CAP. The Checklist provides a mechanism for projects to specifically identify "those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project" per CEQA Guidelines section 15183.5(b)(2).

Consequently, the Recirculated Draft PEIR and Revised Draft 2045 CAP do what the comment requests: 1) demonstrate a link between the CEQA streamlining requirements included in the Checklist and a project's GHG impact, and 2) establish a project's "fair share" contribution to address the cumulative GHG impact.

See General Response 3, which comprehensively addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects.

O5b-71 As discussed in General Response 3, in response to comments received, the County has revised the Checklist to clarify that the Checklist will be used only for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a

voluntary option that project applicants can use to streamline their project's GHG impact analysis. Projects that do not intend to streamline their GHG impact analysis need not demonstrate compliance with the Checklist and would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist. Such projects can demonstrate CEQA compliance in the most appropriate way for the project, which may include mitigation measures tailored to the project to address significant impacts.

All Tier 1 requirements in the Checklist would result in direct and indirect GHG emission reductions for new development projects. Most of these Teir 1 requirements were quantified for GHG emission reductions at the County level. The Checklist's Tier 1 requirements are included to specifically identify "those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project" per section 15183.5(b)(2) of the CEQA Guidelines (Revised Draft 2045 CAP, Appendix F p. F-3). The comment does not include specific examples of Tier 1 Checklist requirements that are included for "policy grounds unrelated to GHG reductions," and as such the County cannot provide specific responses.

Regarding the comment about equally effective mitigation to reduce GHG emissions, the Checklist includes an Alternative Project Emissions Reduction Measure option for project applicants to use. This option allows projects that propose alternative GHG emissions reduction measures to the Tier 1 Checklist requirements or propose to include additional GHG emissions reduction measures beyond those in the Checklist, provided that the project applicant demonstrate how the alternative project measure would achieve the same or greater level of GHG emissions reductions as the Tier 1 Checklist requirement(s) that it replaces.

O5b-72 As discussed in General Response 3, in response to comments received, the County has revised the Checklist to clarify that the Checklist will be used only for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis. Projects that do not intend to streamline their GHG impact analysis need not demonstrate compliance with the Checklist and would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist. Such projects can demonstrate CEQA compliance in the most appropriate way for the project, which may include mitigation measures tailored to the project to address significant impacts.

Regarding the cost to new development projects opting to utilize the Checklist for streamlining purposes, the commenter provides no evidence to support the claim that

such costs would be "significant." Regardless, CEQA does not require the financial details of a proposed project to be addressed in an EIR. (CEQA Guidelines, § 15131).

Regarding the commenter's claim that implementing the Checklist would impose "significant… procedural hurdles" to project applicants, the commenter provides no evidence to support this claim. As discussed above, the Checklist will only be applicable for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b) and demonstrating consistency with the Checklist is no longer mandatory for new development projects.

O5b-73 As discussed in General Response 3, in response to comments received, the County has revised the Checklist to clarify that the Checklist will be used only for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis. Projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist. This tailored, project-specific CEQA analysis would be required to include feasible mitigation measures to lessen the project's significant environmental impacts.

The Checklist also provides an alternative compliance pathway for CEQA streamlining, as requested by the commenter. The CEQA streamlining process allows for flexibility in implementation of measures. Please refer to Section F.2, Step 4, *Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions*, for more information. Also see General Response 3, which addresses concerns regarding the CEQA Streamlining Checklist and the use of alternative project emissions reduction measures.

O5b-74 Regarding the comment's disagreement with the identification in Recirculated Draft PEIR Section 4.6 (p. 4-20 et seq.) of both the No Project Alternative and Alternative 3 as the environmentally superior alternative, see 2.2.1, *General Response 1: CEQA Alternatives*, for a discussion regarding the Recirculated Draft PEIR's adequate analysis of alternatives under CEQA.

O5b-75 CEQA requires that EIRs identify the environmentally superior alternative and discuss the facts that support that selection. (Pub. Resources Code, § 21081.5; CEQA Guidelines, § 15126.6.) The County acknowledges the commenter's preference for the identification of Alternative 1 as the environmentally superior alternative; however, as explained in Recirculated Draft PEIR Section 4.6 (p. 4-21), Alternative 3 is considered the environmentally superior alternative for CEQA purposes. The facts offered in support of this selection are provided in Table 4-6 (p. 4-23 et seq.). Specifically, Alternative 3 would result in similar but fewer impacts than the Project on the following resource areas: aesthetics, agriculture and forestry resources,

biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, transportation, and wildfire. Alternative 3 would result in greater impacts than the Project for energy, GHG emissions, air quality, and utilities and service systems. By comparison, Alternative 1 would result in reduced impacts in only five of the resource areas relative to the Project (i.e., air quality, energy, GHG emissions, transportation, and wildfire). Alternative 1 would result in greater impacts for hazards and hazardous materials as well as utilities and service systems. Implementation of Alternative 1 would facilitate projects that include wind projects with wind turbines that could result in a safety hazard for people residing or working in the project area due to collision risk, interference with radar or other air navigation tools, and other hazards related to air navigation. Additionally, implementation of this alternative would facilitate projects that would not encourage the reduction of solid waste like those facilitated by the Project, and instead would focus on the purchase of carbon offsets. Because Alternative 1 would not have the least environmental impacts among the alternatives, the County declines the suggestion to identify Alternative 1 as the environmentally superior alternative.

The comment's suggestion that the use of offsets under Alternative 1 would result in fewer projects; however, this suggestion ignores the fact stated in in Section 4.4.2, *Alternative 1: Carbon Offset Alternative* (p. 4-13), that purchasing carbon offsets would result in carbon offset *projects*. Alternative 1's carbon offset projects "could increase or protect carbon sequestration, invest in solar or wind projects, improve water or energy efficiency, capture methane at animal farms or landfills, replace high-global-warming- potential gas use with a gas that has a lower global warming potential, or implement other measures." Without more information about the number and nature of resulting carbon offset projects, there is no reasonable basis to assume resulting environmental impacts would be less than those of the Project.

O5b-76 In response to the comment's disagreement with the identification of Alternative 3 as the environmentally superior alternative, it is speculative for the analysis in the Recirculated Draft PEIR to rely on future new, less impactful technologies that have not been developed yet that may have the same or greater GHG reduction potential. Instead of relying on speculative future technologies that have yet to be developed, the Recirculated Draft PEIR relies on the best information currently available and is supported by substantial evidence. (See Recirculated Draft PEIR, p. 4-16.)

O5b-77 Identification of the environmentally superior alternative relies on the alternative's respective ability to feasibly accomplish most of the basic project objectives and to avoid or substantially lessen one or more significant impacts of the Project as proposed. Alternative 1 would result in greater environmental impacts associated with hazards and hazardous materials as well as utilities and service systems. Implementation of Alternative 1 would facilitate projects that include wind projects with wind turbines that could result in a safety hazard for people residing or working in the project area due to collision risk, interference with radar or other air navigation

tools, and other hazards related to air navigation. Additionally, implementation of this alternative would facilitate projects that would not encourage the reduction of solid waste like those facilitated by the Project, and instead would focus on the purchase of carbon offsets. Alternative 1 would result in less environmental benefits to the County overall, because the reductions in air pollutant and GHG emissions could be realized elsewhere in Southern California, the State, or the Pacific Southwest and because greater environmental impacts could result from wind projects facilitated by the purchase of carbon offsets. Policy considerations impact the suitability of implementing Alternative 1, given the uncertainties with its execution, as the volatile cap and trade market makes it difficult to anticipate the cost of regulatory carbon allowances. See Recirculated Draft PEIR Section 4.6 (p. 4-21) and Table 4-6 (p. 4-23 et seq.).

O5b-78 The Recirculated Draft PEIR's analysis of alternatives' impacts is not cursory. CEQA Guidelines section 15126.6(d) states, "[a] matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed." Consistent with CEQA Guidelines section 15126.6(d), Recirculated Draft PEIR Table 4-6 is a matrix that provides a comparative analysis of significant environmental impacts of the Project and the Project alternatives, including whether mitigation measures identified for the Project would be required for one or more of the Project alternatives.

The commenter's opinion that fewer projects definitively would be constructed under Alternative 1 is not supported by substantial evidence. Recirculated Draft PEIR Section 4.4.2 (p. 4-13) explains, "Carbon offset projects could increase or protect carbon sequestration, invest in solar or wind projects, improve water or energy efficiency, capture methane at animal farms or landfills, replace high-global-warming-potential gas use with a gas that has a lower global warming potential, or implement other measures. To achieve the greatest environmental co-benefits to the County, priority would be given, from highest to lowest, to offsets purchased from local projects (within Los Angeles County), regional projects (from within Southern California), projects within California, projects outside of California but within the Pacific Southwest (within Arizona, Hawaii, Utah, or Nevada), and projects elsewhere in the United States." Alternative 1 does not limit the number or size of offset projects, and anticipates a scenario where all carbon offset projects would be developed within LA County.

The commenter incorrectly assumes that Alternative 1 would have greater impacts with respect to hazards associated with projects in an airport land use plan due to the potential for carbon offset projects to include a wind project built in an airport land use plan area. Any wind project proposed in LA County would be subject to the requirements of the Los Angeles County Renewable Energy Ordinance, which

outlines the approval process for the development and operation of wind energy systems and facilities, as well as with the applicable airport land use plan and Federal Aviation Administration requirements. Compliance with applicable independently enforceable laws would ensure that development complies with safety standards.

Regarding the suggestion that Alternative 1 would include more wind projects than the proposed Project, it is possible that it would not. As noted above, carbon offset projects could be any of a variety of projects.

O5b-79 Regarding the comment's concern that complying with the Checklist would be challenging for project applicants, as discussed in General Response 3, in response to comments received, the County has revised the Checklist to clarify that the Checklist will be used only for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis. Projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist.

The commenter does not state specifically how the Checklist would create an "undue burden" on projects. However, as noted above, the Checklist is voluntary for new development projects, so project applicants are free to opt out of any burdens that demonstrating consistency with the Checklist might entail.

O5b-80 As discussed in General Response 5, CEQA does not obligate lead agencies to quantify every single measure and action within a CAP to allow for future streamlining. CEQA only requires that CAPs identify measures that can achieve the CAP's targets and that CAPs should "specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level." (CEQA Guidelines, § 15183.5(b)(1)(D).) The Revised Draft 2045 CAP complies with this CEQA provision by quantifying GHG emission reductions associated with 18 different measures, which cumulatively would allow the County to meet the GHG reduction targets identified in the Revised Draft 2045 CAP, and by including project-specific requirements in the Checklist. The Checklist's Tier 1 requirements were quantified in the Revised Draft 2045 CAP for GHG emissions reductions needed to achieve the 2030, 2035, and 2045 emissions reductions targets. See General Response 5, which addresses the quantification of GHG emission reductions for the Revised Draft 2045 CAP strategies, measures, and actions. Also see General Response 3, which addresses the Revised Draft 2045 CAP's reliance on future ordinances or plans implementing the Revised Draft 2045 CAP measures and actions that have not yet been developed to achieve the County's GHG reduction targets.

O5b-81 The County agrees that there are a variety of ways an individual project can avoid, reduce, or mitigate GHG emissions, and the Checklist includes an alternative project emissions reduction pathway for project applicants to use. This alternative pathway allows project applicants to propose alternative GHG emissions reduction measures to those identified in Table F-1 (the CEQA streamlining requirements). Please refer to Draft 2045 CAP Appendix F, Section F.2, Step 4, *Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions*, for more information. The Checklist also includes a framework for an Offsite GHG Reduction Program, which would allow applicants to fund decarbonization programs for existing development to accelerate 2045 CAP measures and actions or go beyond 2045 CAP measures and actions, as an alternative to the Checklists CEQA streamlining requirements. Please refer to Draft 2045 CAP Appendix F, Section F.4, *Offsite GHG Reduction Program Framework*, for more information.

The idea behind the commenter's example scenario is valid: if a project can avoid or reduce all of its GHG emissions in all sectors through specific technologies in a subset of emissions sectors, such as through "comprehensive water and energy conservation and alternative technologies," then there is indeed no technical or regulatory basis to require such project to implement additional GHG reduction actions in other emissions sectors. In other words, if a project can achieve net zero GHG emissions through energy and transportation measures, then it would not be required to implement solid waste and agriculture measures. However, it may be difficult or even infeasible to achieve net zero GHG emissions with measures in only a few emissions sectors, unless the project could achieve substantial carbon removal or sequestration to counterbalance residual emissions in other sectors. The alternative project emissions reduction measure pathway allows this. Specifically, if a project can demonstrate that its water and energy measures would achieve the same or greater level of GHG emissions reductions as the Checklist streamlining requirement that it replaces, such as a requirement for another emissions sector like solid waste or transportation, then the project would not be required to implement those other requirements.

To further clarify this process, the County has added a new subsection in Revised Draft 2045 CAP Appendix F in Section F.2 under Step 4 titled, "Guidance for Quantifying GHG Reductions from Alternative Measures" to help project applicants choose this pathway. See Revised Draft 2045 CAP Appendix F, pages F-13 to F-15 for more detail. The addition of this subsection does not constitute significant new information that would trigger recirculation of the Recirculated Draft PEIR under CEQA Guidelines section 15088.5. Rather, it serves to clarify and amplify the content of the Recirculated Draft PEIR.

Finally, projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist. This tailored, project-specific CEQA analysis would be required to include feasible mitigation measures to lessen the project's significant environmental impacts.

Also see General Response 3, which addresses concerns regarding the CEQA Streamlining Checklist and the use of alternative project emissions reduction measures, as well as General Response 5, General Response 5, which addresses the quantification of GHG emission reductions for the Revised Draft 2045 CAP strategies, measures, and actions.

O5b-82 Please see response to comment O5b-81 above for a discussion regarding why there is flexibility in demonstrating compliance with the Revised Draft 2045 CAP. Also see General Response 3, which addresses concerns regarding the CEQA Streamlining Checklist and the use of alternative project emissions reduction measures, as well as General Response 5, which addresses the quantification of GHG emission reductions for the Revised Draft 2045 CAP strategies, measures, and actions.

O5b-83 In response to the comment's concern that complying with the Checklist would be challenging for project applicants, as discussed in General Response 3, the County has revised the Checklist to clarify that the Checklist will be used only for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis. Projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist. This tailored, project-specific CEQA analysis would be required to identify threshold(s) of significance for GHG emissions and include feasible mitigation measures to lessen the project's significant GHG impacts.

In response to the comment's concern that the Revised Draft 2045 CAP does not provide adequate guidance on significance thresholds if a project cannot complete the Checklist, the Revised Draft 2045 CAP does not preclude a project from using any specific CEQA significance threshold. A project can undergo its own CEQA review of GHG impacts and determine such impacts would be less than significant based on substantial evidence and valid CEQA mitigation measures. The Revised Draft 2045 CAP is not a CEQA thresholds guidance document and does not attempt to provide guidance on numeric significance thresholds, but instead provides a pathway for CEQA streamlining via completion of the Checklist, pursuant to CEQA Guidelines section 15183.5(b) (Recirculated Draft PEIR, p. 2-9). Should a project be unable to comply with all Tier 1 streamlining requirements, the Checklist includes an alternative project emissions reduction pathway for project applicants to use. This alternative pathway allows project applicants to propose alternative GHG emissions reduction measures to those identified in Table F-1 (the CEQA streamlining requirements). Please refer to Draft 2045 CAP Appendix F, Section F.2, Step 4, *Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions*, for more information.

With regard to the commenter's concerns regarding CEQA litigation, while potential litigation challenging future projects is always a possibility, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. Any project approval is subject to legal challenge and there is no evidence presented by the commenters suggesting that it is more likely that future projects implementing the Revised Draft 2045 CAP measures and actions would be challenged. Also see General Response 2, which addresses concerns regarding third parties initiating lawsuits against the County and future project applicants.

O5b-84 As discussed in General Response 3, in response to comments received, the County has revised the Checklist to clarify that the Checklist will be used only for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis. In addition, the County has revised the section cited by the commenter as follows:

> ***Projects That Are Not ~~Consistent~~ Eligible for ~~with the 2045 CAP~~ CEQA Streamlining***
>
> *In some cases, a project may not be able to ~~demonstrate consistency~~ comply with all of the 2045 CAP CEQA streamlining requirements. This may be because the project is inconsistent with the ~~existing land use designation of the Land Use Element and the 2021–2029 Housing Element~~ General Plan's growth projections as described in Step 1. Or a project may not be able to feasibly incorporate all ~~consistency~~ CEQA streamlining requirements as identified in Table F-1 and discussed in Step 3; such a project may further be unable to adequately identify alternative project measures to achieve a similar level of GHG reduction to ~~infeasible consistency~~ each CEQA streamlining requirement~~s~~ which a project cannot comply with. Such projects are not eligible to streamline environmental review of their GHG impacts using the 2045 CAP's PEIR and may be required to prepare a comprehensive project-specific analysis of GHG emissions pursuant to CEQA Guidelines (including the CEQA Guidelines Appendix G Environmental Checklist).*
>
> ~~*As discussed above, a comprehensive project-specific analysis of GHG emissions must be prepared for any project that is found to be not consistent with the 2045 CAP through completion of Table F-1 and (if applicable) Table F-2. Such an analysis shall quantify existing and projected GHG emissions and evaluate potential impacts pursuant to the CEQA Guidelines (including the CEQA Guidelines Appendix G Environmental Checklist). The project shall incorporate all the measures in the 2045 CAP Checklist to the extent feasible. Projects that do not implement all feasible applicable checklist measures or alternative project emissions reduction measures may have significant GHG impacts because they*~~

> ~~*could conflict with an applicable GHG reduction plan per CEQA Guidelines Appendix G, Section VII.*~~ (Revised Draft 2045 CAP, Appendix F, p. F-15.)

Regarding the comment that the offsite program will be available to project applicants as a tool to complete the Checklist for CEQA streamlining, this would be a viable pathway in the event that a project applicant is unable to comply with all Tier 1 CEQA streamlining requirements. The commenter's assertion is correct: the offsite program represents an alternative project emission reduction measure to aid with Checklist compliance, but would only be available if a project applicant is unable to comply with all Tier 1 CEQA streamlining requirements. The County has revised the section cited by the commenter as follows:

> *Action ES5.4 of the 2045 CAP would establish an Offsite GHG Emissions Reduction Program (Offsite Program) for new development to use as a GHG reduction or mitigation pathway for 2045 CAP compliance and to fund programs for reducing GHG emissions in the built environment. This program would allow new development to fund decarbonization programs for existing development to accelerate 2045 CAP measures and actions or go beyond 2045 CAP measures and actions.* ~~*An Offsite GHG Emissions Reduction Program (Offsite Program) will be developed.*~~ *Future projects that cannot achieve net-zero GHG emissions or are unable to comply with all* ~~*required 2045 CAP Checklist items*~~ *CEQA streamlining requirements would have the option to participate in the Offsite Program. The Offsite GHG Reduction Program could be used for projects that propose alternative GHG emissions reduction measures to those identified in Table F-1, or that propose to include additional GHG emissions reduction measures beyond those described in Table F-1.* (Revised Draft 2045 CAP, Appendix F, p. F-34.)

Also see response to comment O5b-81 above and General Response 3, which addresses concerns regarding the CEQA Streamlining Checklist and the use of alternative project emissions reduction measures.

O5b-85 As discussed in General Response 3, in response to comments received, the County has revised the Checklist to clarify that the Checklist will be used only for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b) such that the Revised Draft 2045 CAP structure does not disqualify projects from demonstrating less than significant CEQA impacts absent incorporation of all Checklist items. Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis. Projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist. This tailored, project-specific CEQA analysis would be required to identify threshold(s) of significance for GHG emissions and include feasible mitigation measures to lessen the project's significant GHG impacts.

O5b-86 As discussed in General Response 3, in response to comments received, the County has revised the Checklist to clarify that the Checklist will be used only for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis. Projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist. Thus, projects may demonstrate less than significant environmental impacts by preparing a project-specific impact analysis under CEQA, separate and apart from use of the Checklist.

O5b-87 As discussed in General Response 3, in response to comments received, the County has revised the Checklist to clarify that demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis. Thus, the Checklist measures are not an imposition, because demonstrating compliance with the CEQA streamlining requirements in the Checklist is voluntary.

To document the proposed change in use of the Checklist and to clarify the role of Checklist and what is mandatory and voluntary, the County has revised sections of the Revised Draft 2045 CAP and Recirculated Draft PEIR in the following ways, as shown in the example below:

> *Projects that ~~are not consistent with the 2045 CAP~~ elect not to use the 2045 CAP CEQA Streamlining Checklist for CEQA streamlining must prepare a comprehensive project-specific analysis of GHG emissions. The analysis must quantify existing and projected GHG emissions and it is strongly encouraged that the project incorporate ~~the measures~~ all ~~the~~ CEQA streamlining requirements in this 2045 CAP CEQA Streamlining Checklist ~~to the extent feasible, as defined by CEQA[2] and subject to the County's discretion~~, although this is not required. ~~Cumulative GHG impacts may be significant for any project that is not consistent with the 2045 CAP per the CEQA Guidelines Appendix G Environmental Checklist.[3]~~ The 2045 CAP CEQA Streamlining Checklist may be updated to incorporate new GHG emissions reduction techniques or to comply with later amendments to the 2045 CAP or to local, state, or federal law.*
> (Revised Draft 2045 CAP, Appendix F, p. F-3.)

As shown in the revised language above, the requirement that all projects incorporate all Checklist requirements "to the extent feasible" independent of a project's election to use the Checklist for CEQA streamlining has been removed from the Revised Draft 2045 CAP and the Checklist entirely. As such, the comment's claim that there is no scientific basis for this requirement is now moot.

See General Response 3, which addresses project-level requirements for CEQA streamlining as identified in the Checklist.

O5b-88 As discussed in General Response 3, in response to comments received, the County has revised the Checklist to clarify that the Checklist will be used only for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis. Projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist. Such projects would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist. This tailored, project-specific CEQA analysis would be required to identify threshold(s) of significance for GHG emissions and include feasible mitigation measures to lessen the project's significant GHG impacts.

Building Industry Association of Southern California, Inc.

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Valerie Hardman
Outdoor Dimensions

May 15, 2023

Submitted via electronic mail: climate@planning.lacounty.gov

Attn: Thuy T. Hua, Supervising Regional Planner
County of Los Angeles, Department of Regional Planning
320 West Temple St., 13th Floor
Los Angeles, CA 90012

Re: Building Industry Association of Southern California, Inc. – Comment Letter Concerning the County's Revised Draft 2045 Climate Action Plan

Dear Ms. Hua:

Building Industry Association of Southern California, Inc., Los Angeles/Ventura Chapter (BIA-LAV) is a non-profit trade association of businesses and individuals in the vital homebuilding industry in the Counties of Los Angeles and Ventura. In essence, BIA-LAV's members are those who are the most active in building the new homes and communities in which Angelenos will live. BIA-LAV and its members have long supported governmental efforts aimed at achieving sustainable development and sound environmental stewardship, and will continue to do so. O6-1

We write today to provide comments concerning Revised Draft 2045 Climate Action Plan ("RDCAP") in response to its publication by the County of Los Angeles (the "County") regional planning staff. Last week, we were disappointed that the County's staff declined to extend the review period for the RDCAP. It is a very complex document, spanning nearly 1000 pages and dozens of legal and scientific topics, such as agriculture, jobs, energy and water supply and reliability, economic development, housing, infrastructure, public works, transportation, and water. While we and others had been repeatedly assured by the County's staff that the RDCAP was to be an "aspirational" plan, what has been proposed would be legally enforceable in many problematic ways, and would add hundreds of additional pages to the County's general plan. O6-2

We had scheduled for last Monday a meeting with the County's staff to discuss the RDCAP. We postponed the meeting because we were and are still– with the assistance of consultants and attorneys – assessing the sweeping consequences of this proposed, massive amendment to the County's general plan and other key, already-approved policy priorities. The program environmental impact report O6-3

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(PEIR) that accompanied the RDCAP reflects even more technical and legal content, and hundreds of more pages to digest. Indeed, the PEIR's deficiencies alone are vast and overwhelming; and it does not begin to explain or analyze the many conflicts and consequences of the RDCAP vis-a-vis the already-approved general plan, community plans, area plans, and specific plans. The RDCAP plainly has staggering implications to the housing industry; but it generally lacks scientific or technical support for the regulatory burdens that it would impose on projects. Given the sheer volume of material to digest, BIA-LAV will continue to analyze the RDCAP and PEIR with an aim toward providing additional comments to the County and its decisionmakers.

O6-3 (cont.)

O6-4

O6-5

Since the passage long ago of California's Assembly Bill 32 (2006), in which the State Legislature expressed the policy goal of substantially reducing anthropogenic greenhouse gases ("GHG") emissions, our staff and members, as well as our regional and state associational counterparts, have followed and participated in regulatory initiatives intended to address climate change and GHG emissions. During that time, we have seen a wide range of regulatory proposals for GHG regulations which, if they had been imposed uncritically, would have wreaked havoc on our members and their ongoing homebuilding efforts. None of the proposals that we have seen before would so broadly and unduly impose upon and decimate the homebuilding industry as would the RDCAP as it is now presented.

O6-6

BIA-LAV appreciates that the County's staff feels obligated to propose strong measures aimed to reduce the GHG emissions and incorporate them into an updated climate action plan ("CAP"). Indeed, the urgency of the climate crisis demands action that is both smart and effective. That notwithstanding, if the RDCAP were to be adopted as proposed, it would impose an entirely unmanageable set of new regulatory burdens affecting the potential production of housing and development of communities within the County. The RDCAP should be substantially revisited, corrected and qualified, resulting in a better-reasoned and wise CAP update. Our reasoning is set forth in the discussion that follows.

O6-7

First, however, as a threshold matter, we must emphasize that both California as a whole and Los Angeles County in particular remain mired in a worsening housing crisis. In recent years, the State Legislature has acknowledged the woeful state of housing supply when enacting the following pronouncements:

O6-8

> "California has a housing supply and affordability crisis of historic proportions. The consequences of failing to effectively and aggressively confront this crisis are hurting millions of Californians, robbing future generations of the chance to call California home, stifling economic opportunities for workers and businesses, worsening poverty and homelessness, and undermining the state's environmental and climate objectives."[1]

> "California's housing picture has reached a crisis of historic proportions despite the fact that, for decades, the Legislature has enacted numerous statutes intended to significantly increase the approval, development, and affordability of housing for all income levels …."[2]

[1] Calif. Government Code section 65589.5(a)(2)(A).

[2] Calif. Government Code section 65589.5(a)(2)(J).

> "While the causes of this crisis are multiple and complex, the absence of meaningful and effective policy reforms to significantly enhance the approval and supply of housing affordable to Californians of all income levels is a key factor."[3]

O6-9

Notwithstanding the clear urgency of such legislative pronouncements, thus far the County has failed to adopt and implement the kinds of reasonable land use policies that are needed to foster substantially more homebuilding in the County.

To illustrate, as we noted in our previous comment letter concerning an earlier draft of proposed CAP revisions, during the eight (8) year period from 2014 through 2021, the County issued permits for the construction of only 8,854 housing units, which translates into an average issuance of only ***1,107*** housing permits annually during the entire eight-year period. This figure falls woefully short of the assessed need for additional housing in the County. Pursuant to state law, the County's recent allocation of the Regional Housing Needs Assessment ("RHNA allocation"), required the County to identify and zone parcels on which to accommodate 90,052 new housing units within the eight-year period April 2021 through April 2029; and the preponderance of the RHNA allocations were imposed to meet pent-up, unmet existing demand rather than current population growth. The County's RHNA allocation therefore equates to ***11,257*** housing units annually, which is greater than ten times larger than the County's rate of actually permitting new housing during the eight (8) year period ending 2021.

O6-10

Moreover, even as our economy has recovered following the recent pandemic, the rate at which new housing has been constructed within the County's unincorporated jurisdiction has continued to decline. The County reported in the Department of Regional Planning's general plan and housing element annual progress report for 2022 that the County issued certificates of occupancy for only ***956*** housing units on unincorporated County land during all of 2022.[4] Collectively, the constituents of the housing market are speaking loudly to the County's policy makers, saying: Clearly, the County is not taking necessary steps to foster, incentivize, spur and approve new homebuilding – even though the County's own housing element approval makes housing production a policy priority, and even though without solving the housing supply crisis little to no progress can be made on other key policy priorities, like homelessness, racial equity, employee retention and recruitment, and a stable tax and revenue base for the County to pay for its many legally mandated and critically important duties.

O6-11

If the RDCAP were adopted as proposed, the abysmal current level of housing production within the County will only worsen. In light of both (i) the undeniable need to build much more housing supply in the County, and (ii) the ongoing failure of the County to accommodate new housing supply, the County's decisionmakers should reject the RDCAP's proposed policies because they would both further delay and discourage new housing and community development, and further drive up the costs, the litigation risks and the uncertainty of trying to build housing –

O6-12

[3] Calif. Government Code section 65589.5(a)(2)(B).

[4] See *General Plan and Housing Element Annual Progress Reports CY 2022*, LEAP Reporting Table and Summary Table spreadsheets.

or pretty much anything, including without limitation public works, infrastructure, and advanced manufacturing facilities.

O6-12 (cont.)

Against this backdrop, our most fundamental and urgent concerns about the RDCAP are as follows:

O6-13

- **First, the sheer number of new regulatory measures, tests and standards reflected in the RDCAP – including new limitations, prescribed implementation measures and potential mitigation impositions – exceeds 100 in total.** Given the limitations of today's technologies, scores of these new prescriptions cannot presently and feasibly be met. Many of the prescriptions remain insufficiently defined in the RDCAP, in that they will rely on future County studies and policy pronouncements or ordinances. Because of the many uncertainties that the RDCAP leaves unaddressed, the RDCAP as proposed would impose upon projects that are presently seeking or soon will seek approval new requirements which can neither be fully fathomed nor met presently.

  Similarly, the draft PEIR prepared for the RDCAP fails to adequately analyze the alleged GHG reductions of the many proposed programs and measures. It lacks technical substantiation for the projected GHG reductions. Consequently, the RDCAP improperly takes credit for as-yet-unadopted programs and foreshadowed or promised measures that have neither been properly evaluated under CEQA nor demonstrated to be likely successful. The CAP's "alternative" compliance pathway is not quantified; and an indicated program for off-site mitigation possibility is promised for formulation and adoption to only sometime in the future.

  O6-14

  Notwithstanding the above, the RDCAP states that all of its measures will, upon its adoption, immediately become part and parcel of the County's general plan. If so, then every project that cannot meet every one of these new measures (to the extent relevant) will be rendered inconsistent with the General Plan. BIA/LAV's members cannot imagine that the County would, in one fell swoop, add so many new benchmarks, thresholds, limitations and areas for close examination, analysis, and potential dispute and litigation to the County's already arduous and prohibitive project approval processes. Thousands of consultants would need to be employed and become educated about such new regulatory prescriptions and tests as might apply to proposed projects, which would add tremendously to the time, expense and complexity of project reviews and approvals. Therefore, first, ***the RDCAP should be pared back very substantially to reduce the sheer number of new prescriptions, calculations and tests that it now includes; and any resulting CAP update should not be incorporated into the County's general plan*** (as is discussed in more depth below). The County should explore instead adopting only a few, relatively plain measures concerning which there is substantial stakeholder agreement concerning their affordability, feasibility and effectiveness.

  O6-15

- **Second***, many of the proposed new requirements are foreseeably impossible to meet – either across the board or in a vast number of circumstances, and the legal devastation this would cause shatters the remainder of the Board's approved general plan, area plans, community plans, specific plans, and other approved plans and projects. The County should remove from the RDCAP all measures that cannot be*

  O6-16

feasibly implemented with certainty based on technical, legal and economic factors that exist today. Even though some of the RDCAP measures establish quantitative, inflexible mandates that are effective in 2045, 2045 is barely 20 years away; and nearly every single home or mixed-use project heretofore approved by the County currently will foreseeably continue to exist in 2045. The RDCAP generally fails to consider the foreseeable interplay among existing development, fully or partially approved pending development, and further development that is yet to be proposed. When the RDCAP is considered with circumspection, many of its measures are actually illegal under current laws and regulations.

O6-16 (cont.)

For example, the RDCAP aims to require all projects to comply with the RDCAP's new mandate that no more than ten percent (10%) of its water supply will come from water imported into the County. Projects approved today cannot abrogate the County's water supply agreements, create new water regulations that allow for potable use of recycled water, or pretend that cisterns can supply future apartment buildings and manufacturing facilities – especially since new projects cannot under water quality laws result in hydromodification impacts to downgradient streams and habitat areas. There is no evidence that the County can implement its housing element in compliance with RHNA law and meet this water supply mandate, nor is it clear whether – given that the mandate retroactively implicates all pre-existing water uses in the County – any new project can use any amount of stored or imported water, even as a 10% blending source. Simply put, the sources and uses of water in the County, ongoing consumption needs, and the current, foreseeable and imaginable technologies all preclude such an achievement. The BIA/LAV's members, as the homebuilders and leaders in community development who must strive to supply new homes against a backlog of demand, know from their many required demonstrations of water supply reliability that such a tight limitation on imported water cannot be achieved at any cost in the foreseeable future.

We therefore urge the County's staff to contact the Metropolitan Water District of Southern California (MWD), the Los Angeles Department of Water and Power (LADWP) and other water purveyors operating within the county, as well as the State Water Resources Control Board, the Los Angeles County Regional Water Quality Control Board, and the state Department of Health Services, to ascertain their understanding of how this RDCAP measure could actually be implemented in homes might be built next year and will be existing in 2045 – or allow any applicant to demonstrate reliable water supply consistent with the RDCAP's stated tests alongside water supply assessment law and the California Environmental Quality Act (CEQA). Even the voluntary, very costly, and stringent CalGreen Tier II water standard, which most projects are unable to meet, does not prescribe such an unachievable 10% water import cap, nor does it mirror the RDCAP's anti-innovation approach of dictating only three exclusive water treatment technologies (reclaimed water, grey water, and tap-to-toilet water) which County residents and businesses would be allowed to use to meet the test.

O6-17

Similarly, the RDCAP aims to establish a new land use limitation or goal such that projects where employment will occur must aim for an employment density of 300

O6-18

employees per acre. Concerning this proposal, BIA/LAV respectfully requests first and foremost that ***all construction and development activities should be expressly excluded from any such employment density requirement or analysis***. Land development and construction activities tend naturally to be logically phased; and work is undertaken serially out of necessity. Critical paths required for any given construction undertaking do not allow for different tradespersons to be piled atop all at once, such as would be required to meet or approach any arbitrary per-acre employment density goal for construction.

O6-18 (cont.)

Even when looking beyond construction activities, the 300-person per acre employment density goal seems irrational as applied generally to nearly all parts of the unincorporated county. Such a goal might be sensible and achievable only a very few select parts of the largest and most mature cities (such as pre-pandemic New York City) – not in the unincorporated county areas. In well-planned "new town" areas and still maturing communities, however, meeting any such employment density target would be obviously impossible. A one-acre strip mall in which is located a dozen small businesses does not employ 300 people; nor does a modern automated factory, hybrid technology and entertainment venues, or agriculture production or processing. The RDCAP's employment density metric appears from nowhere; and its expected GHG reduction is never quantified. It is impossible to imagine that any mixed-use projects (which are generally favored by regional planners) could ever come close to meeting such a requirement; but the RDCAP nonetheless threatens to impose it as a new General Plan mandate.

In fact, the infeasibility of the many RDCAP requirements becomes apparent when one considers the RDCAP Checklist, set forth in Appendix F (the "Checklist"). Under any level of scrutiny, the Checklist is overly prescriptive and lacks any potential feasibility in most land use contexts. Its sweeping and overly ambitious provisions fail to consider the many implementation challenges that it would create for housing projects. The RDCAP and its appendices include no meaningful technical support indicating how and when actual GHG reductions might be achieved in the prescriptive categories identified by the Checklist.

O6-19

Individual projects should not be forced into such a one-size-fits-all framework without a supporting technical basis for the approach; nor should infeasibility need to be proven for the components of such a long laundry list of requirements. For example, even if one were to assume that a given project could, factually, achieve net-zero GHGs by avoiding and reducing all of its GHG emissions through some combination design features and other measures, there is no technical or scientific consensus concerning how one might substantiate the individual or combined effects of trying to meet the standards that the Checklist contains. Moreover, forcing projects to comply with *every* element of the Checklist – or to otherwise mitigate for their failure to do so – would, at minimum, require undue heroics and excessive costs, and could effectively require projects to become "net-negative" in terms of their GHG impacts. A far better approach would be to account for the inherent differences between a wide range of projects by providing flexibility and alternative compliance pathways, while aiming for

O6-20

a more reasonable and equitable degree of betterment from projects in terms of their GHG-emissions characteristics. O6-20 (cont.)

Finally concerning the Checklist and the RDCAP's discussion about it, if a project cannot demonstrate consistency with the CAP, then the project applicant must prepare a "full" GHG analysis – presumably in an environmental impact report (EIR), even if the project would otherwise qualify for CEQA streamlining or an addendum. The RDCAP states, however, that even such a full EIR process will not excuse the project applicant from complying with each and every single Checklist measures "to the extent feasible." Thus, no consideration is given when the required analysis of a project viewed as a whole demonstrates relative wisdom and expediency of not complying with a particular Checklist measure, or when an already-approved suite of GHG reduction mandates included in state or federal laws and regulations differs from the CAP prescriptions, or when a project would add no or negligible GHG emissions, or would otherwise provide quantified GHG reduction benefits. Any project for which there must be undertaken a full GHG analysis should be able to demonstrate whether it has a less than truly significant GHG impact (based upon a reasonable threshold) irrespective of the Checklist. O6-21 O6-22

We therefore urge the County to instead consider the California Air Resources Board's (CARB) Scoping Plan approach to GHG mitigation, which should include the use of CARB-certified GHG-reduction offsets methodology and dispensation for projects that have already garnered CARB's approval thereunder. The County should be proud of the two master planned communities located within the County which have demonstrated net-zero GHG emissions under CARB's methodology. Instead, the RDCAP as proposed summarily rejects the approaches that CARB uses. CARB's 2022 scoping plan and CEQA itself both recognize that there are multiple pathways by which to demonstrate consistency with California's climate action policies. So too should the County's CAP update recognize multiple potential pathways toward compliance – and not embed into the County's General Plan a mindboggling suite of consultant-generated new mandates that were never before presented as mandates even within the County's own department, let alone to other critical agency, public, business, and homebuilder stakeholders.

For example, the County submitted, and the California Department of Housing and Community Development ("HCD") approved, a new housing element in the County's general plan. The RDCAP makes new housing generally infeasible, for reasons mentioned above (e.g., water) and in light of the scores of other mandatory RDCAP measures. The RDCAP therefore directly undermines the potential implementation of the County's housing element. If the County had proposed, along with its housing element, to add to the length and complexity of its housing project approval process, eviscerate CEQA streamlining for housing (and thus delayed housing approvals by multiple years), add countless thousands of dollars to the cost of producing each housing unit, and impose more than 100 new approval standards for new housing, then HCD would have rejected the housing element as a gross violation of housing and civil rights laws. It should be viewed as no less a violation of those law for the County to impose these same burdens in another section of the general plan (i.e., in a CAP update

which the County proposes to incorporate into the general plan) a scant few months later.

Importantly, the County's current CAP was upheld in recent CEQA litigation, as was project-level compliance therewith. This was owing no doubt to the relatively prudent, achievable, and clear content of the current County CAP. BIA-LAV respectfully asserts that maintaining the current CAP would be vastly more reasonable than would be adopting the RDCAP as it is proposed.

O6-22 (cont.)

- ***Third, the RDCAP should be revised to clearly express the flexible and aspirational nature of its many provisions, and – most importantly – to expressly preempt its weaponization under the California Environmental Quality Act (CEQA). To this end, any finalized CAP update should not be made part and parcel of the County's general plan.*** BIA/LAV is concerned that the County's planning staff espouse the view that the RDCAP as proposed should be viewed as mainly aspirational and not so mandatory as to unduly prejudice any project approvals and development. Respectfully, based on our members' many decades of experience in litigation related to project approvals, BIA/LAV cannot regard the RDCAP as anything less than dangerously over-prescriptive. As written, all of the RDCAP measures would indeed be mandatory – albeit subject to both (i) off-site mitigation "opportunities" and (ii) possible forgiveness based on infeasibility findings (which might be obtained only after a great expense of time, money and process). Once the RDCAP measures become effective, they would affect virtually any and all projects that will thereafter be considered.

O6-23

In California, locally adopted climate action plans legally may be wholly aspirational; or they may instead be mandatory either in part or in whole. Therefore, the County should take care to express its intentions about which elements of any updated CAP will be mandatory in order to prevent the potential and indeed foreseeable weaponization of the updated CAP through CEQA litigation. Notably, San Diego County has been subjected to rounds of litigation due to its uncritical incorporation of its supposedly aspirational climate action plan update in its general plan. As a result of such litigation, that county's own projects, and all private projects that come before the county, can be subjected to legal challenge for the county's failure to strictly enforce its climate action plan update.[5]

O6-24

[5] See, e.g., "Enviro Law Group Sues San Diego for Missing Climate Goals in Mira Mesa," Voice of San Diego, Feb. 21, 2023, found at https://voiceofsandiego.org/2023/02/21/enviro-law-group-sues-san-diego-for-missing-climate-goals-in-mira-mesa/; "San Diego Climate Group Sues City over Lack of Enforcement and Unidentified Funding for Its Climate Action Plan," by Dorian Hargrove, September 14, 2022, found at https://www.cbs8.com/article/news/local/san-diego-climate-group-sues-city-over-climate-action-plan/509-8980fa39-67e6-447b-b999-b23e969ca6d0.

Accordingly, BIA/LAV urges the County to include a well-considered "statement of limitation of use" in any CAP update, so as to avoid any arguable claim that the plan's components should be used as a foil under CEQA. Good examples of such statements of limitation of use exists, such as the Southern California Association of Government's (SCAG) statement pertaining to its use of transportation analysis zone (TAZ) maps for modeling in its 2023 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and SCAG's 2012 RTP/SCS disclaimer of CEQA implications related to its long list of potential climate action mitigation concepts.

O6-24 (cont.)

- ***Fourth, the County should expressly and clearly grandfather all projects that will have commenced their pursuit of development approval prior to the effective date of any climate action plan revision – so that those projects will be subject only to the County's currently-adopted climate action plan, and not to an updated CAP***. Some community development projects, even if they are not yet finally and completely approved, have been contemplated for years or even decades and long been reflected in the County's general plan, local area plans, as well as in the Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Community Strategy for several successive four-year cycles. BIA/LAV's members have been actively pursuing and are at various stages of continuing to pursue and implement identified development and project approvals from the relevant agencies of the County. Importantly, these many activities have been undertaken with an aim to comply with the County's currently adopted climate action plan.

  It would be a tremendous waste of the effort and costs already incurred, and thus unduly burdensome, to require such project applicants to revise their plans and proposals to conform to changes that might be reflected in a new climate action plan may result from the RDCAP if and to the extent it is adopted. Therefore, finalization of any updated CAP should include a clear provision grandfathering all project applications that will have been commenced prior to an express implementation date.

O6-25

- ***Fifth, the most unreasonable suggestion in the RDCAP is the proposal to establish a GHG mitigation "trading" policy whereby alternative, offsite compliance can be demonstrated only by reducing GHG within the County's limits.*** In its comments above, BIA/LAV urges the County to avoid making its many new GHG tests and hurdles binding in such a way that either onsite compliance or heroic offsite mitigation might be required as a component of project approval. Unless it is corrected before it is finalized, the RDCAP indicates a contrary result, and – even worse – indicates that project proponents should be able to mitigate GHG reduction shortcomings by seeking to reduce GHG away from the project (i.e., off-site), but only by mitigating within the county's borders. In effect, then, the County is proposing a mitigation "trading pool" (such as that employed in "cap and trade" regimes). But rather than the trading pool being reasonably broad and deep, it is instead proposed only the size of a small pond.

  There is no legitimate reason to limit the scope of the potential GHG emissions "trading pool" to the County's spatial limits. The anthropogenic GHG gases that contribute to climate change are emitted worldwide in broadly varying ways and amounts throughout differing societies, states and countries for reasons ranging from abject poverty and the

O6-26

relative wealth or dearth of advanced technology to wanton over-consumption. If and to the extent that local project proponents in the County might be required to mitigate their projects' respective GHG emissions, they should be free to seek out the most economical, effective and efficient ways to do so. Indeed, California should be exporting the best technologies and the best and most affordable climate change policies far and wide, especially given that most other states and many nations need better direction far more than does California.[6]

O6-26 (cont.)

It will be far more difficult, taxing and costly to identify and implement offsite GHG reduction measures if one is limited to doing so only within County's spatial limits. As noted above, the RDCAP presently leaves unanswered many questions about how to quantify what levels of mitigation might be sufficient. Limiting the spatial range of potential measures available would unduly add to project costs whenever more affordable GHG-reduction potential exists outside of the County. In addition, there would likely be additional agency costs involved in administering and policing a circumscribed, county-specific trading pool which can be avoided if the County were to instead align the CAP update with the approach that CARB champions at the state level.

Specifically, CARB, which the State Legislature tasked in 2006 with the primary regulatory power to address GHG emissions, has long approved of and pointedly applauded GHG mitigation that goes beyond county borders, such as the landmark arrangements proposed, promised and, when allowed, put in place by the developers of certain large master planned communities within the County.[7] CARB's most recent scoping plan for GHG reductions specifies that, while localized off-site mitigation offsets may be preferable, non-local offsets and credits should be available to enlarge the feasibility of mitigation.[8] Limiting the trading pool for any off-site GHG emissions mitigation to within the County's borders would assure that the County will have the

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[6] California slightly trails only New York and Maryland in terms of having the lowest per capita GHG emissions in the nation (even though California is relatively vast); and Californians are rapidly adopting electric vehicles at a relatively fast pace, which suggests that California will soon have the lowest per capital GHG emissions in the nation. Moreover, Los Angeles, Orange, Riverside and San Bernardino counties accounted for 40 percent of the 369,364 battery-powered vehicles registered in California in 2020, suggesting that Los Angeles County residents better the state average in terms of having very low per capita GHG emission. "Southern California Continues to Dominate EV Industry," *Governing the Future of States and Localities*, April 2, 2021, found at: https://www.governing.com/next/southern-california-continues-to-dominate-ev-industry.

O6-27

[7] In its 2022 Scoping Plan, CARB expressly recognized two master planned communities located within the County's jurisdiction (the Newhall Ranch and Centennial projects) as exemplary "net zero GHG" projects. See 2022 Scoping Plan, Appendix D, pp. 24-25, found at https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-action.pdf.

O6-28

[8] See CARB's 2022 Scoping Plan, App. D – Local Action Plans, p. 31, similarly found at: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-action.pdf.

most expensive and the least efficient and effective GHG off-site mitigation program imaginable. Such would be inconsistent with the County's obligation to help foster the construction of affordable housing for all of its citizens. Therefore, the County should consider adopting the CARB scoping plan's tiered approach to mitigation, prioritizing onsite and local measures, followed by non-local measures, or should instead provide technical justification for deviating from the scoping plan's recommended prioritization. O6-26 (cont.)

- ***Sixth and lastly, the RDCAP would, if adopted, violate federal constitutional principles that prevent federal, state or local governments from disproportionately overburdening – as a condition of land use approval – new development and redevelopment in relation to the relative burdens that are similarly shouldered by the jurisdiction's population as a whole.*** As noted above, BIA/LAV urges the County to reject making the many new tests and prescriptions set forth in the RDCAP mandatory. We instead urge the County to be clearly indicate the new CAP measures as aspirational or "directive" only (i.e., non-mandatory); and we ask the County to not include such measures in its general plan whereupon they might be weaponized by project opponents. O6-29

If and to the extent that the County were to reject our requests, many of the new tests and standards reflected in the RDCAP, individually and collectively, would constitute unduly burdensome impositions and conditions of approval which would violate the so-called *Nolan/Dollan/Koontz* line of Supreme Court of the United States opinions.[9] Taken together, these Supreme Court rulings prevent local, state and federal governments from requiring any citizen a person to give up a constitutional property right in exchange for a discretionary benefit conferred by the government – for example, where an exaction demanded has too little or no relationship to the benefit, or where the degree of the exactions that are demanded by permit conditions are not "roughly proportional" to the projected impacts of the development. This is called the doctrine of "unconstitutional conditions."[10] O6-30

[9] The *Nollan*, *Dolan*, and *Koontz* trilogy of Supreme Court opinions consists of *Nollan v. California Coastal Comm'n*, 107 S.Ct. 3141 (1987), *Dolan v. City of Tigard*, 114 S.Ct. 2309 (1994), and – most recently – *Koontz v. St. Johns River Water Management Dist*., 133 S.Ct. 2586 (2013).

[10] In *Koontz*, the Supreme Court recapped and explained its opinions in *Nollan* and *Dolan*, and further expounded on the doctrine of unconditional conditions, when finding that a governmental agency had imposed disproportionately oppressive conditions in connection with its offer to approve a permit. application. Specifically, the Court explained the doctrine of unconstitutional conditions as it pertains to citizens' right to apply for permission to develop one's respective property, explaining that the doctrine vindicates the Constitution's enumerated rights (here, the Fifth Amendment right to just compensation for the governmental taking of property). As applied in *Koontz*, the doctrine prevents the government from coercing citizens into giving up their rights; and the Court explained that *Nollan* and *Dolan* represent a special application of the doctrine applicable when owners apply for land-use permits. As the Court explained, the standards set out

Briefly, if the RDCAP were adopted as it is now proposed, it would force all permit applicants to submit to permit conditions that are vastly more imposing than, and grossly disproportionate to, any requirements that the County is willing to impose upon its existing property owners or their tenants. If and to the extent that the permit applicant can show that it is infeasible to achieve net-zero GHG emissions onsite, then the permit applicant will next be required to mitigate off-site (but only within the County) to otherwise achieve net-zero emissions. Beyond that, only if and to the extent that the applicant runs the full gamut of expensive, time-consuming and ultimately risky CEQA processes might the applicant be ultimately excused in an ad hoc and discretionary manner from any further mitigation on grounds of economic infeasibility under CEQA. The weaponization of CEQA through such a permit process would then be complete.

O6-30 (cont.)

O6-31

Essentially, the RDCAP therefore would operate to put all new development and redevelopment on a permanent fast in terms of their potential GHG emissions. It would be as if though new development and redevelopment applicants must forever undertake and maintain both a starvation diet and incessant exercise in order to eliminate all body fat; and – if and to the extent the applicant is unsuccessful in doing so – must buy equivalent gym memberships for other County citizens to compensate for any shortcomings. Such demands are tremendously disproportionate to what little – if anything – is asked of the citizenry generally in terms of their respective GHG emissions reductions.

O6-32

Although the County's staff suggests that many aspects of it are merely "aspirational" rather than mandatory, as the RDCAP is now proposed, the only aspect of it that is truly aspirational is the hope that all of the County's many millions of citizens will magically all become GHG-neutral by the year 2045. Apparently, the RDCAP aims to make a bit of progress toward such a county-wide aspiration by overburdening those who must apply for permission to develop or redevelop homes and property and overtaxing those who may buy, rent or build prospectively built housing. Indeed, the County seems poised to impale all land-use permit applicants with a broad sword in order to fund and make relatively small dents in the GHG emissions of the County's other citizens, who might benefit from the off-site mitigation exactions that the RDCAP promises to impose.

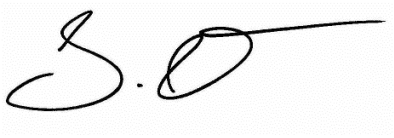
Such a policy approach and its effects would be inconsistent with the pronouncements from the California Legislature which are quoted above – specifically about the need for "meaningful and effective policy reforms to significantly enhance the approval and supply of housing affordable to Californians of all income levels…." We believe that the RDCAP's policies are also inconsistent with the spirit and letter of the doctrine of unconstitutional conditions as it was explained by the Supreme Court of the United States in *Koontz*.

in *Nollan* and *Dolan* address the danger of governmental coercion in the land-use permitting context while also accommodating the government's legitimate need to offset the public costs of development through land use exactions. See *Koontz*, 133 S.Ct. 2594-96.

Conclusion

We commend the County for its desire to address climate change and the need to be aligned with the State's GHG emission goals. That notwithstanding, many of the RDCAP's policy directives, however well-intended they may be, promise to increase housing costs substantially, further dampen the already dismal housing production in the County, further reduce homeownership opportunities, further increase housing rental rates, and further erode the economic status of the middle class and the most vulnerable residents of the County. We respectfully urge the County to revise the RDCAP substantially in light of our comments above. O6-33

Sincerely,



De'Andre Valencia, Senior VP
BIASC/ LA Ventura Chapter

2.3.2.6 Letter O6: Building Industry Association

O6-1 to O6-2 The Revised Draft 2045 CAP, released on March 15, 2023, retained the majority of the contents of the Draft 2045 CAP that was released the prior year, on April 25, 2022. The Revised Draft 2045 CAP was released with a tracked changes version to facilitate ease of review.

The Recirculated Draft PEIR listed the targeted changes to highlight the differences between the analysis contained in the Draft PEIR and the Recirculated Draft PEIR to facilitate ease of review. The Recirculated Draft PEIR describes changes to the Revised Draft 2045 CAP in Chapter 2, *Project Description*, and analyzes the Project as revised on a resource-by-resource basis throughout Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*. The Recirculated Draft PEIR wholly replaces the May 2022 Draft PEIR.

Regarding the comment's concern regarding the review period of the Recirculated Draft PEIR, CEQA presumes the adequacy of a 45-day review period for a Draft PEIR (Pub. Resources Code, § 2109(a); CEQA Guidelines, § 15105) and explains that the public review period should not be longer than 60 days except in "unusual circumstances." There are no extenuating circumstances here and as such, the standard 45-day review period is sufficient. Additionally, during those 45 days, the County hosted seven open meeting hours advertised as lunchtime office hours, posted on the project website and distributed via email an informational video on the Project, and held meetings with responsive stakeholder groups to facilitate review and discussion. In order to provide stakeholders additional time to review and understand the Revised Draft 2045 CAP and Recirculated Draft PEIR, and since changes to the Recirculated Draft PEIR were predicated on changes to the Revised Draft 2045 CAP, the Revised Draft 2045 CAP was released prior to the Recirculated Draft PEIR to offer additional review time to read the changes driving the analysis in the Recirculated Draft PEIR. For these reasons, the County believes that the 60-day public review period provided for the Revised Draft 2045 CAP and the 45-day public review period provided for the Recirculated Draft PEIR were sufficient to allow informed public comment.

O6-3 In response to the comment's concern related to alleged deficiencies of the Recirculated Draft PEIR regarding conflicts and consequences of the Revised Draft 2045 CAP associated with the County's already-approved General Plan, community plans, area plans, and specific plans, the comment does not allege any specific conflicts. Section 3.12, *Land Use and Planning*, of the Recirculated Draft PEIR evaluates land use and planning issues to determine whether the Revised Draft 2045 CAP would result in a significant impact related to a physical division of an established community or conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental impact. As described in Section 3.12.2.3, the Revised Draft 2045 CAP is a policy document intended to reduce community-wide GHG emissions and would support development allowed under the General Plan. No changes to General Plan land use designations, zoning, or land use–specific projects are proposed as part of the Revised Draft 2045

CAP. The Recirculated Draft PEIR concluded that projects facilitated by the Revised Draft 2045 CAP would have less-than-significant impacts related to a conflicting with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental impact.

O6-4 The Housing Element serves as a policy guide to address the comprehensive housing needs of the County. Its focus is to ensure decent, safe, sanitary, and affordable housing for current and future residents. It now also focuses on equitable development to counter historical residential segregation and environmental injustice. The Housing Element sets forth implementing actions that encourage the private sector to build and improve housing. To that end, a climate action plan was identified as a program of the Housing Element. The Revised Draft 2045 CAP includes a voluntary streamlined procedure for environmental clearance for individual housing projects, thereby reducing the time and expense needed for individual environmental clearances. Qualifying projects will be able to rely on the Revised Draft 2045 CAP for their GHG emissions impact analysis under CEQA. Housing projects have been able to successfully integrate climate action as identified in the CARB's 2022 Scoping Plan.

O6-5 In response to the comment's suggestion that the Revised Draft 2045 CAP and Recirculated Draft PEIR contain a large amount of "material to digest," the length of the Revised Draft 2045 CAP and its Recirculated Draft PEIR is standard and the comment provides no evidence to support its suggestion. See Response O6-1 through O6-2.

O6-6 The Revised Draft 2045 CAP aligns closely with CARB's 2022 Scoping Plan. A comparison of the alignment can be found in Appendix H of the Revised Draft 2045 CAP. In response to the comment's concern that the Revised Draft 2045 CAP would have an effect on the homebuilding industry, please see General Response 3 for further discussion regarding what is required of discretionary projects related to Draft 2045 CAP consistency such that the Revised Draft 2045 CAP would not "impose upon and decimate" the homebuilding industry.

O6-7 The Recirculated Draft PEIR does not impose an unmanageable set of new regulatory burdens affecting the production of housing within the County. The framework set out in the Revised Draft 2045 CAP contains actions to be implemented by both the County and development projects. The Checklist found in Appendix F identifies required versus voluntary actions for projects that elect to streamline their GHG emissions impact analysis under CEQA. Please see General Response 3 for further discussion. The County rejects the comment's suggestion that the Recirculated Draft PEIR be revised and addresses additional, specific concerns the comment letter raises in the responses below.

O6-8 to O6-9 Regarding the comment's concern about the state's housing crisis and County policies that foster homebuilding, the Revised Draft 2045 CAP is a policy document that would support development allowed under the General Plan. No changes to

General Plan land use designations, zoning, or land use-specific projects are proposed as part of the Revised Draft 2045 CAP.

The Revised Draft 2045 CAP focuses on the importance of housing availability and seeks to balance encouragement for increased housing supply with GHG reductions. The Revised Draft 2045 CAP prioritizes strategies that include providing specific incentives and subsidies for affordable housing developments. For example, Measure T1 seeks to increase housing opportunities that are affordable and near high-quality transit areas to reduce VMT. Action T1.2 directs the County to develop land use tools that will increase the production of a diversity of housing types, such as missing middle housing. As such, the Revised Draft 2045 CAP implements measures and actions that would help foster substantially more homebuilding in the County. The Housing Element identifies 61 programs the County will set forth to implement actions that encourage the private sector to build and improve housing; ensure that government policies do not serve as unnecessary constraints to housing production, preservation and improvement; and ensure that government policies counter the historical patterns of segregation and environmental injustice for communities of color. One of the contributing programs that implements Measure T1 is the Housing Element Rezoning Program which increases densities near high-quality transit areas, thus eliminating the need for developers to pursue General Plan amendments to increase densities.

Please also see Response to comment O6-4.

O6-10 The County notes the comment's discussion of the County's Regional Housing Needs Assessment; however, this comment does not raise environmental issues related to the Recirculated Draft PEIR and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O6-11 Regarding the comment's concern regarding the rate of new housing development within the County, the County disagrees that it is not taking necessary steps to foster, incentivize, spur and approve new housing projects. Please see Response to Comment O6-8 for further discussion regarding the Revised Draft 2045 CAP's measures and actions that support increased housing production. The commenter cites the number of homes issued certificates of occupancy but does not provide information on actual contributing factors for delays between the time entitlements were issued and certificates of occupancy were obtained. It would be speculative to assume that all delays were related to government policies. Homes receiving certificates of occupancy in 2022 would likely have started the building process before or during the pandemic and could have been affected by various delays associated with the pandemic outside of the County's control. As the County works to implement the Housing Element's programs, additional policy changes such as the Rezoning Program will be made to support housing production. This comment does not raise environmental issues related to the Recirculated Draft PEIR and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O6-12 The comment provides no evidence to support its claims that if the Revised Draft 2045 CAP were adopted, housing production within the County would worsen, the Revised Draft 2045 CAP's measures would delay and discourage housing development, increase development costs, and raise risk of litigation. In response to the comment's concern regarding new housing, please see Response to Comment O6-8. Regarding the comment's concerns about increased costs to housing production, under CEQA, economic effects of a project onto themselves are not treated as significant effects on the environment; rather, the focus of CEQA is on physical changes in the environment. These comments do not address the adequacy or accuracy of the Recirculated Draft PEIR or any environmental effects of the proposed Project and no further response is required pursuant to CEQA Guidelines section 15088(a).

Regarding risk of litigation, while potential litigation challenging future projects is always a possibility, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. Any project approval is subject to legal challenge and there is no evidence presented by the commenters suggesting that it is more likely that future projects implementing the Revised Draft 2045 CAP would be challenged. See General Response 2, which addresses concerns regarding third parties initiating lawsuits against the County and future project applicants.

O6-13 See General Response 5, which addresses the quantification of GHG emission reductions for Revised Draft 2045 CAP strategies, measures, and actions. Also refer to General Response 3, which discusses that demonstrating consistency with the Checklist is a voluntary option for project applicants to streamline specific projects under CEQA.

O6-14 See General Response 3, which addresses the alternative GHG reduction measure pathway in the Checklist. Also see General Response 5, which addresses the quantification of GHG emission reductions for Revised Draft 2045 CAP strategies, measures, and actions. Also see General Response 6, which addresses the Checklist's Offsite GHG Reduction Program Framework and the use of offsite programs in the Checklist.

O6-15 Regarding the comment's statement that the Checklist does not provide a quantitative pathway for alternative project emissions reduction measures (Step 4 and Table F.2 of the Checklist), the County understands these concerns and has added a new subsection in Revised Draft 2045 CAP Appendix F in Section F.2 under Step 4 titled, "Guidance for Quantifying GHG Reductions from Alternative Measures" to help project applicants that choose this pathway. This new section provides guidance for how applicants can quantify the GHG reduction benefits of a Checklist streamlining requirement for an individual project to determine the amount of GHG emissions reduction that an alternative project emissions reduction measure must achieve. For further discussion regarding alternative project emissions reduction measures, please refer to General Response 3.

Regarding the comment's point regarding off-site mitigation, the Revised Draft 2045 CAP Action ES5.4 would establish an Offsite GHG Reduction Program (Offsite Program) for new development to use as a GHG reduction or mitigation pathway by allowing applicants to fund or implement local projects that reduce GHG emissions within unincorporated Los Angeles County. The Offsite Program will be developed separately after the Revised Draft 2045 CAP is adopted and the Final EIR is certified. Section F.4 of Appendix F includes a framework for the Offsite Program, which includes the required location for offsite projects; six specific standards to ensure that the GHG reductions produced by offsite projects are real, permanent, quantifiable, verifiable, enforceable, and additional; as well as the proposed process that requires certain actions from project applicants, such as the requirement to provide to the County a quantification of reductions supported with substantial evidence showing that the offsite project proposed achieves the amount of GHG emissions reductions required. For further discussion regarding the Offsite Program, please refer to General Response 6.

Regarding the comment's concern with General Plan consistency, the Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan and would be adopted by General Plan Amendment together with proposed revisions to the Air Quality Element. General Plan consistency would be determined by comparing a future project to the Air Quality Element goals and policies, rather than by comparing a project to the implementation programs identified in the Revised Draft 2045 CAP. A subcomponent of the Revised Draft 2045 CAP implementation program is the Checklist, Appendix F, which the County will utilize to determine the consistency of future projects that wish to streamline their GHG impact analysis with the Revised Draft 2045 CAP pursuant to CEQA Guidelines sections 15064(h)(3), 15064(h)(3), 15064.4 and 15183.5(b). If a project is consistent with the General Plan and can demonstrate consistency with the Revised Draft 2045 CAP by completing the Checklist, the project would be considered consistent with the Revised Draft 2045 CAP and eligible for CEQA streamlining of its project-level GHG analysis. (Recirculated Draft PEIR, p. 2-40.)

However, demonstrating consistency with the Checklist is no longer mandatory for new development projects, but is rather a voluntary option that project applicants can utilize to streamline their project's GHG impact analysis. Projects that do not intend to streamline their GHG impact analysis do not need to demonstrate consistency with the Checklist. Instead, such projects would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist.

The comment's concerns with increased time, expense, and complexity of project approvals are speculative and does not raise significant environmental issues related to the Recirculated Draft PEIR, such that no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nevertheless, the County reiterates that consistency with the Revised Draft 2045 CAP CEQA Streamlining Checklist is no longer a requirement for new development projects, but is rather a voluntary option

that project applicants can utilize to streamline their project's GHG impact analysis. Projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist but rather, would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist.

The County disagrees that the Revised Draft 2045 CAP should be substantially "pared back" because such action would inhibit the County's ability to implement reduction strategies, measures, and actions necessary to achieve Countywide GHG reduction targets consistent with state and local goals, including AB 1279, the 2022 Scoping Plan, the *We Are Still In* Declaration to align with the 2016 Paris Climate Agreement, and the *OurCounty: Los Angeles Countywide Sustainability Plan*. Regarding the comment's concern about incorporation into the General Plan, the County has chosen to prepare and utilize the Revised Draft 2045 CAP as an implementation program for the Air Quality Element of the General Plan and adopt the Revised Draft 2045 CAP by General Plan Amendment. In California, local governments regulate many activities that contribute to GHG emissions and air pollutants, including land use and transportation planning, zoning and urban growth decisions, implementation of building codes and other standards, and control of municipal operations. Local governments have typically addressed climate change either in policies in the general plan itself, or through adoption of a CAP.

O6-16 The commenter provides no evidence that the Revised Draft 2045 CAP's requirements for new development would be impossible or infeasible to implement. The commenter is also incorrect that all projects must meet a requirement that no more than 10 percent of a project's water supply will come from water imported into the County. Revised Draft 2045 CAP Measure E5 includes a performance goal that 90 percent of total Countywide water demand is met by recycled water graywater, or potable reuse by the year 2045 (25 percent by 2030 and 50 percent by 2035) (Revised Draft 2045 CAP Chapter 3, p. 3-54). This is not a project-level mandate. For projects that wish to streamline their GHG impacts evaluation under CEQA, the Checklist requires nothing regarding water source types. Checklist item #21, *TIER 2: Use Recycled Water and Graywater for Non-potable Uses and Include Rainfall Capture*, is a voluntary Tier 2 item that encourages projects to implement water reuse strategies on-site through certain design elements such as using reclaimed water for outdoor uses and installing residential graywater systems. A project that could not meet this metric could still use the Checklist to streamline its GHG impact evaluation under CEQA, because compliance with Tier 2 measures is strongly encouraged rather than mandatory.

Please see General Response 3, which addresses requirements for projects electing to streamline their CEQA GHG impact analysis as identified in the Checklist. Also see General Response 2, which addresses concerns regarding third parties initiating lawsuits against the County and future project applicants.

O6-17 As stated above in Response to Comment O6-16, the comment is incorrect that all projects must meet a requirement that no more than 10 percent of a project's water supply will come from water imported into the County; rather, this is a Countywide performance objective. Performance objectives represent guideposts for the successful implementation of each measure and the Revised Draft 2045 CAP as a whole. However, the performance objectives are not specific mandates for the County or for individual projects. This explanation is provided at the beginning of Appendix E of the Revised Draft 2045 CAP. Because the Revised Draft 2045 CAP is implemented and adapted over time, many of the performance objectives may change. Measure E5 was not quantified for GHG emission reductions for the target years. As indicated in supporting Actions 5.1 through 5.4, the use of recycled water is required only where the recycled water is available, indicating a priority for using recycled water because increasing the use of alternative water sources (like recycled water) reduces the demand for water sources with higher energy and carbon intensities (like imported water). Implementation of Measure E5 does not preclude inclusion of viable future technologies that meet GHG reduction goals in future updates to the Revised Draft 2045 CAP. Should future technologies such as desalinization meet GHG emission reduction goals, they can be considered in the next CAP update. As technologies improve over time, recycled water may be more widely available and should be prioritized over the use of imported water because increasing the use of alternative water sources reduces the demand for water sources with higher energy and carbon intensities.

Regarding the comment's statement about project applicants demonstrating reliable water supply, projects that do not intend to streamline their GHG impact analysis need not complete the Checklist and would instead be required to prepare a project-specific impact analysis under CEQA, which allows applicants to demonstrate reliable water supply consistent with water supply assessment law and CEQA. Please see General Response 3 for further discussion regarding the process for project applicants.

Regarding the comment's suggestion for the County to contact the Metropolitan Water District, the Los Angeles Department of Water and Power, other water purveyors, the State Water Resources Control Board, the Los Angeles County Regional Water Quality Control Board, and the state Department of Health Services, the County has and continues to engage and collaborate with local and state water planning agencies, which influences County planning efforts. For example, the County is developing strategies to expand recycled water supply and treat concentrates, a byproduct of the advanced water treatment of wastewater. Additional strategies, including the coordination of water agencies, related to recycled water are under development through the Draft County Water Plan: https://lacountywaterplan.org/Home.

O6-18 The Checklist does not require that all new projects must achieve an employment density of 300 jobs per acre. This is a Countywide goal, not a project-specific

mandate. Please see General Response 3, which addresses project-level requirements for CEQA streamlining as identified in the Checklist.

O6-19 See General Response 3, which addresses project-level requirements for CEQA streamlining as identified in the Checklist. Responding to the comment's concern regarding technical support regarding GHG reductions, the County conducted quantitative GHG modeling for 18 of the 25 measures included in the Revised Draft 2045 CAP. The estimated reductions associated with each of these measures can be found in Chapter 3.3, *Strategies, Measures, and Actions*, of the Revised Draft 2045 CAP. The technical substantiation for these measures, i.e., full detail on data sources and calculation methods for estimating GHG emission reductions, can be found in Appendix B, *Emissions Forecasting and Reduction Methods*. For further discussion, please refer to General Response 5.

O6-20 See General Response 3, which addresses project-level requirements for CEQA streamlining as identified in the Checklist. Regarding the cost to new development projects opting to utilize the Checklist for streamlining purposes, the commenter provides no evidence to support the claim that such costs would be "excessive," and under CEQA, economic or social effects of a project onto themselves are not treated as significant effects on the environment; rather, the focus of CEQA is on physical changes in the environment.

O6-21 See General Response 3, which addresses the Revised Draft 2045 CAP processes applicable to various project applicants and project-level requirements for CEQA streamlining as identified in the Checklist. This response includes revisions to the Checklist and Revised Draft 2045 CAP Appendix F to address the concerns raised by the comment.

O6-22 See General Response 3, which addresses the Revised Draft 2045 CAP processes applicable to various project applicants and project-level requirements for CEQA streamlining as identified in the Checklist. This response includes revisions to the Checklist and Revised Draft 2045 CAP Appendix F to address the concerns raised by the comment. Project use of the Checklist is now voluntary. Also see General Response 4, which addresses the use of voluntary GHG offset credits in the Revised Draft 2045 CAP and as an alternative project GHG emission reduction measure in the Checklist. Specifically, for projects intending to use Checklist to streamline CEQA review of a their GHG impacts, the use of GHG offsets is not an option; however, the Revised Draft 2045 CAP does not preclude a project from using GHG offsets to demonstrate net zero emissions (or carbon neutrality) or to attain any other CEQA significance threshold, in lieu of using the Checklist.

Regarding the relationship of the Revised Draft 2045 CAP to the County's General Plan and housing goals, as well as potential litigation, please see General Response 2.

O6-23 Regarding the comment's concern regarding mandatory Revised Draft 2045 CAP measures, the Revised Draft 2045 CAP has been revised to provide that demonstrating

consistency with the Revised Draft 2045 CAP Checklist is not mandatory for all new development projects. It is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). As such, the Revised Draft 2045 CAP measures are not "over-prescriptive" as the comment alleges, as projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist. Such projects would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist.

The County disagrees that the Revised Draft 2045 CAP should be revised to be "flexible and aspirational" because such revisions would inhibit the County's ability to implement reduction strategies, measures, and actions necessary to achieve Countywide GHG reduction targets consistent with state and local goals, including AB 1279, the 2022 Scoping Plan, the *We Are Still In* Declaration, and the *OurCounty: Los Angeles Countywide Sustainability Plan*.

The Checklist is clear about what is required of projects that choose to streamline their CEQA GHG impact analysis. (See Appendix F, p. F-5 et seq.) Nothing beyond the Tier 1 measures (or alternative measures if Tier 1 measures are not feasible) is required for project applicants to streamline their CEQA GHG impacts analysis.

Please refer to General Response 3 for further discussion regarding the required elements of the Revised Draft 2045 CAP and the processes applicable to various project applicants, and to General Response 2 regarding the relationship of the Revised Draft 2045 CAP to the General Plan.

The comment does not provide evidence that findings of infeasibility with the Tier 1 Checklist measures may necessitate a "a great expense of time, money and process," and such statements are speculative and do not raise significant environmental issues related to the Recirculated Draft PEIR, such that no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

Regarding the commenter's concern regarding the "weaponization" of the Revised Draft 2045 CAP under CEQA, potential litigation challenging future projects is speculative at this time. While potential litigation challenging future projects is always a possibility, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. The comment raising potential legal challenges does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O6-24 Regarding the comment's concern regarding mandatory elements of the Revised Draft 2045 CAP, the County has revised the Checklist to clarify that the Checklist will be used *only* for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new

development projects, but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis. Projects that do not intend to streamline their impact analyses would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist.

The Checklist is clear about what is required of projects that choose to streamline their CEQA GHG impact analysis. (See Appendix F, p. F-5 et seq..) The Checklist provides a list of Tier 1 measures, which are required for all discretionary private development projects to demonstrate consistency with the Revised Draft 2045 CAP unless alternative measures are proposed. Nothing beyond the Tier 1 measures is required for project applicants to streamline their CEQA GHG impacts analysis. Please refer to General Response 3 for further discussion as to the required elements of the Revised Draft 2045 CAP for certain projects.

Further, as stated above, since the Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan, future project General Plan consistency would be determined by comparing such project with the policies in the Air Quality Element goals and policies rather than with the detailed implementation programs identified in the Revised Draft 2045 CAP. The Revised Draft 2045 CAP is not a regulatory document but is rather a plan-level framework for the County to implement to achieve Countywide GHG reduction targets for 2030, 2035, and 2045 that are consistent with the state's GHG reduction targets and related legislative actions. (Recirculated Draft PEIR, p. 2-8.)

Regarding the comment's mention of the County of San Diego's Climate Action Plan and related litigation, please refer to Response to Comment O5b-36, which explains why the Revised Draft 2045 CAP is distinguishable from the County of San Diego's CAP and why the holding in *Golden Door* does not directly apply here.

The comment also mentions legal challenge of future projects. While potential litigation challenging future projects is always a possibility, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. The comment raising potential legal challenges does not raise significant environmental issues related to the Recirculated Draft PEIR and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

In response to the comment's point about including a "statement of limitation of use," the Revised Draft 2045 CAP explains how it will be used by project applicants. In addition to the above response regarding how applicants may use the Checklist to streamline CEQA GHG analysis, please refer to General Response 3 for further discussion regarding how the Revised Draft 2045 CAP will be applied to future projects.

O6-25 Any development project wishing to pursue its own project-level CEQA analysis of GHG impacts may do so. The Checklist will be used *only* for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections

15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new development projects, but is rather a voluntary option that project applicants can utilize to streamline their project's GHG impact analysis. Please see General Response 3 for additional discussion, including the now voluntary applicability of the Checklist to future approvals of previously planned projects. This response includes revisions to the Checklist and Draft 2045 CAP Appendix F to address the concerns raised by the comment.

O6-26 In response to the comment regarding limiting its proposed Offsite GHG Reduction Program to projects that are located within the jurisdictional boundaries of unincorporated Los Angeles County, and its concerns about cost, scalability to meet demand, and inconsistency with CARB's 2022 Scoping Plan. Which states a preference for localized off-site mitigation offsets but allows non-local offsets, please see *General Response 4: GHG Offsets* and *General Response 6: Offsite GHG Emissions Reduction Program Framework* for explanation and technical justification regarding the Offsite GHG Reduction Program Framework's requirement that offsite GHG reduction projects be located within the jurisdictional boundaries of the County.

O6-27 The County appreciates the comment's discussion regarding California's per capita GHG emissions relative to other states and the electric vehicle adoption rate of the Southern California region; however, the use of GHG offsets is not an option with respect to demonstrating compliance with the Revised Draft 2045 CAP CEQA streamlining requirements using Step 4 of the Checklist (Identify Alternative Project Emissions Reduction Measures). For explanation and technical justification regarding this restriction, please see *General Response 4: GHG Offsets,* which addresses the use of voluntary GHG offset credits in the Revised Draft 2045 CAP and as an alternative GHG reduction measure in the Checklist.

O6-28 In response to the comment's point regarding limiting the proposed Offsite GHG Reduction Program to projects that are located within the jurisdictional boundaries of unincorporated Los Angeles County, the Revised Draft 2045 CAP does not preclude a project preparing a project-specific CEQA GHG analysis from using GHG offsets (generated within the County or outside the County) to demonstrate net zero emissions (or carbon neutrality) or to attain any other CEQA significance threshold. However, the use of GHG offsets is not an option with respect to demonstrating compliance with the Revised Draft 2045 CAP CEQA streamlining requirements using Step 4 of the Checklist (Identify Alternative Project Emissions Reduction Measures). For explanation and technical justification regarding this restriction, please see *General Response 4: GHG Offsets*. The County has reviewed CARB's Scoping Plan (cited in footnote 7 and 8 of the comment letter) and has determined that the information provided does not bear on, which addresses the adequacy or use of voluntary GHG offset credits in the Recirculated Draft PEIR or the conclusions reached 2045 CAP and as an alternative GHG reduction measure in the Recirculated Draft PEIR. Nonetheless, the information has been included in the record where it will be considered as part of the decision-making process.

O6-29 Regarding the comment's concern regarding federal constitutional principles, the Revised Draft 2045 CAP is a legislative enactment and does not implicate the doctrine of "unconstitutional conditions" because the Revised Draft 2045 CAP does not demand the conveyance of protected property interests. "Nothing in *Koontz* suggests that the unconstitutional conditions doctrine under *Nollan* and *Dolan* would apply where the government simply restricts the use of property without demanding the conveyance of some identifiable protected property interest (a dedication of property or the payment of money) as a condition of approval." (*California Building Industry Association v. City of San Jose* (2015) 61 Cal.4th 435, 460 [holding the city's inclusionary housing ordinance "does not violate the unconstitutional conditions doctrine because there is no exaction – the ordinance does not require a developer to give up a property interest for which the government would have been required to pay just compensation under the takings clause outside of the permit process."] The Revised Draft 2045 CAP neither restricts the use of property nor requires future project applicants to dedicate any portion of its property to the public or to pay any money to the public but rather, the Revised Draft 2045 CAP falls within municipalities' general broad discretion to regulate the use of real property to serve the legitimate interests of the general public and the community at large.

In response to the comment's point about mandatory CAP measures and actions and General Plan adoption, the County has chosen to prepare and utilize the Revised Draft 2045 CAP as an implementation program for the Air Quality Element of the General Plan and would adopt the Revised Draft 2045 CAP by General Plan Amendment together with revisions to the Air Quality Element. In California, local governments regulate many activities that contribute to GHG emissions and air pollutants, including land use and transportation planning, zoning and urban growth decisions, implementation of building codes and other standards, and control of municipal operations. Local governments have typically addressed climate change either in policies in the general plan itself, or through adoption of a CAP.

The County has developed the Checklist, Appendix F, as a subcomponent of the Revised Draft 2045 CAP implementation program. The Checklist would be used to determine the consistency of future projects with the Revised Draft 2045 CAP *only* if such future projects intend to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new development projects, but is rather a voluntary option that project applicants can utilize only if they wish to streamline their project's GHG impact analysis. The Checklist is clear about what is required of projects that choose to streamline their CEQA GHG impact analysis. (See Appendix F, p. F-5 et seq..) The Checklist provides a list of Tier 1 measures, which are required for all discretionary private development projects unless alternative measures are proposed to demonstrate consistency with the Revised Draft 2045 CAP in order to streamline a project's GHG impact analysis. Nothing beyond the Tier 1 measures is required for project applicants to streamline their CEQA GHG impacts

analysis. Please refer to General Response 3 for further discussion regarding the Revised Draft 2045 CAP processes applicable to various applicants.

Regarding the commenter's concern that Revised Draft 2045 CAP measures could be "weaponized" by project opponents under CEQA, potential litigation challenging future projects is speculative at this time. This comment does not raise significant environmental issues related to the Recirculated Draft PEIR warranting a response pursuant to CEQA Guidelines section 15088(a). Nevertheless, the Revised Draft 2045 CAP is a defensible document and there is no evidence presented that such litigation is likely to occur.

O6-30 In response to the comment's point about the *Nolan/Dollan/Koontz* line of cases and the doctrine of "unconstitutional conditions," the cited cases stand for the proposition that a public agency could be found liable for a "taking" of property subject to the Fifth Amendment, where the agency imposes a condition on a development permit requiring the applicant to give up a property right, where the condition does not have an adequate "nexus" and is not "roughly proportional" to the impacts of the development project. The principles of the cited cases apply to monetary exactions as well as physical property exactions. For a discussion regarding why the Revised Draft 2045 CAP does not violate constitutional principles, please see Response to Comment O6-29 above.

The Revised Draft 2045 CAP does not impose unduly burdensome impositions and conditions of approval. The County has developed the Checklist, Appendix F, as a subcomponent of the implementation program. The Checklist would be used to determine the consistency of future projects with the Revised Draft 2045 CAP *only* if such future projects intend to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Nothing beyond the Checklist's Tier 1 measures (or alternative measures if Tier 1 measures are not feasible) is required for project applicants to streamline their CEQA GHG impacts analysis. Projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist but rather would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist. For such projects, there is no requirement to demonstrate consistency with the Revised Draft 2045 CAP. Please refer to General Response 3 for further discussion regarding how the Revised Draft 2045 CAP will be applied to future projects.

The Revised Draft 2045 CAP, in Appendix F Section F.4, includes a framework for the County's Offsite GHG Reduction Program. Action ES5.4 calls for developing an Offsite GHG Reduction Program, which would be available to project applicants to use as an alternative GHG reduction measure by allowing applicants to fund or implement local projects that reduce GHG emissions within unincorporated Los Angeles County. The comment is correct that all offsite projects must be located within the jurisdictional boundaries of unincorporated Los Angeles County such that

emissions reductions achieved by such offsite projects will be accounted for in future GHG inventory updates and will contribute toward the emissions reduction targets, which are also based on the jurisdictional boundaries of the unincorporated County. For further discussion of the Offsite Program, please refer to General Response 6.

O6-31 Regarding the comment's interpretation of the process for project applicants to show consistency with the Revised Draft 2045 CAP, please refer to General Response 3 for a comprehensive explanation of determining consistency with the Revised Draft 2045 CAP. The potential for litigation and the alleged "weaponization of CEQA" is a speculative assumption. This comment does not raise significant environmental issues related to the Recirculated Draft PEIR warranting a response pursuant to CEQA Guidelines section 15088(a). Nevertheless, the Revised Draft 2045 CAP is a defensible document and there is no evidence presented that such litigation is likely to occur.

O6-32 The Revised Draft 2045 CAP does not overburden project applicants. The Revised Draft 2045 CAP builds on previous climate action work from the 2020 CCAP, adopted in October 2015 as a subcomponent of the Air Quality Element of the *Los Angeles County General Plan 2035* and includes new emissions reduction targets consistent with AB 1279 and the 2022 Scoping Plan. The County has developed the Checklist, Appendix F, as a subcomponent of the Revised Draft 2045 CAP implementation program. Use of the Checklist is no longer mandatory for new development projects and is rather a voluntary option that project applicants can utilize to streamline their project's GHG impact analysis. Such projects would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist. Please refer to General Response 3 for further discussion regarding the Revised Draft 2045 CAP processes applicable to project applicants.

The Revised Draft 2045 CAP would not be inconsistent with the Legislature's stated need for the supply of affordable housing. In fact, the Revised Draft 2045 CAP focuses on the importance of housing availability and seeks to balance an encouragement for increased housing supply with GHG reductions. The County prioritizes strategies that both invest in and support frontline communities, which include providing specific incentives and subsidies for affordable housing developments and implementing other initiatives that integrate equity in ways that help reverse the trends of discrimination and disinvestment. For example, Action ES5.1 requires identification of new requirements for new development to reduce GHG emissions from energy use, transportation, and other sources that includes affordable housing considerations in these requirements and supporting measures to maintain housing affordability. Measure T1 seeks to increase housing opportunities that are affordable and near high-quality transit areas to reduce VMT. Action T1.2 directs the County to develop land use tools that will increase the production of a diversity of housing types, such as missing middle housing. As such, the Revised Draft 2045 CAP implements measures and actions that would help fulfill the County's housing law compliance obligations.

For a discussion regarding why the Revised Draft 2045 CAP is not inconsistent with the doctrine of unconstitutional conditions, please refer to Response to Comment O6-30.

O6-33 The comment does not provide support for its allegations regarding housing supply, production, and costs, homeownership opportunities, rental rates, and economic effects, which are all speculative. The Revised Draft 2045 CAP is a policy document that would support development allowed under the General Plan. No changes to General Plan land use designations, zoning, or land use-specific projects are proposed as part of the Revised Draft 2045 CAP. Under CEQA, economic or social effects of a project onto themselves are not treated as significant effects on the environment; rather, the focus of CEQA is on physical changes in the environment. The comment does not support its speculative assumptions regarding housing with any evidence, such that the County cannot provide a further, specific response.

CENTER for BIOLOGICAL DIVERSITY Because life is good.

May 15th, 2023

Sent via email

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Re: Comments on the Draft Los Angeles County 2045 Climate Action Plan and Draft Recirculated Environmental Impact Report

Dear Ms. Hua:

These comments are submitted on behalf of the Center for Biological Diversity (the "Center") regarding the Draft Los Angeles County 2045 Climate Action Plan ("Plan" or "Draft Plan") and its Recirculated Draft Environmental Impact Report ("RDEIR"). O7-1

The Center previously submitted comments on July 18, 2022 on an earlier version of the Plan and its Draft Environmental Impact Report, which is included here as Exhibit 1 ("July 18th Letter"). We hereby incorporate the comments in the July 18th Letter as well as in previous letters of the Center attached thereto, and request that the issues raised in those letters be considered in preparing the Final EIR and any further revisions to the Plan. O7-2

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over one million members and online activists throughout California and the United States. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles County ("County").

I. The County Should Include Power Plant Emissions in its Greenhouse Gas Inventory and Specific Measures in the CAP to Phase Out Power Plant Pollution. O7-3

As noted in our prior comments, and consistent with climate science and equity, California must transition off fossil fuel electricity and to 100% renewable, just energy by 2030.[1] O7-4 O7-5

[1] *See, e.g.* United Nations Secretary General, Amid Backsliding on Climate, the Renewables Effort Now Must be Tripled (April 4, 2022) *available at* https://www.un.org/sg/en/content/sg/articles/2022-04-04/amid-backsliding-climate-the-renewables-effort-now-must-be-tripled; also Global 100% RE Strategy Group,

meet this target, however, the County should set the most ambitious goals, including setting a schedule to phase out power plants and accelerate decarbonization efforts. The Revised Draft CAP still lacks a GHG emissions reduction target for the electricity generation sector, instead focusing on consumer demand solutions, and entirely omits consideration of climate disruptive pollution from power plants. O7-5 (cont.) O7-6

The County has revised the CAP to clarify that it does not consider pollution from power plants within the County environmental setting.[2] The County reasons that it has "no jurisdictional control or influence" over these emissions.[3] O7-7 O7-8

This omission is particularly problematic given the number of power and peaker plants (fueled by either natural gas or oil) within the County.[4] These power and peaker plants are "disproportionately located in disadvantaged communities, where vulnerable populations already experience high levels of health and environmental burdens."[5] The County should exercise its authority and influence to the greatest extent legally and practicable feasible as either a responsible or lead agency to address this source of pollution. O7-9 O7-10

Deferring mitigation of this climate disruptive pollution to either CARB or the air districts forecloses opportunities for the County to target gaps in state and air district regulation of the energy sector. For instance, the state's 100% zero carbon[6] target focuses on retail sales only. This limitation to retail sales means that power plants can on the one hand meet the SB 100 target, but on the other hand, still combust fossil fuels or other feedstocks for end uses outside of retail sales, such as to meet transmission and distribution losses from the grid.[7] This could potentially amount to 10-15% of power generation derived from combusting natural gas at power plants.[8] The Revised Draft CAP still lacks any measure to address these significant GHG and co-pollutant emissions from the power plant sector. O7-11 O7-12 O7-13 O7-14

II. The County Should Accelerate the Timeline for Measures to Achieve the Full Local and Climate Benefits Presented by Distributed Energy Resources. O7-15

We thank the County for revising the Draft 2045 CAP to include a focus on distributed energy resources ("DER"). Due to the many benefits of DER, as detailed below and in our prior comments, DER can play a key role to achieve CAP decarbonization objectives. As currently O7-16 O7-17 O7-18

"Joint declaration of the global 100% renewable energy strategy group," (2021) *available at* https://global100restrategygroup.org/.

[2] Revised Draft CAP at 1-6.

[3] *Id.*

[4] *See e.g.* PSE Healthy Energy, *Energy Storage Peaker Plant Replacement Project*, *available at* https://www.psehealthyenergy.org/our-work/energy-storage-peaker-plant-replacement-project/

[5] *Id.*

[6] The Center maintains disagreement with the (Revised) Draft CAP definition of zero carbon. As detailed in our prior comments, zero carbon should exclude all combustion resources. O7-19

[7] LA100 Renewable Energy Study Executive Summary (March 2021) at 8, *available at* https://www.nrel.gov/docs/fy21osti/79444-ES.pdf.

[8] *Id.*

revised, however, the Draft CAP diminishes this role by deferring realization of the full potential of DER in the County to an unknown time in the future, and potentially not until 2045. O7-18 (cont.)

As noted in our prior comments, DER confer significant community benefits. These include local economic benefits, including but not limited to local clean energy installation jobs, which are more numerous than utility-scale clean energy jobs.[9] O7-20

The Revised Draft CAP echoes several of these benefits of DER. The Revised Draft CAP identifies DER as a "key climate action for wildfire-prone areas,"[10] and in particular "an alternative to the costly infrastructure upgrades that would be required to maintain uninterrupted power service."[11] Compared to utility-scale development, DER also avoid aesthetic impacts,[12] do not risk conflict with existing plans and policies, as detailed below, and can leverage substantial federal incentives, in particular for resource deployment in disadvantaged communities.[13] O7-21 O7-22

In addition, DER present an opportunity to tackle the escalating electricity rates in the County. Although the RDEIR notes SCE's planned investment of $75 billion in utility infrastructure,[14] to assist in decarbonization strategies, this $75 billion would then be passed on to SCE ratepayers, including those within the County. DER, on the other hand, could avoid a substantial portion of this investment by avoiding costs associated with utility-scale solutions. The Public Utilities Commission has identified transmission buildout as the number one cause of high electricity bills.[15] The number two cause is costs to make utility-scale solutions resilient, primarily wildfire mitigation. As the Revised Draft CAP notes, DER can avoid all of these costs to the benefit of County ratepayers that receive SCE service. Adequate deployment of rooftop solar displaces the need for significant transmission and distribution costs that would traditionally be passed on to ratepayers.[16] By contrast to spending $75 billion, growing local solar and storage would save California ratepayers $4 billion a year, adding up to $120 billion over the next 30 O7-23 O7-24 O7-25 O7-26 O7-27 O7-28

[9] *See, e.g.*, Eric Wesoff and Maria Virginia Olano, *Most US solar jobs are in installation, not manufacturing*, Canary Media, https://www.canarymedia.com/articles/solar/chart-most-us-solar-jobs-are-in-installation-not-manufacturing (Utility-scale solar has a much lower level of labor intensity than distributed solar installation).
[10] *See* Revised Draft CAP at D-15.
[11] RDEIR at 2-22.
[12] *See e.g.* RDEIR at 3.2-9. ("[DER] would be more likely to blend in with the surrounding existing development and visual environment, and they would not be likely to create changes to visual character or quality that would be visible from a scenic vista or that would noticeably significantly interrupt views available from scenic vistas.")
[13] *See e.g.* Revised Draft CAP, Appendix G-4 (referencing "$7 billion for competitive grants to enable low-income and disadvantaged communities to deploy or benefit from zero-emission technologies, including distributed technologies on residential rooftops" from the Inflation Reduction Act.)
[14] RDEIR at 3.7-13.
[15] *See e.g.* CPUC, Utility Costs and Affordability of the Grid of the Future (May 2021) *available at* https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2021/senate-bill-695-report-2021-and-en-banc-whitepaper_final_04302021.pdf
[16] For instance in 2018 alone, the California Independent Systems Operator, citing increased rooftop solar and energy efficiency, canceled 20 transmission projects at a $2.6 billion savings to all ratepayers.

years.[17] Similarly, eliminating the need for additional transmission also eliminates the need for utility-caused and expensive wildfire mitigation, such as the costs for undergrounding of transmission lines and associated power shutoffs.[18] O7-29

In fact, the majority of the metrics detailed to assess the effectiveness of the County's decarbonization of the energy supply efforts are DER. O7-30 In addition to "total installed DER capacity," other metrics include degree of deployment of rooftop solar PV, energy efficiency, microgrids, and frontline community benefits — all DER.[19] O7-31

Finally, the Revised Draft CAP notes:

> The energy transition includes not only a shift in energy sources, but also a shift in where and when energy is generated and how it is used and managed. This requires rethinking the energy grid to move away from a centralized system dominated by large-scale fossil fuel-based power plants with a one-way flow of energy from source to customers. Instead, the grid is becoming increasingly decentralized, distributed, localized, and network-based. Over time, this will enable greater energy resilience because the system will be able to respond and adapt to local conditions in a more precise way, limiting large-scale disruptions.[20]

The County is clearly aware of how DER does and continues to play an integral and growing role in decarbonizing the energy system. O7-32 Yet surprisingly, the County does not prioritize DER as it does utility-scale measures. O7-33 Having identified that SCE lacks sufficient capacity to enroll residents and businesses in their Green Rate option, Measure ES2 is revised to strive for enrollment in SCE's program (utility-scale resources, located at great distance from the County) "or other available 100 percent zero carbon electricity service by 2030."[21] O7-34 This lacks the specificity required under CEQA; CEQA mitigation measures and/or CAP GHG reduction strategies must be specific, enforceable, and be capable of being implemented. O7-35 The County should instead prioritize DER, and then have remaining capacity met with SCE or CPA Green Power rate options. O7-36 Similarly, while the Revised Draft CAP increases the performance objectives for rooftop solar PV (Measure ES3), the County should consider how more aggressive targets for Measure E3 can cure the vague provisions in Measure ES2. O7-37

This would also require accelerating development of the "community energy map" (measure ES4.3). O7-38 The community energy map would identify opportunities for DER deployment, but is currently drafted as a medium to long term measure for completion between 2035-2045. O7-39 Several

[17] Vibrant Clean Energy, Role of Distributed Generation in Decarbonizing California by 2045 (July 2021) at 6 *available at* https://www.vibrantcleanenergy.com/wp-content/uploads/2021/07/VCE-CCSA_CA_Report.pdf.
[18] R.20-08-020, Protect Our Communities Foundation, Rebuttal Testimony of Bill Powers, P.E. (July 16, 2021) at 28-32.
[19] Revised Draft CAP at 4-6.
[20] Revised Draft CAP at 1-26.
[21] *See e.g.* Revised Draft CAP at B-15.

existing studies already show the potential for DER in the County.[22] The County should instead leverage that research and work with community-based organizations that already seek DER to deliver community benefits. The County should not defer realization of the full potential of DER for another 10 plus years, or even longer to 2045. Delaying implementation of DER-focused strategies risks locking the County into utility-scale solutions that present greater environmental harms, and are not even built yet.

O7-39 (cont.)
O7-40
O7-41
O7-42

III. DER Avoid Significant Impacts Omitted From the Revised CAP and RDEIR.

O7-43

The County should revise the CAP and RDEIR to account for the environmental impacts from utility-scale solutions, including biofuels.

O7-44

Poorly sited large-scale solar development can result in habitat fragmentation, loss of connectivity for terrestrial wildlife, destruction of carbon sequestration of soils, and introduction of predators and invasive weed species on intact habitat.[23] Onshore wind projects, though they require a smaller footprint than solar projects and thus pose less terrestrial damage,[24] still pose risks to bird and bat mortality, and threats of fragmenting large swaths of land and habitat due to adjacent power lines and roads.[25] Finally, geothermal energy has the potential to also impact biodiversity when sited adjacent to surficial thermal water features, which often are altered in their discharge

O7-45
O7-46
O7-47

[22] *See e.g.* Los Angeles Business Council, UCLA Luskin Center for Innovation, *Bringing Solar Energy to Los Angeles* (July 2010), *available at* https://innovation.luskin.ucla.edu/wp-content/uploads/2019/03/Bringing_Solar_Energy_to_Los_Angeles.pdf.

[23] *Id.* Critically, although ample space exists to develop solar facilities outside areas of high conservation value, some of the nation's utility-scale solar development has occurred in core ecological habitats. Careful siting on already built environments, like residential and commercial building rooftops and parking lots, as well as degraded lands and areas without imperiled species, can avoid these impacts. *See* R.R. Hernandez et al., *Techno-Ecological Synergies of Solar Energy for Global Sustainability*, 2 Nature Sustain. 560 (2019); D. Richard Cameron et al., *An Approach to Enhance the Conservation-Compatibility of Solar Energy Development*, PLOS One (2012). *See also* Patrick Donnelly & Jean Su, *No free lunch on green energy*, Las Vegas Review-Journal (June 19, 2021) *available at* https://www.reviewjournal.com/opinion/nevada-views-no-free-lunch-on-green-energy-2382525/; Noelle Swan, *Energy, Wildlife, and the Myth of the Zero-Sum Game*, Christian Science Monitor (July 12, 2021), https://www.csmonitor.com/Commentary/From-the-Editor/2021/0712/Energy-wildlife-and-the-myth-of-the-zero-sum-game.

O7-48

[24] Communication with Ben Hoen, Research Scientist, Lawrence Berkeley National Lab (Aug. 13, 2021). The National Renewable Energy Laboratory (NREL) estimated a density of 2.74 +/- 1.4 MW/km^2 for wind projects. *See* Dylan Harrison-Atlas et al., *Spatially-Explicit Prediction of Capacity Density Advances Geographic Characterization of Wind Power Technical Potential*, 14 Energies 3609, 3617 (2021). The Lawrence Berkeley National Lab estimated a density 86 MW/km^2 for solar. *See* Bolinger, "Land requirements for utility-scale PV," ASES Solar 2021, August 5, 2021. For solar projects, nearly 100% of the land is covered with panels, while wind projects—after construction—only take up the area of the pad and access roads. NREL estimated this "direct" land impact as 333 MW/km^2. *See* Paul Denholm et al., Nat. Renewable Energy Lab., Land-Use Requirements of Modern Wind Power Plants in the United States 10 tbl. 1 (2009) *available at* https://www.nrel.gov/docs/fy09osti/45834.pdf.

[25] *See e.g.* Scott Loss et al., *Direct Mortality of Birds from Anthropogenic Causes*, 46 Ann. Rev. Ecol., Evol., and System. 99 (2015) (detailing that limiting biodiversity impacts and bird and bat mortality can be achieved with operational measures, such as higher cut-in speeds and curtailment during certain seasons times of day, heights and outside migratory pathways).

temperature, geochemistry, or quantity after production commences.[26] Rooftop, parking lot, and ground mounted solar, in contrast, lack the impacts resulting from remote, utility-scale projects; and more than sufficient solar potential remains available from rooftop, parking lot and ground mounted solar to meet California's decarbonization targets.[27] O7-47 (cont.) O7-49

While the Revised Draft CAP details some of these significant impacts, the RDEIR fails to analyze the degree of these impacts, especially when DER present an environmentally superior alternative. Notably, DER can displace the need for dirty combustion resources, including biomethane.[28] The Revised Draft CAP and the RDEIR fail to detail the significant local impacts of biomethane production and combustion within the County. Biomethane production and combustion, while considered a zero-carbon resource under SB 100, cause undue harm to disadvantaged communities and present a false climate solution.[29] The IPCC itself acknowledges, with high confidence, that biofuels can have "adverse socio-economic and environmental impacts, including on biodiversity, food and water security, local livelihoods, and rights of Indigenous Peoples."[30] Biomass facilities are often concentrated in low-income communities and communities of color that are already suffering from high pollution burdens, and worsening environmental injustices. For example, in the San Joaquin Valley in California, four out of five active biomass plants and four out of five idle biomass plants are located in DACs.[31] Most of these communities O7-50 O7-51

[26] Sorey, M. L. 2000. *Geothermal development and changes to surficial features: Examples from the Western United States*, Proceedings World Geothermal Congress, *available at* https://www.geothermal-energy.org/pdf/IGAstandard/WGC/2000/R0149.PDF.

[27] *See e.g.* Pursuing a Just and Renewable Energy System: A Positive & Progressive Permitting Vision to Unlock Resilient Renewable Energy and Empower Impacted Communities (May 2023) *available at* https://www.biologicaldiversity.org/programs/energy-justice/pdfs/Policy-Brief-for-Positive-Vision.pdf

[28] *See e.g.* RDEIR at 2-26 ("use of biomethane on-site in buildings are key to decarbonization").

[29] Properly accounting for the climate impacts of biomass and biomethane is particularly challenging. This is because carbon accounting for biogenic feedstocks involves complex counterfactuals about what would have happened to waste methane if it were not captured (for biomethane feedstocks), whether and when forest biomass will regrow (for woody biomass feedstocks), and what indirect land-use changes will result from using cropland to produce energy crops (for crop-based feedstocks). Consequently, experts that study the climate impacts of these feedstocks identify estimates with wide ranges of uncertainty. *See, e.g.*, Richard Plevin, *Uncertainty in estimating the climate effects of biofuels: EPA Workshop on Biofuel Greenhouse Gas Modeling* (Mar. 1, 2022), *available at https://www.epa.gov/system/files/documents/2022-03/biofuel-ghg-model-workshop-estimating-biofuel-climate-effects-2022-03-01.pdf;* Miguel Brandao et al., *On quantifying sources of uncertainty in the carbon footprint of biofuels: crop/feedstock, LCA modelling approach, land-use change, and GHG metrics, Biofuel Rsch. Journal* (June 1, 2022) *available at https://www.biofueljournal.com/article_148830_cfd95668b16943c4b53ed4b7e16977ce.pdf.* The U.S. EPA for example, found in its review of the Renewable Fuel Standard that the program had led to the conversion of up to 8 million acres of land—nullifying and overwhelming any climate benefit the program might have had. *See* EPA, *Biofuels and the Environment: Second Triennial Report to Congress, at 39 (June 29, 2018), available at https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=IO&dirEntryId=341491*. O7-52

[30] UN Intergovernmental Panel on Climate Change, 2023, AR6 Synthesis Report 2023, https://report.ipcc.ch/

[31] *See generally* Cal. Office of Env. Health Hazard Assessment, SB 535, *available at* https://oehha.ca.gov/calenviroscreen/sb535

are within the ninetieth percentile for air pollution burden, and some are in the top percentile. Biomass power plants are also guilty of repeated air quality violations.[32] Yet the RDEIR does not detail any of these significant impacts — impacts that DER can avoid.[33] O7-51 (cont.)

IV. The RDEIR Does Not Adequately Respond to Comments Advocating for A More Realistic Target for Phasing Out Oil and Gas Operations. O7-53

The Draft Climate Action Plan continues to include an underwhelming and confusing ultimate target of 80 percent reduction of emissions from oil and gas operations by 2045. O7-54 As noted in the RDEIR, the Board of Supervisors adopted the Oil Well Ordinance on January 24, 2023. That Ordinance prohibits new oil wells and makes existing oil wells and production facilities nonconforming uses. Under the County Code, such nonconforming uses must be discontinued and removed from their sites within twenty years.[34] The Climate Action Plan should at a minimum reflect this timeline (i.e., 2043) for phase out of oil and gas operations and acknowledge that the timeline could be shortened further following the amortization study. O7-55 In addition, either the target should be a 100% reduction of emissions from oil and gas operations, or the County should explain why an 80% reduction is appropriate. While there may be certain operations that are not removed by 2043 as a result of the Oil Well Ordinance, including orphan wells with no discernable owner, or operations not subject to the Oil Well Ordinance, the County should be transparent about why it assumes 20% of emissions will not be addressed. O7-56

The RDEIR also makes unfounded assertions about the possible impacts of an earlier oil and gas phase out. O7-57 While we acknowledge and appreciate the hard work of County staff to move this process forward, we disagree with the discouraging framing that completing a phase-out by 2045 will be "daunting." Los Angeles County is one of several jurisdictions moving forward with a process to phase out oil and gas extraction. As local governments gain more experience, it is likely that implementation of phase-outs will become easier. O7-58 In addition, all discussion of possible impacts from a phase-out ahead of 2043 is speculative and should be reserved until the Board of Supervisors moves forward with any such plan. O7-59

Four active biomass plants (Rio Bravo Fresno, DTE Stockton, Merced Power, and Ampersand Chowchilla) and four idle biomass plants (Community Recycling Madera Power, Covanta Mendota, Dinuba Energy, and Covanta Delano) are in census tracts designated as disadvantaged under SB 535.

[32] *See* EPA Enforcement and Compliance History Online Database, *available at* https://echo.epa.gov/.

[33] *See e.g.* RDEIR at 3.12-17: "retrofitting of existing buildings, development along existing transit areas, infill projects in urban locations that are already developed, electric vehicle charging stations, or distributed energy resources such as rooftop solar panels") thereby avoiding environmental impacts and inconsistencies with local plans and ordinances; RDEIR at 3.12-18: "Larger scale projects facilitated by the Draft 2045 CAP . . . such as utility-scale solar generation facilities . . . could be be inconsistent with certain General Plan policies related to land use, specifically Policies LU 6.1, LU 6.2, LU 6.3, LU 10.3, LU 10.5, LU 10.10, C/NR 13.1, and C/NR 13.8.") O7-60

[34] County Code § 22.172.050(B). It is possible that the time period could be extended for some wells through the process outlined in section 22.172.060. O7-61

V. The Plan Should Further Emphasize Conservation of Natural Lands and The Role of Poorly Sited Development in Increasing Wildfire Risk. O7-62

As outlined in the July 18th Letter (pages 14-18), the Plan should include strategies, funding, and measures to conserve valuable carbon-sequestering, biodiversity-supporting, climate change-resilient non-forest habitats like shrublands, grasslands, deserts, and wetlands. We appreciate that revisions have been made to the Draft CAP to address our comments and we urge further focus and funding on conserving these habitats to combat climate change. O7-63

As outlined in the July 18th Letter (pages 19-21), the Plan must address the role of poorly planned development in contributing to wildfire risk while implementing ecosystem appropriate wildfire management strategies. This is necessary to ensure the Plan is consistent with other County policies (including the General Plan's Safety Element) and to acknowledge and disclose the link between climate change and land use planning. While we appreciate that the Draft Plan now includes some revisions consistent with our recommendations to revise Implementing Action A1.2, it still does not acknowledge the link between development in fire-prone areas and increased fire risk and the climate crisis. O7-64

We also note that despite our recommendation (page 22), the Draft Plan does not appear to set any goals or take any actions to incorporate traditional ecological knowledge into wildfire management and climate change strategies. We urge incorporation of these feasible measures into the Plan and/or RDEIR so reduce wildfire risk and protect carbon-storing habitats. O7-65

VI. The CAP Streamlining Checklist Should Provide More Clarity on Performance Standards. O7-66

We note that the Draft CAP Checklist in Appendix F includes various proposed checklists and decision-making processes to determine which projects are eligible for CEQA streamlining under the CAP and which project may not be. As outlined in previous letters including our April 30, 2020 letter, CAP mitigation measures must be specific and enforceable in order to render the CAP legally defensible as a CEQA streamlining program. Unfortunately, the CAP still has significant defects in this area. For instance, Appendix F of the Draft CAP allows for streamlining if a project can demonstrate compliance with various county ordinances including a zero net energy (ZNE) ordinance, all electric buildings ordinance, zero emission vehicle master plan, building performance standards, and/or net zero water ordinance. Yet, as the Draft CAP acknowledges, none of these ordinances have been adopted, although the County is seeking to adopt them by 2030.[35] O7-67

The Draft CAP does not explain how CAP compliance on a project-by-project basis will be determined or achieved before adoption of these ordinances. The Draft CAP should provide more clarity as to what measures would be required for each type of project *prior* to adoption of each of these ordinances; for instance, until a ZNE ordinance is adopted, the Draft CAP should require ZNE for applicable projects and include a definition of ZNE within the checklist. O7-68

Without such clarity, the CAP cannot properly function as a CEQA streamlining document. O7-69

[35] RDEIR, Appx. F, at F-31.

VII. Conclusion

Thank you for the opportunity to submit comments on the Draft Plan and RDEIR. The concerns outlined in this letter are non-exhaustive, and we reiterate those issues that remain unaddressed from our July 18th Letter and the other Center letters attached thereto. We look forward to reviewing the analysis and mitigation strategies in the Final EIR and Plan and proposing suggestions to refine and strengthen them. We also are happy to meet again with County staff to discuss any of the recommendations in this letter, the July 18th Letter, or previous letters of the Center. Please do not hesitate to contact the Center with any questions at the email or number listed below. O7-70

Sincerely,

J.P. Rose
Policy Director & Senior Attorney
Urban Wildlands Program
Center for Biological Diversity
Telephone: (408) 497-7675
jrose@biologicaldiversity.org

Exhibit 1

CENTER for BIOLOGICAL DIVERSITY Because life is good.

July 18, 2022

Sent via email

Thuy Hua, Supervising Regional Planner
Los Angeles County Department of Regional Planning
320 West Temple Street, 13th Floor
Los Angeles, CA 90012
climate@planning.lacounty.gov

Re: Comments on the Draft Los Angeles County 2045 Climate Action Plan and Draft Environmental Impact Report

Dear Ms. Hua:

These comments are submitted on behalf of the Center for Biological Diversity (the "Center") regarding the Draft Los Angeles County 2045 Climate Action Plan (Plan) and its Draft Environmental Impact Report (DEIR). The Center submitted comments on an earlier version of the draft Plan on April 30, 2020 and on the Notice of Preparation for the DEIR on February 1, 2022, which is included here as Attachment A. We hereby incorporate the comments in both letters by reference and request that the issues raised in those letters be considered in preparing the Final EIR and revised Plan. O7-71

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over one million members and online activists throughout California and the United States. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles County ("County").

The County has proposed an "aspirational goal" of "carbon neutrality" in 2045 with interim targets of 40 percent and 50 percent GHG emissions below 2015 levels by 2030 and 2045, respectively. To adequately address the climate crisis and the closely related public health and environmental justice crises, the Plan must do better.

Climate science demands greater reductions in the near-term that will require a further accelerated transition away from fossil-fuel energy systems and an accelerated adoption of proven, cost-effective, zero-emission solutions that alleviate the disproportionate harm of fossil fuel extraction and combustion. As the world's scientists have repeatedly warned, we are out of time to act on climate. We simply cannot afford any further delay of needed pollution reductions.

Accordingly, the Plan must achieve much more rapid emissions reductions in the near-term and prioritize emission reductions over "carbon neutrality." Under the current Plan, the County projects that, by 2045, it will have a gap of approximately 23 percent "residual emissions" of GHG emissions reductions left to fill to reach carbon neutrality by 2045. (Plan at 3-3). It crosses its fingers and hopes to rely on new technologies, or – perhaps – carbon removal strategies, such as carbon capture and sequestration (CCS) and direct air capture (DAC). (Plan at ES-7, 3-8 – 3-9). There is much more the County can and must do to reduce emissions directly with proven, cost-effective solutions, rather than rely on speculative and problematic technologies like CCS, bioenergy, and DAC.

The Center appreciates the opportunity to raise these concerns with the County. If you have any questions about the Center's concerns, please contact Hallie Kutak at the phone number or email listed at the end of this letter.

I. THE COUNTY MUST INCLUDE A MORE ACCELERATED OIL AND GAS PRODUCTION PHASE OUT MEASURE AND TRANSITION TO CLEAN RENEWABLE ENERGY BY 2030.

A. California Should Phase Out Fossil Fuel Extraction by 2030, If Not Earlier.

Angelenos have been exposed to the harmful impacts of living near fossil fuel production for far too long. The oil and gas industry pollutes our air, soil, and water; harms public health; and fuels the escalating climate crisis. Impacts in the County have been concentrated in historically disadvantaged communities: nearly 73 percent of County residents that live near oil and gas wells are people of color. (Los Angeles County Board of Supervisors Mitchell and Kuehl, 2021). To protect public health and avoid the worst climate catastrophes, a robust body of scientific research has established that no new fossil fuel production and infrastructure can be permitted, and the U.S. must end existing oil and gas production by 2030, not 2045, for a reasonable chance of limiting global temperature rise to 1.5°C.

Measure ES-1 of the Plan—develops a sunset strategy for oil and gas production in unincorporated Los Angeles County by 2045, with performance objectives of reducing emissions from operations by 40 percent below 2015 levels by 2030, 60 percent by 2035, and 80 percent by 2045 (Plan at 3-14)—is inconsistent with science-based climate targets and the County's latest actions to protect communities from oil and gas extraction.

The Plan should instead include a measure to phase out all fossil fuel production by 2030 or earlier, to align with recent research about the measures necessary to ensure temperature rise does not exceed 1.5°C. For example, a recent report found that, for a 50 percent chance of staying within a 1.5°C carbon budget, there can be no new fossil fuel development and 40 percent of developed fossil fuel reserves need to stay in the ground. (Trout et al. 2022). Another recent report agreed that there can be no new fossil fuel production for a 50:50 chance of staying within 1.5°C temperature rise and added that the UN's equity framing of "common but differentiated responsibility" requires wealthier nations with economies less dependent on oil and gas revenues to lead the way with high rates of closure and early phase-out dates. This means that, for the U.S. (and 18 other wealthy nations with the highest capacity for a just transition), oil and gas production must be cut by 74

percent by 2030 with zero production by 2034. (Calverley & Anderson 2022). For this reason, ending oil and gas production throughout California in 2045 is compatible only with the lowest ambition temperature scenario studied; it falls "far short" of what is necessary to stay within a 1.5°C carbon budget. The proposed 2045 timeline for Los Angeles is similarly insufficient, despite the recognition in Goal 7 of the County's 2019 Sustainability Plan that rapidly moving toward a zero-carbon energy system—including "eliminating fossil fuel production in the County, including drilling, extraction, and refining"—is necessary to keep the County's commitment to containing temperature rise, in alignment with the goals of the Paris Climate Agreement. (Los Angeles Countywide Sustainability Plan, 2019).

A 2030 or earlier timeframe is also necessary for the Plan to be consistent with recent County actions. As noted in the Plan, in September 2021 the Board of Supervisors voted to phase out oil and gas drilling and ban all new drill sites in unincorporated County areas. The Plan fails to mention, however, that the September 2021 motion specifically requested an "analysis of the feasibility of a 5-year phase-out period." (Los Angeles County Board of Supervisors Mitchell and Kuehl 2021). The Board of Supervisors requested the five-year timeline because it would align with actions by Culver City to phase out oil[1] and a similar proposal by the City of Los Angeles. More recently, the County Department of Regional Planning drafted an ordinance that will ban new drilling and make oil operations throughout the County a legal nonconforming use that must be phased out within 20 years. (Los Angeles County Department of Regional Planning, Staff Report 2022). The Department also posted a Request for Proposals for an amortization study that would determine the fastest date by which operations can be phased out. The ordinance is expected to be enacted in "late 2022," and the Requests for Proposals are due July 12, 2022, with a proposed 18-month contract timeline and final amortization recommendations due in May 2023. (Los Angeles County Department of Regional Planning, RFP 2022). In other words, the County will soon have a 2042 default phase out deadline, which may move up to 2027 or some other date before 2030 if the amortization study finds those dates to be legally defensible. The Plan should align Measure ES-1 with these timelines.

Similarly, the Plan does not clarify why Measure ES-1 stops short of reducing emissions by 100 percent. Measure ES-1 focuses on reducing emissions 80 percent below 2015 levels by 2045 with a paired strategy of removing carbon with direct air capture and carbon sequestration. The inclusion of carbon capture as part of the strategy drives the uncertainty in costs associated with Measure ES-1. (Plan, Appendix E at E-3). Carbon capture adds potentially more than $100 million to the cost estimate. There is no need to add millions of dollars in costs to this measure to capture or remove carbon dioxide when the County's strategy already addresses the vast majority of oil and gas operations throughout the County. The County plans to phase out oil and gas operations through an amortization program that addresses all active and idle wells, and through a separate strategy to address wells in the Inglewood Oil Field. (Los Angeles County Department of Regional Planning, Ordinance Website 2022). The only wells that the County's current efforts will not address before 2045 are "orphan" wells that have no known operator to hold accountable for proper well abandonment. And the County has begun work on a pilot program to address likely-orphan wells

[1] Culver City recently commissioned a study to determine what a reasonable amortization period would be for the oil wells within its jurisdiction and found that the operator achieved amortization of its capital investment *within four to five years of purchasing the wells.* (Cheek et al. 2020).

using state and federal funding. (Los Angeles County Board of Supervisors Hahn and Mitchell 2021). It is not clear if the Plan assumes that these orphan wells account for the remaining 20 percent of emissions that cannot be eliminated by 2045, or if there are other reasons why emissions cannot be eliminated. The County should explain why it expects emissions to decrease only 80 percent from this measure, especially since the source of those remaining emissions should dictate the implementing actions the County takes. It would be far less costly and more effective to invest resources in addressing orphaned wells if those are the source of remaining emissions than it would be to devise and implement a carbon removal strategy.

B. The County Must Phase Out Power Plants And Accelerate Its Targets For Clean Electricity And Distributed Generation.

As noted above and consistent with climate science and equity, California must transition off fossil fuel electricity and to 100 percent renewable, just energy by 2030. To meet this target, the County must set more ambitious goals, including setting a schedule to phase out power plants and accelerate decarbonization efforts. The current Plan lacks a sufficient target for the electricity generation sector, focusing instead on consumer demand solutions.

1. The County Must Analyze the Phase Out of Power Plants.

After the Supreme Court's disastrous decision limiting the authority of the U.S. Environmental Protection Agency to address the devastating impacts of power plant pollution, it is imperative that local jurisdictions take appropriate action to meet our climate and equity goals. (*West Virginia v. EPA*, No. 20-1530 (June 30, 2022).) This is particularly true for the County and the many power plants in its jurisdiction.

The Plan aims to align with other state and regional initiatives, specifically the implementation of Senate Bill (SB) 100. But SB 100's 100 percent zero carbon target is limited to retail sales of electricity. This limitation means that power plants can technically meet the SB 100 target while still combusting fossil fuels or other feedstocks for end uses outside of retail sales, such as to meet transmission and distribution losses from the grid. (LA100, 2021). As a result, natural gas combustion could potentially amount to 10 to 15 percent of power generation. (*Id.)* In this regard, outside of the catch-all carbon removal strategy, the Plan lacks any measure to address the significant GHG and co-pollutant emissions from the power plant sector. Instead, the Plan proposes to decarbonize the electricity generation sector with utility scale solar, rooftop solar and other distributed energy resources ("DERs"), and demand response strategies. But it is silent on limiting electricity generation emissions. In conjunction with its proposed strategies, the County should also include a measure to limit and eventually phase out power plant pollution.

As detailed below, the County should revise its definition of zero carbon and include measures to phase out power plants. By prioritizing DERs, the County can cure the feasibility issues associated with utility-scale solar. In this way, the County can accelerate the Plan's target for clean electricity generation and achieve zero combustion resources by 2030.

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2. The County Should Revise the Definition of Zero Carbon.

The Plan defines zero carbon as "energy resources that either qualify as "renewable" in the most recent Renewables Portfolio Standard (RPS) Eligibility Guidebook or generate zero GHG emissions on-site." (Plan at 3-15). This is the same definition used by the State for SB 100, which omits lifecycle analyses. These categories are flawed for several reasons and using them will hinder progress toward the County's carbon goals.

First, not all of these resources are, in fact, renewable or carbon-neutral. For instance, evidence shows that, like coal and oil, woody biomass – which is included in the RPS – is a carbon-burning form of energy production that emits carbon dioxide and contributes to the climate crisis. Biomass power plants are California's dirtiest electricity source—releasing more carbon at the smokestack than coal. (Sterman et al. 2018). The average GHG emission rate for California's current electricity portfolio is about 485 pounds carbon dioxide equivalent (CO_2e) per megawatt hour (MWh).[2] In 2018, woody biomass power plants in California emitted more than *seven times* that amount, averaging 3,500 pounds CO_2e per net MWh for non-cogeneration facilities.[3]

Second, automatic inclusion under these programs and definitions precludes an adequate environmental review of local impacts. In particular, the SB 100 analysis omits analysis of significant increases in local air and water pollution in and around mega-dairies from the production of biomethane from dairy waste feedstock. And in California, biomass power plants are among the worst emitters of particulate matter and NOx. Certainly, the LA100 Study includes a No Biofuels scenario to address this concern, and the County should do the same, or otherwise disclose that its

[2] See CARB, California Greenhouse Gas Emissions for 2000 to 2018, Trends of Emissions and Other Indicators (2020 Edition) at Figure 9 (GHG Intensity of Electricity Generation); *see also* CARB, 2000-2018 Emissions Trends Report Data (2020 Edition) at Figure 9, showing the overall GHG Intensity of Electricity Generation in 2018 of 0.22 tons CO2e per MWh, which is equal to 485 pounds per MWh. These calculations were based on the 2020 trends report, however the 2021 edition, California Greenhouse Gas Emissions for 2000 to 2019, Trends of Emissions and Other Indicators (July 28, 2021) (Figure 9) shows a similar number (0.21 tones CO2e per MWh), https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf (data available for download at https://ww2.arb.ca.gov/ghg-inventory-data).

[3] Total CO2e emissions for each facility in 2018 come from California Air Resources Board Mandatory GHG Reporting Emissions data, available at CARB, *Mandatory GHG Reporting – Reported Emissions*, https://ww2.arb.ca.gov/mrr-data (last visited June 23, 2022). Data on net MWh produced by each facility in 2018 come from the Cal. Energy Comm'n, *California Biomass and Waste-To-Energy Statistics and Data*, https://ww2.energy.ca.gov/almanac/renewables_data/biomass/index_cms.php (last visited June 23, 2022). Total CO2e produced by the nine electricity only, non-cogeneration active woody biomass facilities with available data totaled 2,127,693 metric tons, and net MWh in 2018 from these nine facilities totaled 1,334,346 MWh, for an average of 1.59 metric tons CO2e per net MWh, equal to 3,515 pounds CO2e per net MWh. The average of 3,515 pounds CO2e per MWh includes electricity-only plants; cogeneration plants are excluded because some of their CO2 emissions are from heat-related fuel consumption. The high CO2e rate-per-MWh is similar for biomass facilities without cogeneration.

electricity generation measures implicate increased and unjust mega-dairy practices, including increased groundwater and air pollution in the Central Valley.

In response to these concerns, the Joint Agencies (the CEC, CPUC and Air Resources Board, "CARB") developed a "No Combustion scenario." The County should replace its zero carbon definition with the definition of No Combustion, which excludes combustion technology, combustion turbines, combined cycle, combined heat and power, and biomass. (Joint Agencies 2021).

3. The County Should Achieve a "High DER" Future.

The Center appreciates the County's identification of the many benefits of DERs, including community ownership, wildfire mitigation, reducing peak energy demand, resiliency and eliminating the need for the construction of new generation facilities. (Plan at 3-11). There are other benefits to DERs, especially to disadvantaged communities. To maximize these benefits, the County should prioritize the deployment of DERs, versus placing too great a reliance on utility-scale solar measures.

The 2021 Joint Agency Report analysis, implementing SB 100, concluded it is possible to eliminate all combustion resources by 2045. (Joint Agencies 2021). That analysis, however, did not include DERs. As detailed below, DERs are an integral component to meet our climate and equity goals and can theoretically generate enough power to meet U.S. electricity needs multiple times over. (National Renewable Energy Laboratory, 2012). DERs also present significant benefits, can center equity and minimize impacts to biodiversity and habitats. The California Energy Commission ("CEC") recently initiated a rulemaking to examine how California can achieve a "High DER" future. (CEC 2022). In that rulemaking, the CEC is exploring "issues related to the operation and performance of a mature high-DER electricity system in California, as well as near-term issues that must be addressed along the path to the future system," specifically to "optimize DER benefits and value in support of advancing state goals for decarbonization, resilience, affordability, and environmental justice and equity. (*Id.* at 3-4). Similarly, the Public Utilities Commission ("CPUC") also "anticipates a high-penetration DER future and seeks to determine how to optimize the integration of millions of DERs within the distribution grid while ensuring affordable rates." (CPUC 2021). The Plan should match the State's ambition for DERs.

(i) ***The County Should Revisit its Over-Reliance on Utility-Scale Solar.***

Although the County proposes to decarbonize the electricity system through all three strategies of utility-scale solar, rooftop solar and other DERs, and demand response, the Plan measures place a tremendous reliance on utility-scale programs, limiting the ambition for alternative generation options through DERs. Measure ES2 seeks 100 percent municipal participation (by 2025) and 96 percent community participation (by 2030) in either Southern California Edison's (SCE's) Green Rate or the Clean Power Alliance's ("CPA") Green Power programs. (Plan, Appendix E at E-3). By contrast, the targets for rooftop solar are far less ambitious. For instance, the Plan proposes a mere five percent growth in rooftop solar on existing multifamily residential and commercial buildings by 2030. Including more aggressive targets, especially for new construction of multifamily residential buildings, will allow low-income renters

to leverage other programs with associated benefits, including the Solar on Multifamily Affordable Housing and Virtual Net Energy Metering programs.

The Plan must recognize the difference between "community solar" through the Green Rate and Green Power programs and actual solar *in* the community, which drives realization of the several community benefits detailed below. Neither SCE nor CPA's solar options are located "in the community," or close to customer demand, but instead require generation from large facilities far away from demand. For example, CPA's clean energy would not be generated in certain communities, areas, or even Los Angeles County: "[a]lmost all this energy will come from wind and solar farms in California with a little bit coming from other western states and a little coming from geothermal and small hydroelectric." (DEIR at 3.1-13). Due to the distance of these facilities from County residents, these solar farms require substantial transmission infrastructure, with associated line losses, land use and affordability impacts that DERs avoid.

(ii) ***DERs Present Several Benefits to Achieve our Climate and Equity Goals.***

Utility-scale solutions will simply not meet our climate and equity goals. 100 percent clean electricity requires serving the County's hardest to reach residents where affordability is paramount. (CEC 2016). Achieving affordable electricity bills is critical to decarbonizing our electricity systems, and DERs present several benefits to ratepayers that utility-scale solutions cannot achieve. For instance, adequate deployment of rooftop solar displaces the need for significant transmission and distribution costs that would traditionally be passed on to ratepayers. In 2018 alone, the California Independent Systems Operator, citing increased rooftop solar and energy efficiency, canceled 20 transmission projects at a $2.6 billion savings to all ratepayers. Growing local solar and storage would save California ratepayers $4 billion a year, adding up to $120 billion over the next 30 years. (Vibrant Clean Energy 2021). Similarly, eliminating the need for additional transmission also eliminates the need for utility-caused and expensive wildfire mitigation, such as the costs for undergrounding of transmission lines and associated power shutoffs. DERs also present local economic benefits, including but not limited to local clean energy installation jobs, which are more numerous than utility-scale clean energy jobs. (Wesoff and Olano 2022).

DERs can also cure feasibility issues raised by utility-scale solar. The Joint Agency SB 100 Report, which does not include DERs, shows that we need to build 2.8 GW/year of large-scale solar, every year for 25 years, along with 1.1 GW of consumer solar. However, our average build rate of large-scale solar has to-date been 1.0 GW/year. It is unclear if 2.8 GW/year is possible or affordable. Certainly, SCE's Green Rate program has suspended "all enrollments" for its 50 percent and 100 percent options, due to the need to construct additional utility-scale generation. A more robust deployment of DERs would eliminate this need for additional construction and generation potentially hundreds of miles away from demand.

Adequate deployment of rooftop solar can also minimize the need for the estimated million acres of land to meet the SB 100 core scenario's proposal for utility-scale solar, upon which the Plan places most of its reliance. Utility-scale solar presents significant land use impacts to biodiversity, species and habitats and eliminates opportunities for natural carbon sinks. (Butt et al. 2013; Brittingham et al. 2014; Pickell et al. 2014; Souther et al. 2014; Allred et al. 2015; B. Harfoot

et al. 2018). It is simply not feasible to place such reliance on utility-scale solar to meet our climate goals. Backlogs in interconnection queues for utility-scale resources, compounded by the time necessary to plan and build transmission creates a bottleneck preventing necessary buildout by 2030, the critical decade for GHG reduction.

The County should revise the Plan to include more aggressive targets for DER adoption, especially as SCE does not currently have the generation capacity for its utility-scale program. The County should instead take this opportunity to use the Plan to send the appropriate market signals to accelerate DER development to the benefit of the County, especially its historically marginalized residents.

(iii) ***The County Should Implement DERs "From the Ground Up."***

Certain portions of the electricity grid are in such disrepair, especially in low-income communities, that the only viable electrification and resilience solutions may be non-wire alternatives presented by DERs. (Brockway et al. 2021). As noted above, utility-scale solutions are not adequate, and the County should propose particularly ambitious efforts to meet the energy needs of the County's disadvantaged communities.

At a recent joint CEC and CPUC workshop on achieving a High DER future, the two agencies committed to collaborating on community engagement efforts to determine how DERs could meet community-level needs, and thereby ensure that DAC residents are not left behind in a just and clean energy transition. The Center appreciates the County's proposal to identify geographic opportunities to deploy DERs (Plan at 3-11, Action ES4-3), and encourages the County to include measures in the Plan to further coordinate with the CEC and CPUC to serve the hardest to reach residents and achieve more ambitious targets for DERs.

II. THE COUNTY SHOULD SET CLEAR AND MORE AMBITIOUS BENCHMARKS FOR ZERO EMISSIONS TRANSPORTATION.

The transportation sector accounts for over 50 percent of total LA County GHG emissions. (Plan at 2-2). It is therefore imperative that the County do everything in its power to reduce these emissions with clear, ambitious reductions targets. As described below, the County must do more to reduce vehicle miles travelled (VMTs) and tailpipe emissions (including from freight transport), and to increase public transit and deployment of and access to electric vehicles (EVs) and charging infrastructure.

A. Cars and Light Trucks

1. ZEV Sales Targets

Measure T-6 (Plan at 3-29, Appendix E at E-9) calls for sales of new light-duty ZEVs in the County to be 60 percent by 2030 and 100 percent by 2035. Yet the Advanced Clean Cars II rule ("ACC II"), currently being finalized by the Air Resources Board, calls for *68 percent EV sales by 2030*. The County's current plan is less than what ACC II calls for statewide. (CARB, ACC II 2022). This mismatch is unwarranted: in fact, LA County should be *leading* the ZEV transition and setting targets that are well ahead of ACC II. The County is one of the centers of EV adoption in the

state. Between 2010 and 2019, 46 percent of all EV and hybrid rebates in California were from Southern California—more than the Bay Area (35.4 percent) and the rest of the state (18.6 percent). (LACEDC 2020, p. 29). Of the Southern California share, 56.8 percent of rebates came from the County, the largest share by far of all counties in the region. The achievement of California's EV targets in ACC II will be called into question if one of the top counties in the state does not even attempt to keep pace with statewide targets.

Instead, the County should set an ambitious EV sales target and reach 100 percent sales by 2030, not 2035. The average vehicle lifetime and the sheer number of internal combustion engine vehicles (ICEVs) that could be sold between 2030 and 2035 demonstrate the need to end gas-powered sales no later than 2030. A 2019 study found that if new vehicle technology is immediately adopted and incorporated into 100 percent of all new vehicle sales, in 20 years it would still only be present in 90 percent of the on-road vehicle fleet. (Keith et al. 2019, p. 2). This means that under a 2035 100 percent ZEV sale requirement, 10 percent of California's fleet would still be ICEVs in 2055, continuing to emit carbon pollution and undermining the state's emission targets. That portion is highly significant: it means that roughly two million additional gas-powered cars would be sold between 2030 and 2034, emitting an estimated 69M $MTCO_2e$ over their lifetimes. (Fleming 2020 and Data Analysis).

The 2030 100 percent ZEV mandate is feasible. According to some estimates, cost parity between ICEVs and ZEVs has already been reached without the use of incentives (see Lutsey & Nicholas 2019, p. 11; see also Taylor and Rosenberg 2022), and experts have concluded that ZEVs are already cheaper to own and maintain over their lifetimes. (Harto 2020). In fact, experts predict that ZEV sticker prices will match their ICEV counterparts as early as 2023 to 2025, primarily due to declining battery costs. (Gearino 2020). In light of these facts, it is clear that delaying 100 percent sales until 2035 is unnecessary and risks bringing warming above 1.5°C.

Finally, even if LA County ignores the clear imperative for 100 percent sales by 2030, it should raise its interim 2030 target well above the current 60 percent goal. Even a commitment to reach 80 percent in 2030 would be a vast improvement and bring us closer to carbon neutrality. The target should be frontloaded to secure maximum carbon reductions earlier: if fewer ICE cars are made and sold during the earlier years, there will be fewer emissions from these vehicles over their lifetimes. An earlier interim target also sends a clear message to industry that it must rapidly shift its investment and capacity to producing EVs.

2. EV Charging Stations

The Plan would "[r]equire all new development to install electric vehicle charging stations ("EVCSs") through a condition of approval/ordinance. Residential development must install EVCSs; nonresidential development must install EVCSs at a percentage of total parking spaces." In addition to these policies, the County should follow the efforts set out in proposed SB 1482 for residential parking, which requires newly constructed multifamily residences in California to have electric vehicle charging access for every unit that has access to a parking space. (SB 1482, Allen 2022). This provision would result in little additional cost for builders while addressing equity for multi-unit dwelling residents.

The Plan would also "[i]nstall EVCSs at existing buildings and right-of-way infrastructure (e.g., lamp poles) throughout unincorporated Los Angeles County." There is no explicit mention of "existing buildings" extending to existing *residential* buildings. Requirements must be set for installing charging at *existing* multi-unit dwellings in addition to new construction.

The Plan also fails to set clear targets regarding the number of EV chargers it had pledged in previous years. The 2019 LA County Sustainability Plan aimed to reach 60,000 new public EV charging stations by 2025, and an additional 70,000 by 2035. (Los Angeles Countywide Sustainability Plan, 2019 at 112). Yet the Plan does not contain definite goals for charging stations.

Other analyses have shown that the County's needs will be much higher than even the goals in the 2019 Sustainability Plan. For example, according to the International Council on Clean Transportation (ICCT), the *City* of Los Angeles alone would need approximately 50,000 public chargers by 2030 to reach 100 percent EV sales by 2030. (Bui et al. 2021, p. 9). The County's needs would be of course much higher. Another ICCT report found that the Los Angeles Metropolitan Area will need 176,672 non-home chargers by 2030—far more than even the Sustainability Plan called for. (Bauer et al. 2021, Table A-2). The lack of definite charging station goals in the Plan is troubling enough; the scale of the County's charging needs demands a detailed plan for building the infrastructure for a fast, equitable transition to ZEVs.

The studies also confirm that the County could implement complementary policies that would reduce the overall need for charging stations. Given the scale of charging infrastructure needed, the County should consider the following ideas, with particular attention to how they would impact the County's focus on equity programs:

- EV-ready building codes
- Prioritized EV-ready zoning
- Preferential EV parking
- Waiving parking fees for EVs at county-owned locations (Bui et al. 2021)
- Enforcing penalties for combustion cars using EV spaces
- Congesting pricing
- Prioritizing VMT reduction

These complementary policies can significantly reduce the County's EV charging needs. One study found that in San Francisco, a combination of these policies would reduce charging station needs by 45 percent by 2030. (Hsu et al. 2020, p. 19). Another study found that a combination of these policies could reduce the demand for new chargers in the LA metropolitan area from nearly 50,000 to 27,300 by 2030. (Bui et al. 2021, p. 9).

3. County Fleet Vehicles

The Plan also calls for electrifying the vehicles in the County light-duty fleet: to 35 percent by 2030, 60 percent by 2035, and 100 percent by 2045. (Plan at 3-29, Appx. E, T7.2). Yet these goals lag behind even the goal President Biden set for federal fleets: that light-duty acquisitions would be 100 percent ZEV by 2027. (White House 2021). While the LA County fleet is not covered

by President Biden's Executive Order, the Plan surely betrays its spirit. There is no reason why the County should achieve its ZEV transition years slower than the federal government.

Additionally, the County should include *procurement* dates as well as target dates for when the percentage of the fleet should be zero emissions, as the federal executive order does. It is not clear when the County is going to start purchasing 100 percent ZEVs for its own fleets in order to reach the penetration goals. This information is crucial to understanding how the County plans to meet its goals. Procurement of 100 percent ZEVs should start immediately for light-duty vehicles.

B. Freight and Warehouses

The County should strengthen its performance objectives to advance the phase out of new combustion medium and heavy-duty vehicle (MD/HDV) sales to 2035, which is consistent with CARB's Mobile Source Strategy (CARB 2021, Mobile Source Strategy, p. 68), with higher penetration of ZEV MD/HDVs earlier than the objectives provided. Heavy duty trucks contribute disproportionately to air pollution and harm to disadvantaged communities. (Brown et al. 2021).

A recent Department of Energy study from the National Renewable Energy Laboratory has found that nationwide: "ZEV sales could reach 42 percent of all MD/HD trucks by 2030, reflecting lower combined vehicle purchase and operating costs (using real-world payback periods)" (Ledna et al. 2022). The study's findings suggest that "by 2030, nearly half of medium- and heavy-duty trucks will be cheaper to buy, operate, and maintain as zero emissions vehicles than traditional diesel-powered combustion engine vehicles." (U.S. Dept. of Energy 2022). If this degree of cost parity is achievable across the United States by 2030, then there may be greater adoption of ZE HDVs by 2030 than the County assumes.

The County can help this process by accelerating the implementing actions. For instance, the Plan does not propose to begin implementing freight decarbonization technologies along highway corridors (Appx. E, T8.1) for another 3 years. The County should start implementing these immediately. Similarly, we hope the County will begin the process of streamlining permitting for ZEV MD/HDV charging infrastructure immediately.

The Center appreciates the effort to create an ordinance for all new and existing warehouses to include EVCS (Appx. E, T8.2, T8.3). However, the deadline of 2035 for existing warehouses could be accelerated. Warehouse and logistics development is a well-documented source of greenhouse gas emissions and air quality degradation that can create serious, negative health outcomes for surrounding communities. (Betancourt and Villianatos 2012). Particulate emissions from diesel vehicles contribute to "cardiovascular problems, cancer, asthma, decreased lung function and capacity, reproductive health problems, and premature death. (*Id.* at 5.) With the rapid increase in global trade, the Ports of LA and Long Beach have become a primary entryway for goods, processing over 40 percent of all imports into the United States, and accounting for 20 percent of diesel particulate pollutants in southern California—more than from any other source. (Minkler et al. 2012). These goods are "transloaded" before leaving Southern California, meaning that they spend some time in warehouse storage facilities before they reach their final destination. (Betancourt and Villianatos 2012). This has resulted in a massive, unchecked expansion of warehouse development throughout Southern California, creating a logistics hub so massive that it is now visible from space. (Ragen 2022). This growth continues unchecked and is now bleeding

into open space areas in Coachella Valley and elsewhere, choking airways and driving habitat loss. The Plan makes little mention of the supply chain/logistics industry, which drives these impacts. The County must coordinate with regional planning and transportation agencies to ensure that the logistics industry is planned with intention, away from existing residential communities, and that the attendant environmental impacts are limited to the extent feasible.

C. Green Hydrogen

The Plan proposes to "[i]ncrease the use of green hydrogen vehicles. Use biomethane and biogas created from organic waste as a 'bridge fuel' to achieve 100 percent green hydrogen and electric vehicles." (Plan at 3-29). First, biomethane and biogas should not be used as bridge fuels, including as a hydrogen source. Reliance on biomethane and biogas props up the fossil fuel industry as it allows gas companies to maintain their pipeline infrastructure. Relying on wood biomass or forestry residues could promote forest logging, hence destroying a significant carbon sink, as explained in Section V, *infra*. Further, sources of biogas and biomethane, such as animal manure, promote expansion and consolidation of the animal agriculture industry, resulting in more air and water pollution. (Sadaat and Gersen 2021).

Second, green hydrogen, as in electrolytic hydrogen produced by splitting water solely using clean, renewable solar and wind energy, is not a workable solution for decarbonizing our transportation systems and buildings since electrifying these sectors and running them directly on a clean, renewable energy grid is the most efficient, cost-effective solution. Green hydrogen, limited to electrolytic hydrogen produced from renewables (Sadaat and Gersen 2021), could be part of an interim solution to decarbonizing difficult to decarbonize sectors such as aviation and maritime shipping, at least until the point of electrification. However, current evidence points to efforts to scale up hydrogen production, but not necessarily "green" hydrogen production. Currently, 95 percent of hydrogen produced in the United States is made from fossil gas ("grey" hydrogen), emitting substantial climate and air pollution. Fossil fuel companies have expressed interest in hydrogen, marketing the benefits of green hydrogen, but explicitly advocate for all forms of hydrogen production. For instance, their claims of being able to repurpose gas pipeline infrastructure for hydrogen obfuscate the fact that hydrogen is incompatible with current infrastructure and can only be transported as a blend with fossil gas, and only in a relatively small proportion. Promoting hydrogen has become a tool of fossil fuel companies to both prolong the production of fossil gas and the need for fossil gas infrastructure. Until this changes, and clear signs point to clean electrolytic hydrogen being promoted for commercial scale production, hydrogen is a false solution that best serves fossil fuel interests.

III. THE COUNTY SHOULD SET CLEAR AND MORE AMBITIOUS BENCHMARKS FOR BUILDING ELECTRIFICATION.

Natural gas use in buildings is a primary driver of GHG emissions in the unincorporated areas of the County. (Plan at ES-2; Aas 2020). Consequently, the County identifies building electrification as a necessary "core measure" to achieve its 2030 and 2035 greenhouse gas reduction targets. (Plan at 3-4, 3-5). While its goals are lofty, the Plan fails to set ambitious targets or identify the resources necessary to achieve rapid electrification. Absent such benchmarks, the Plan risks locking-in carbon intensive options for several decades.

The Plan envisions that all buildings will be zero net energy (ZNE) by 2045.[4] Yet its own benchmarks get the County nowhere close to that goal. The Plan proposes requiring all new residential buildings to be ZNE by 2025 and all new nonresidential to be ZNE by 2030. (Plan at 3-38). Given the urgency of the climate crisis and the long lifespan of buildings, there is no justification to wait any longer to require new construction to be ZNE, no less the additional decade proposed for nonresidential construction. Fifty-two cities and counties throughout the state — such as the City of Los Angeles, Berkeley, San Francisco, San Jose and Oakland — have already taken these clear-cut steps to prohibit natural gas infrastructure and make electric appliances standard, thereby demonstrating the feasibility of such action. (Rachal 2021). If building electrification is delayed any further, the County will miss the lower-cost opportunities for all-electric new construction, and instead further entrench itself in the cost of expensive early retirement of equipment—a hole it already is trying to dig itself out of through investment in electrifying existing building stock. Requiring ZNE for new construction is available low-hanging fruit. Without embracing such obvious measures, the County risks missing its climate goals altogether.

For one, the County's goal hardly aligns with its most recent actions on building electrification. Earlier this year, on March 15, 2022, the County Board of Supervisors unanimously moved to instruct the Director of Public Works to assess feasibility of ZNE and make recommendations for an ordinance or building code to phase out the use of natural gas equipment and appliances in all new residential and commercial construction, where feasible, starting in 2023. (Los Angeles Board of Supervisors 2022). At minimum, the Plan should align with these timelines that the County has already established.

The Proposed Plan must also speed up its timeline to transform existing building stock. Most of the buildings that will be standing in 2050 have already been built. (IPCC 2014). Consistent with statewide goals on ZNE buildings (CPUC 2022), the Draft EIR and Plan should include plans, incentives, and programs to retrofit at least 50 percent of commercial buildings to ZNE by 2030. The Plan notes the extensive investment needed to electrify existing buildings but appears to lack identified funding sources to carry out electrification. The Final EIR and Plan should include evidence describing how the County will include sufficient funding and staff to carry out the programs and mitigation strategies identified. (*See, e.g., Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1116-1118 [EIR invalid because agency offered no evidence that measures for reducing impacts would actually be effective]). Alternatively, if the County lacks funding sources to reach its goals, then the County must electrify where it can and require all new construction to be ZNE on a more accelerated timeline.

In short, the County must take a long-term view of its climate goals and evaluate the role of natural gas infrastructure in that future. A recent CEC report found that, under all the long-term GHG reduction scenarios, electrification of buildings "leads to lower energy bills for customers over the long term than the use of renewable natural gas." (Aas 2020). Further, because the cost of decarbonizing natural gas with renewable natural gas is more expensive than electrification, building electrification now lowers the total societal cost of meeting California's climate goals. (*Ibid*.)

[4] A ZNE building is defined as one that is energy-efficient and consumes energy less than or equal to the on-site renewable generated energy. (DEIR at ES-50).

IV. THE PLAN MUST LOOK BEYOND TREES AND AGRICULTURAL TO MEET CARBON SEQUESTRATION GOALS.

The Center is encouraged to see the Plan includes strategies to conserve forests and working lands (Strategy 9) and sequester carbon and implement sustainable agriculture (Strategy 10). However, the "focus on conservation and restoration of existing forest lands and urban forests to sequester carbon and support local ecosystems" (Plan at 3-49) ignores a vital opportunity to conserve valuable carbon-sequestering, biodiversity-supporting, climate change-resilient non-forest habitats like shrublands, grasslands, deserts, and wetlands while overvaluing agricultural practices. A broader, more comprehensive approach to combatting climate change that expands focused conservation action to non-forest habitats would demonstrate the County is truly "committed to adapting its programs and services to reduce the unincorporated County areas' greenhouse gas (GHG) emissions and help limit global temperature increases." (Plan at ES-1).

The goals of the carbon sequestration strategies, measures, and implementing actions must be bolder and prioritize the conservation and management of existing intact, connected habitats. To better reflect the priorities and more ambitious goals required to effectively implement native-based solutions to reduce carbon emissions, store more carbon, and combat climate change, the following revisions are recommended:

Sector: Wildlands Conservation and Restoration, Agriculture, ~~Forestry~~, and Other Land Use (A)

Strategy 9: Conserve ~~Forests~~ and Restore Intact, Connected Wildlands and Working Lands

Measure A1: Conserve and Restore Forests, Woodlands, Shrublands, Grasslands, Desert, and other Carbon-Sequestering Wildlands ~~Agricultural~~ and Working Lands~~, Forest Lands, and Wildlands~~

Implementing Action A1.1: Develop an open space conservation and land acquisition strategy that prioritizes wildlife connectivity to conserve and restore native habitats ~~lands~~ for carbon sequestration.

A. Non-forest habitats are important for carbon storage, sequestration, and other co-benefits like biodiversity support and climate change resilience.

Scientists point to nature as an effective and efficient tool to help limit warming by keeping carbon sequestered and removing carbon from the atmosphere. (Fargione et al. 2018; Yang et al. 2019). Efforts to sequester carbon have largely been focused on protecting and planting more trees because forests store the largest percentage of carbon compared to other terrestrial ecosystems. (Ahlström et al. 2015). However, the scale of the impacts of climate change requires more thoughtful and ambitious actions beyond trees that 1) account for carbon emissions when non-forest habitats are destroyed and 2) proactively preserve and restore non-forest carbon-sequestering habitats, including but not limited to shrublands, grasslands, and deserts, to complement forest and tree protections.

California's shrubland, grassland, and desert ecosystems are undervalued despite being significant carbon sinks. (Bohlman et al. 2018; Dass et al. 2018; Janzen 2004; Luo et al. 2007; Wohlfahrt et al. 2008). With much of the stored carbon located in their roots and soils, there is potential for long-term storage that could be resilient to changing environmental conditions. (Aranjuelo et al. 2011; Booker et al. 2013; Evans et al. 2014; Vicente-Serrano et al. 2013; White et al. 2000). These habitats have evolved with warm, dry, water- and nutrient-limited environments, which may make them more adaptable and resilient to climate change compared to tropical and temperate forests. (Luo et al. 2007; Rao et al. 2011; Thomey et al. 2014; Vicente-Serrano et al. 2013). Yet shrublands, grasslands, and deserts are often excluded from carbon calculations and neglected as important carbon sinks and biodiversity hotspots.

With climate change progressing and biodiversity losses continuing, targeting forest and non-forest habitats to capture carbon and protect biodiversity is an elegant and effective strategy to achieve desperately needed gains in both areas. The County has a key forward-looking opportunity here to enact climate policy to protect such habitats. (Maxwell et al. 2020; Dinerstein et al. 2020; Soto-Navarro et al. 2020).

1. Trees and forests

The capacity of trees and forests to sequester carbon is waning, and they are not immune to the impacts of climate change. (Cabon et al. 2022; Green & Keenan 2022). In fact, climate change is already affecting the ability of forests and trees to store carbon. Higher temperatures and increased drought are killing trees (C. D. Allen et al. 2010, 2015; Anderegg et al. 2015; Diffenbaugh et al. 2015; McDowell & Allen 2015; Stevens-Rumann et al. 2018; Sullivan et al. 2020), and scientists predicted that U.S. forests will be increasingly vulnerable to fire-, drought-, and insect-driven mortalities as climate change intensifies. (Anderegg et al. 2022).

In addition, there is evidence in high elevation forests that increased atmospheric carbon is leading to shorter carbon residence time, with trees growing faster and dying more quickly. (Büntgen et al. 2019). Elevated atmospheric carbon is also leading to reduced carbon sequestration in European forest soils, likely due to increased microbial respiration. (Heath et al. 2005). This perpetuates a dangerous feedback loop with more carbon in the atmosphere driving hotter and drier conditions that lead to more carbon release. There is some leeway for tropical forests to offset some impacts of climate change; however, their carbon storage capability could rapidly deteriorate if global surface temperatures increase by more than 2ºC of pre-industrial levels (Sullivan et al. 2020).

Land-use planners must urgently look to additional measures that reduce emissions and store carbon to supplement the capacity of trees and forests and increase our chances of effectively combatting climate change. For example, habitats in semi-arid and arid regions, such as shrublands and deserts, have been found to store significant amounts of carbon while being more resilient to drought and increased atmospheric carbon. (Aranjuelo et al. 2011; Evans et al. 2014; Luo et al. 2007). Notably, these habitats support high levels of biodiversity and endemism. They could play a significant role in in combatting climate change and bringing the state closer to its commitment to conserve at least 30 percent of its lands and coastal waters by 2030 under Executive Order N-82-20.

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2. Shrublands

Shrublands in Mediterranean climates, such as vegetation communities dominated by chaparral and coastal sage scrub, have been found to store a significant amount of carbon in their aboveground biomass under normal weather conditions. (Bohlman et al. 2018; Fusco et al. 2019; Gratani et al. 2013; Luo et al. 2007). In a review conducted by Bohlman et al. (2018), above-ground biomass of shrub communities was found to be as high as 3461 g/m^2, with the amount of carbon stored increasing with the age of the stand. Although below-ground biomass is rarely measured or calculated, some shrubland species have been found to have 41 to 47 percent of their biomass below the surface (Bohlman et al. 2018), and chaparral roots have been found four meters (>13 feet) deep in weathered bedrock. (Sternberg et al. 1996).

This suggests that a substantial amount of carbon may be stored belowground in these habitats, not just in their roots, but also in the microbial communities and mycorrhizal fungi that work in concert with root systems to trap carbon in biomass and soil pores and suppress decomposition of humic substances. (Kravchenko et al. 2019; Soudzilovskaia et al. 2019). Intact shrublands with more diverse plant communities have been found to stimulate the formation of soil pores that support optimal microbial functioning and carbon accrual. (Kravchenko et al. 2019). And increased root surface area supports more mycorrhizae that aid in nutrient uptake and facilitate carbon flow and soil carbon accumulation. (Finlay 2008; Orwin et al. 2011; Soudzilovskaia et al. 2019). In addition, semi-arid shrublands have been found to drive the trend and interannual variation of the global carbon cycle. (Ahlström et al. 2015; Poulter et al. 2014). Thus, shrublands should be recognized for their carbon storage potential and included in carbon calculations.

Unlike forests and trees in tropical and temperate regions, Mediterranean shrublands and desert ecosystems are adapted to hot and dry weather conditions and have been found to be resilient to drought. (Luo et al. 2007; Vicente-Serrano et al. 2013). However, during drought the carbon sequestration capacity of Mediterranean shrublands has been observed to decrease. (Gratani et al. 2013) and can even become a carbon source (Luo et al. 2007). Interestingly, elevated atmospheric carbon dioxide levels have been shown to enhance photosynthesis and above-ground production and increase below-ground carbon pools in chaparral and desert ecosystems by stimulating root and mycorrhizal growth. (Evans et al. 2014; Lipson et al. 2005; Thomey et al. 2014; Treseder et al. 2003). However, above-ground gains were only observed in years with above-average rainfall; it is possible that gains in carbon storage could be offset by increased decomposition activity and/or respiration by soil microbes and mycorrhizae during warmer and drier conditions. (León-Sánchez et al. 2018; Lipson et al. 2005; Thomey et al. 2014). Although future impacts of climate change are uncertain, the carbon storage capacity and potential resilience to climate change of shrublands and desert ecosystems demand attention.

The removal and degradation of shrubland ecosystems have been found to result in the loss of both above- and below-ground carbon storage (*e.g.*, Austreng 2012). Given the potential of California shrublands to store a significant amount of carbon, their extensive distribution, and their potential resilience to changing environmental conditions, these ecosystems warrant more consideration and protections in the fight against climate change.

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3. Grasslands

Grasslands cover about 10 percent of California's land area. (Eviner 2016). Although they are mostly dominated by non-native plant species, they continue to be biodiversity hotspots that support almost 90 percent of state-listed rare and endangered species and 75 federally listed plants and animals. (Eviner 2016). Their above-ground biomass may not be as impressive as forests or shrublands, but there is significant potential for carbon storage in their roots and soils (Germino et al. 2019; Kravchenko et al. 2019; Silver et al. 2010; Soudzilovskaia et al. 2019; Yang et al. 2019). Although it depends on the species and ecological region, native grasslands have been found to have 75-93 percent of their biomass below-ground. (Paruelo et al. 2010; Yang et al. 2019). Studies have found that native grasses store more carbon than non-native grasses. (Koteen et al. 2011; Yang et al. 2019), and grasslands with higher plant diversity facilitate greater soil carbon storage. (Chen et al. 2018; Fornara & Tilman 2008; Isbell et al. 2011; Kravchenko et al. 2019; Lange et al. 2015; Yang et al. 2019; Zavaleta et al. 2010) and are likely more resilient to climate change. (Craine et al. 2013; Dass et al. 2018; Vicente-Serrano et al. 2013).

Like California shrublands, grasslands in semi-arid regions have an adaptive capacity to drought and wildfire. Multiple studies suggest that diverse grasslands can adjust to increased drought. (Craine et al. 2013; Dass et al. 2018; Vicente-Serrano et al. 2013), perhaps through the local expansion of drought-tolerant species. (Craine et al. 2013). When fires burn through California grasslands, the grasslands release less carbon than woody habitats because most of the carbon they store is underground, and they recover relatively quickly. (Dass et al. 2018; Donovan et al. 2020). In fact, one study found that California grasslands may be a more reliable carbon sink than trees and forests in the face of climate change, particularly if global warming exceeds 1.7ºC above pre-industrial levels. (Dass et al. 2018). Evidence suggests that forest resilience to drought and wildfires is already declining under climate change, which further highlights the urgency of preserving and restoring remaining intact native grasslands and their biodiversity in addition to protecting forests and trees to improve our chances of limiting warming to 1.5ºC and avoiding the most devastating impacts of climate change.

4. Deserts

Deserts, which can be dominated by shrubs like creosote bush but can also include forbs, trees, grasses, and dunes, have been found to be a substantial carbon sink. (Janzen 2004; Meyer 2012; Mi et al. 2008; Thomey et al. 2014; Y. Wang et al. 2010; Zamanian et al. 2016). Although aboveground productivity is relatively low, the majority of carbon is stored underground in soil organic carbon as extensive root networks, soil microbial communities, and mycorrhizae (Figure 2) as well as in soil inorganic carbon which can be stored as caliche (M. F. Allen & McHughen, 2011) but also deep soil organic carbon. (CCB 2022). Caliche is calcium carbonate ($CaCO_3$) that is formed when rainwater, soil carbon dioxide from soil and root microbes, and calcium react, and its stability depends on the vegetation present. Deep soil organic carbon is generally stored at depths from 30 centimeters to 1 meter where mineral interactions primarily determine the stability of stored carbon. (Jackson et al. 2017). No soil databases have data on carbon sequestration capacity of soils below 2 meters. (Jackson et al. 2017).

Although often overlooked, soil inorganic carbon in arid and semi-arid regions is estimated to sequester 800-1700 Pg of carbon globally, which is four to 8.5 times higher than the estimated 199 Pg of carbon in global soil organic carbon in these systems. (Thomey et al., 2014). Large stocks of soil inorganic carbon are mostly found in regions with low water availability (*i.e.*, areas with mean annual precipitation < 250 mm). (Zamanian et al., 2016), with deserts having the greatest densities of soil inorganic carbon compared to other ecosystems. (Mi et al., 2008; Y. Wang et al., 2010). Soil inorganic carbon and deep soil organic carbon are very stable forms of stored carbon, and they dominate the carbon sink in deserts. (Meyer, 2012; Thomey et al., 2014). This highlights the untapped carbon sequestration potential of California's deserts and the need to protect these landscapes from development and degradation.

B. The Plan's conservation forward language is not backed up by its implementing actions

The Plan mentions a 2045 vision is to "achieve a net gain in carbon storage in the County's wildlands and working lands through management and restoration" and acknowledges that "[f]orests, chaparral shrublands, and wetlands serve as carbon sinks that can sequester carbon dioxide" and "[w]hen these natural and working lands are converted to residential and other urbanized uses, that stored carbon dioxide is released into the atmosphere." (Plan at 3-50). Yet according to the Plan's performance objectives and tracking metrics for implementing action A1.1 to "[d]evelop an open space conservation and land acquisition strategy to conserve lands for carbon sequestration" (Plan at 3-51), the Plan only looks to conserving and restoring natural forest land. (Appendix E at E-16). Not only are non-forest habitats excluded from the Plan, but other important factors that enhance carbon storage and carbon sequestration potential, like prioritizing habitat connectivity and strategically restoring degraded habitats and fallowed agriculture lands, are omitted. The Plan needs to be amended to include the conservation and restoration of other habitats, including but not limited to shrublands, grasslands, wetlands, and deserts, with connectivity as an explicit priority.

When implementing habitat conservation for ecosystem service purposes like carbon sequestration and storage, it is important to take into account that optimal ecosystem services are the result of the functional integrity of healthy ecosystems. There is overwhelming evidence that edge effects from human disturbance like roads and development (including agriculture) impact plants and wildlife and degrade ecosystems. (see Yap et al., 2021a). Negative effects of human disturbance influence important ecosystem dynamics like food webs, nutrient cycling, pollination, and community structure, which, in turn, can disrupt carbon sequestration and storage. (Sobral et al. 2017; Watson et al. 2018). Therefore, prioritizing the preservation of contiguous heterogeneous habitats will benefit biodiversity, which will help improve chances of maintaining ecosystem health and carbon sequestration and storage capacity. The Plan should incorporate connectivity to optimize carbon storage sequestration.

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V. THE PLAN SHOULD PRIORITIZE AVOIDING DEVELOPMENT IN HIGH FIRE-PRONE AREAS AND USE SCIENCE-BASED ACTIONS TO REDUCE WILDFIRE RISK AND PROTECT CARBON-STORING HABITATS.

Wildfires due to lightning strikes and Indigenous cultural burning have occurred on California's landscapes for millennia. They are a natural and necessary process for many of California's ecosystems. But some of the recent fires have been exceptionally harmful to human communities and ecosystems. In the past 200 years since European colonization, forced relocation and cultural genocide of Native Tribes, fire suppression and poor land management, and poor land-use planning has shifted historical fire regimes throughout the heterogeneous ecosystems of the state. In addition, hotter, drier, and more extreme weather conditions due to climate change make the landscape more conducive to wildfire ignitions and spread. Almost all (95-97 percent) contemporary wildfires have been caused by humans and/or human infrastructure (Balch et al. 2017). Therefore, careful and comprehensive analyses of the area's fire history, the various ecosystems' fire ecology, and potential mitigation measures and management strategies to reduce risk of ignition and fire within the County is required. Reliance on a vegetation management plan that bulldozes sensitive ecosystems that could destroy valuable carbon-sequestering, biodiversity-supporting habitat while actually increasing wildfire risk is not only irresponsible, it is negligent. If the County is serious about reducing wildfire risk and protecting carbon-storing habitats, the Plan must include science-based actions and management.

Here are recommended revisions for Implementing Action A1.2:

Limit development in high fire-prone areas and ~~E~~employ ecosystem-appropriate vegetation management of wildlands to reduce unintended human ignitions and wildfire risk ~~and prevent carbon loss in forest lands~~.

A. The Plan must address the role of poorly planned development to reduce wildfire risk.

The Plan fails to acknowledge and discuss that development and human infrastructure in high fire-prone areas increases the risk of igniting wildfires. As detailed in a 2021 Center Report (Yap et al. 2021b), development in highly fire-prone areas increases unintentional ignitions, places more people at risk (within and downwind of the Project area), and destroys native shrubland habitats that support high levels of biodiversity. Almost all contemporary wildfires in California (95-97 percent) are caused by humans in the wildland urban interface. (Balch et al. 2017; Radeloff et al. 2018; Syphard et al. 2007; Syphard & Keeley 2020). For example, the 2019 Kincade Fire, 2018 Camp and Woolsey fires, and 2017 Tubbs and Thomas fires were sparked by powerlines or electrical equipment. And although many of the 2020 fires were sparked by a lightning storm, the Apple Fire was caused by sparks from a vehicle, the El Dorado Fire was caused by pyrotechnics at a gender-reveal celebration, the Blue Ridge Fire was likely caused by a house fire, and electrical equipment is suspected to have ignited the Silverado and Zogg fires.

Recent wildfires have been exceptionally harmful to people. Between 2015 and 2020, almost 200 people in the state were killed in wildfires, more than 50,000 structures burned, hundreds of thousands of people had to evacuate their homes and endure power outages, and

millions were exposed to unhealthy levels of smoke and air pollution. Human-caused wildfires at the urban wildland interface that burn through developments are becoming more common with housing and human infrastructure extending into fire-prone habitats, and homes and structures can add fuel to fires and increase spread. (Knapp et al., 2021). This is increasing the frequency and toxicity of emissions near communities in and downwind of the fires. Buildings and structures often contain plastic materials, metals, and various stored chemicals that release toxic chemicals when burned, such as pesticides, solvents, paints, and cleaning solutions. (Weinhold, 2011). This has been shown with the 2018 Camp Fire that burned 19,000 structures; the smoke caused dangerously high levels of air pollution in the Sacramento Valley and Bay Area and CARB found that high levels of heavy metals like lead and zinc traveled more than 150 miles. (CARB, 2021).

In addition, there are significant economic impacts of wildfires on residents throughout the state. One study estimated that wildfire damages from California wildfires in 2018 cost $148.5 billion in capital losses, health costs related to air pollution exposure, and indirect losses due to broader economic disruption cascading along with regional and national supply chains (D. Wang et al., 2021). Meanwhile the cost of fire suppression and damages in areas managed by the California Department of Forestry and Fire (Cal Fire) has skyrocketed to more than $23 billion during the 2015-2018 fire seasons.

New infrastructure in high fire-prone areas should be avoided. If unavoidable, mitigation measures should require structures to have ember-resistant vents, fire-resistant roofs, and irrigated defensible space immediately adjacent to structures. External sprinklers with an independent water source could reduce structures' flammability. Rooftop solar and clean energy microgrids could reduce fire risk from utilities' infrastructure during extreme weather. Transmission lines could be placed underground. In addition, education awareness for construction workers and operations/management employees should be provided and include how to reduce ignition risk. For example, smoking should be prohibited in the Project area, vehicles and electrical equipment that could create sparks need to be properly maintained, defensible space immediately adjacent to structures need to be maintained, etc.

B. The Plan must use the best available science to implement ecosystem-appropriate wildfire management strategies.

The Plan proposes a vegetation management plan to reduce wildfire risk and carbon loss from wildfire without providing sufficient detail regarding what such a plan would entail. "Vegetation management" often includes mechanical removal via logging of trees and/or bulldozing through shrubland, which can have devastating impacts on ecosystems and actually release more carbon than wildfires do. According to Appendix E, the County plans to manage 50,000 acres of wildlands by 2045 for "wildfire risk reduction and carbon stock savings" (Appendix E at E-18), but it is unclear what the management would entail and if wildfire management would include ecosystem-appropriate measures based on the best available science. It would be deeply concerning if the goal of the Plan is to thin and/or remove 50,000 acres of wildlands purportedly to reduce wildfire risk. In addition, monitoring and reporting of wildfire management activities should be required.

Scientific studies showing that carbon emissions in California, and across the U.S., from tree harvest and thinning are much higher than the emissions from wildfire, bark beetles, or drought. Berner et al. (2017) reported that logging was the largest cause of tree mortality in California forests between 2003 and 2012, followed by wildfire and then bark beetles. Furthermore, Harris et al. (2016) reported that between 2006 and 2010 logging was responsible for 60 percent of the carbon losses from California's forests, compared to 32 percent from wildfire. This is because wildfire consumes only a minor percentage of forest carbon while improving availability of key nutrients and stimulating rapid forest regeneration. When trees die from drought and native bark beetles, no carbon is consumed or emitted initially, and carbon emissions from decay are small and slow; meanwhile, decaying wood keeps forest soils productive and enhances carbon sequestration capacity over time. In contrast, logging and thinning results in a large net loss of forest carbon storage, and a substantial overall increase in carbon emissions that can take decades, if not a century, to recapture with regrowth. (Campbell et al. 2012; Holtsmark 2013; Hudiburg et al. 2011; Mitchell et al. 2012; Searchinger et al. 2009).

In addition, some studies indicate that forest thinning can increase fire severity by opening up the canopy, creating hotter and drier conditions and introducing invasive fire-prone grasses. For example, a study in southwestern Oregon forests by Zald and Dunn (2018) found that private industrial forests subjected to intensive harvest experienced higher wildfire severity than more intact forests with a greater proportion of older forest areas. The study suggested that "intensive plantation forestry characterized by young forests and spatially homogenized fuels, rather than pre-fire biomass, were significant drivers of wildfire severity." Similarly, Bradley et al. (2016) found that, across the western U.S., pine and mixed conifer forests with the lowest levels of protection from logging tend to burn more severely, while forests with the most protection from logging burned least severely even though they are generally identified as having the highest overall levels of biomass and fuel loading. (Bradley et al. 2016).

Similarly, the mechanical removal of shrubland habitat would destroy important habitat while perpetuating a negative feedback loop of more wildfire. Chaparral and coastal sage scrub are native California habitats that are adapted to infrequent (every 30 to 150 years), large, high-intensity crown fire regimes. (Keeley & Fotheringham, 2001). However, if these regimes are disrupted, the habitats become degraded. (Keeley 2005, 2006; Syphard et al. 2018). When fires or other types of disturbances (*i.e*., land-clearing) occur too frequently, type conversion occurs and the native shrublands are replaced by non-native grasses and forbs that burn more frequently and more easily, ultimately eliminating native habitats and biodiversity while increasing fire threat over time. (Keeley 2005, 2006; Safford & Van de Water 2014; Syphard et al. 2009, 2018). Conversely, studies have shown that conservation purchases in areas designated as high fire hazard in Southern California, where chaparral and coastal sage scrub are most vulnerable to development, has led to biodiversity conservation and reduced wildfire risk. (Butsic et al. 2017; Syphard et al. 2016). Thus, the Plan must consider the impacts due to treatment activities on native shrublands when strategizing how to reduce wildfire risk.

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C. The County needs to make a concerted effort to incorporate traditional ecological knowledge into their wildfire management and climate change strategies.

Ramos (2022) states, "Indigenous communities have often been marginalized in the sciences through research approaches that are not inclusive of their cultures and histories." Traditional ecological knowledge (TEK) is often excluded from analyses or distilled to conform to Western science. (Ramos 2022). Here, the Plan fails to acknowledge that Indigenous communities and cultural burning played a role in California's historical fire activity. In fact, there is no mention at all of cultural burning or prescribed fire. This perpetuates the exclusion and marginalization of Indigenous communities and TEK. Consultation with local Native Tribes, and incorporation of Indigenous science, including but not limited to oral histories, ethnographies (that may include burn scars and charcoal records), and archeological data should be incorporated in fire history analysis and subsequent management. As a society, we need to work towards integrative research that "transcends disciplinary boundaries" and employs a range of methodological options to get a deeper understanding of the relationship between people and ecosystems. (Ramos 2022). Doing so will help inform fire management strategies and mitigation measures that work towards reducing harms of wildfire to people while facilitating beneficial fire for the appropriate ecosystems.

Indigenous communities should be more included in climate change and wildfire discourse. Native Americans were found to be six times more likely than other groups to live in high fire-prone areas, and high vulnerability due to socioeconomic barriers makes it more difficult for these communities to recover after a large wildfire. (Davies et al., 2018). In addition, farmworkers, who are majority people of color and often include migrant workers that come from Indigenous communities, often have less access to healthcare due to immigration or economic status. They are more vulnerable to the health impacts of poor air quality due to increased exposure to air pollution as they work. Yet farmworkers often have to continue working while fires burn, and smoke fills the air, or risk not getting paid. (Herrera 2018; Kardas-Nelson et al. 2020; Parshley 2018). Tribes should be included in the development and implementation of wildfire management plans.

VI. THE PLAN SHOULD FOCUS ON EMISSIONS REDUCTIONS AND NATURE-BASED CARBON SEQUESTRATION RATHER THAN RELY ON CARBON CAPTURE TO COVER RESIDUAL EMISSIONS.

The Plan and DEIR state that the plan relies on carbon removal and carbon capture and sequestration (CCS) technologies to address residual emissions. (Plan at 3-9; DEIR at 4-4). Instead of falling back on these unproven technologies and on market-based mechanisms, the Plan should set more ambitious targets for emissions reductions and protecting and enhancing natural and working lands, habitats, and ecosystems, as described above. Indeed, in its Special Report on Global Warming, the IPCC-modeled pathway with the best chance of keeping warming at or below 1.5°C makes no use of fossil fuels with carbon capture or BECCS and proposes limited to no use of engineered carbon removal technologies. (CIEL 2021). Instead, this pathway requires a rapid phaseout of fossil fuels along with *limited* carbon dioxide removal by natural sources such as reforestation and enhanced soil remediation.

Furthermore, CCS carries significant environmental impacts—and may not result in greenhouse gas emissions reductions—that must be analyzed in the program EIR for the Plan. As

the Institute for Energy Economics and Financial Analysis notes, the energy required to capture, transport, and inject carbon underground "materially reduces its net benefit." (Butler 2020, p. 4). For example, coal-fired power plants with carbon capture have an energy penalty of 25 percent or more, with the efficiency penalty as high as 15 percent. (Climate Action Network Int'l 2021, p. 9). These "penalties" mean more fuel must be burned to produce the same amount of power, which means higher energy costs, greater emissions of non-CO_2 air pollutants, and increased demand on the grid. (*Ibid.)* Moreover, in the United States, more than 95 percent of all CCS capacity deployed has been used for EOR, meaning "CO_2 waste products from a fossil fuel-burning activity are used to generate more fossil fuels." (CIEL 2021, p. 8). The climate rationale for CCS evaporates if captured carbon is used to pump more oil. And any CO_2 that is stored underground risks leakage back to the atmosphere, based on the long track record of fossil fuel industry leaks and spills.[5]

CCS projects also can harm people because of the emission of harmful air pollutants such as fine particulate matter, ammonia, and hazardous volatile organic compounds. (Kubota 2019; Jacobson 2019). Further, toxic chemicals like lye and ammonia are used to "capture" carbon. (CRS 2021, pp. 4-5). Megatons of these dangerous chemicals must be produced, transported, and handled to operate carbon capture at scale, and will eventually be disposed of, putting communities at risk. And because CCS enables the underlying emissions-generating activity (such as fossil fuel power generation) to continue, upstream and downstream impacts from activities such as fossil fuel extraction, refining, transport, use, and disposal will continue to harm people's health, particularly in overburdened communities. (CIEL 2021, p. 7).

A recent report by the Pipeline Safety Trust calls out CO2 pipelines as "dangerous and underregulated." (Kuprewicz 2022). This analysis applies not only to federal pipeline regulations but also those within California. In the state, the Office of the State Fire Marshall regulates intrastate hazardous liquid pipelines, whereas the California Public Utilities Commission regulates intrastate gas pipelines. (Gov. Code, § 51010; Pub. Util. Code, § 955). But as the Pipeline Safety Trust points out, CO_2 for CCS can be in liquid, gas, or supercritical form. CO_2 in a supercritical state can be categorized as either a liquid or gas and is not currently codified under either statutory or regulatory scheme. This is a problem because, as the Pipeline Safety Trust explains:

> Carbon dioxide has different physical properties from products typically moved in hazardous hydrocarbon liquid or natural gas transmission pipelines. Those differences pose unique safety hazards and greatly increase the possible affected area or potential impact radius upon a pipeline release that

[5] The myth of permanent carbon sequestration is echoed in regulations that merely kick the climate problem down the road and onto future generations. Under the Environmental Protection Agency's regulations for Class VI injection wells for CO_2, for example, a permit applicant need only show that they can store CO_2 for 50 years to qualify for subsidies. (40 C.F.R. § 146.93.) California's Low Carbon Fuel Standards does not fare much better, requiring only 100 years of storage. (CARB, Accounting and Permanence Protocol for Carbon Capture and Geologic Sequestration under Low Carbon Fuel Standard (2018), https://ww2.arb.ca.gov/sites/default/files/2020-03/CCS_Protocol_Under_LCFS_8-13-18_ada.pdf ["'Permanent sequestration' or 'permanence' means the state where sequestered CO2 will remain within the sequestration zone for at least 100 years."].)

> would endanger the public. CO_2 pipeline ruptures can impact areas measured in miles, not feet. The way regulations currently consider and mitigate for the risks posed by hydrocarbon pipelines in communities are neither appropriate nor sufficient for CO_2 pipelines. (Kuprewicz 2022).

And since *all* CCS projects require moving compressed CO_2 through pipelines, this is an immediate and alarming concern that should halt any CCS development until it is addressed.

As a result of its minimal, if any, effects on reducing carbon emissions and its potential to harm communities, CCS is not a workable backstop for the Plan. At the very least, the County must fully analyze the impacts of these technologies before perfunctorily including them in its plan to reach carbon neutrality.

VII. THE ALTERNATIVES ANALYSIS IN THE DEIR IS INADEQUATE AND FAILS TO COMPLY WITH CEQA.

CEQA mandates that significant environmental damage be avoided or substantially lessened where feasible. (Pub. Resources Code, § 21002; Guidelines, §§ 15002(a)(3), 15021(a)(2), 15126(d).) An agency is therefore barred from approving a project as proposed if there are feasible alternatives which will avoid or substantially lessen the project's significant environmental effects. (Pub. Resources Code, § 21002). Under CEQA, "the public agency bears the burden of affirmatively demonstrating that, notwithstanding a project's impact on the environment, the agency's approval of the proposed project followed meaningful consideration of alternatives and mitigation measures." (*Mountain Lion Foundation v. Fish & Game Com*. (1997) 16 Cal.4th 105, 134). The DEIR's general statements regarding these topics are insufficient. A rigorous analysis of reasonable alternatives to the Project must be provided to comply with this strict mandate.

While alternatives included in an EIR need only be deemed "potentially feasible," an agency's decision at the end of the process to approve the project and find the alternatives "infeasible" requires a comprehensive comparison of the project with the alternatives. Broad considerations of policy come into play when the agency decides whether to approve the project. If the agency determines that the project will best achieve project objectives after considering relevant economic, environmental, social, technological, legal, and other factors, it may approve the project and find the alternatives "infeasible." Unfortunately, the DEIR's analysis of the alternatives proposed lacks evidence to support its conclusions and is therefore inadequate.

The DEIR analyzes two alternatives, to be implemented in addition to the measures and actions un the Draft 2045 Plan: a Carbon Offset Alternative and a Zero Net Energy Buildings Alternative. (DEIR at 4-10).

For one, the County should have considered an alternative in the DEIR that would phase out oil and gas production more quickly. The Plan notes that the objectives of 40 percent below 2015 levels by 2030, 60 percent by 2035, and 80 percent by 2045 would lead to annual GHG emissions reductions of 28,368 $MTCO_2e$ by 2030, 40,178 $MTCO_2e$ by 2035, and 52,148 $MTCO_2e$ by 2045. The cumulative emission reduction potential of an earlier phase out date is large, dwarfing many of the renewable energy production and transportation measures. The Plan should have analyzed a

2030 oil and gas operation phase out alternative, especially given that the alternative is not remote or speculative, but already in progress.

The County also lacked an adequate basis to reject the ZNE Buildings Alternative. ZNE Buildings Alternative would require, in addition to the implementation of measures in the Draft 2045 Plan, that all new residential and commercial construction in unincorporated areas of the County be ZNE by 2023. In addition, it would require 50 percent of existing residential and commercial buildings to be retrofitted by 2030, among other requirements. (DEIR at ES-51). As the DEIR notes, ZNE buildings produce enough renewable energy to meet their own annual energy consumption requirements, thereby reducing the use of nonrenewable energy—and the accompanying emissions— in the building sector. (DEIR at 4-10). No explanation was given for why, contrary to common sense, requiring all new buildings to be ZNE would nevertheless result in similar GHG emissions and worsen air quality and noise for surrounding communities.

Contrary to the DEIR's conclusions, there is no evidence to suggest that this alternative would result in more severe environmental impacts. The County bafflingly concludes that this alternative could result in "similar" or "greater" greenhouse gas impacts as the 2045 County, even though the very definition of ZNE buildings means that they consume less renewable energy than they produce, whereas tradition buildings require continued natural gas hookups and the accompanying GHG emissions. The County thus has no evidence upon which to conclude that ZNE buildings have similar or greater GHG impacts. It must revise the GHG impact analysis to reflect the GHG emissions benefit of this alternative compared to the project, based on its own admissions that this alterative would "likely reduce Countywide GHG emissions more than the Project." (DEIR at 4-24).

The DEIR also concludes that this alternative would lead to an increase in air quality pollutants and noise due to the "additional construction" for ZNE buildings. (DEIR at 4-19, 4-29). The County provides no evidence – and none appears to exist – showing that ZNE construction is noisier or results in the emissions of additional criteria pollutants. Indeed, building electrification improves outdoor air quality and public health outcomes, particularly in winter, when nitrogen oxide emissions create secondary fine particulate matter (PM 2.5) pollution. (Aas 2020). To the extent that the County believes that the implementation of ZNE building standards would induce additional construction projects beyond the construction projected for the County, there is no evidence to support that assertion, either.

The DEIR therefore provides no evidence, basis, or explanation for impermissibly rejecting this alternative. (*See Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 935 ["To facilitate CEQA's informational role, the EIR must contain facts and analysis, not just the agency's bare conclusions or opinions."].) As the County admits, this alternative would meet all the project objectives, result in fewer environmental impacts overall, and would even go further in reducing GHG emissions. (DEIR at 4-12).

If the reason for rejecting this alternative is feasibility, the County acknowledges it has not yet conducted a feasibility analysis to compare the upfront higher costs of ZNE infrastructure with traditional construction. As discussed above, the County Board of Supervisors has already ordered a study of the feasibility of phasing out the use of natural gas equipment and appliances in all new

residential and commercial construction, where feasible, starting in 2023. (Los Angeles Board of Supervisors 2022). The Director of Public Works has 120 days, or until September 11, 2022, to return to the Board with recommendations. Other projects in the County have recently been approved to include a goal of zero net GHGs, which further demonstrates the feasibility of ZNE construction. (See CDFW 2017). The County may want to wait until those recommendations are complete before making a final decision on the viability of this alternative.

Should the County conclude that this alternative is infeasible, the standard for feasibility is high. Whether a project is economically unfeasible "is not measured by increased cost or lost profit, but upon whether the effect of the proposed mitigation is such that the project is rendered impractical." (*Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 600, internal citation omitted.) In *Citizens of Goleta Valley v. Board of Supervisors* (1988) 197 Cal.App.3d 1167, 1180, the Court agreed with the trial court that the administrative record did not contain analysis of the project alternatives in terms of comparative costs, comparative profit or losses, or comparative economic benefit to the project applicant or the community at large. Ultimately, the County must adopt the ZNE alternative unless it can demonstrate with evidence and analysis that this alternative is infeasible.

VIII. CONCLUSION

Thank you for the opportunity to submit comments on the Draft EIR and Plan. We look forward to reviewing the analysis and mitigation strategies in the Final EIR and Plan and proposing suggestions to refine and strengthen them. We also are happy to meet again with County Planning staff to discuss any of the recommendations in this letter. Please do not hesitate to contact the Center with any questions at the email or number listed below.

Sincerely,

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ATTACHMENT A

CENTER *for* BIOLOGICAL DIVERSITY *Because life is good.*

February 1, 2022

Sent via email

Thuy Hua, Supervising Regional Planner
Los Angeles County Department of Regional Planning
320 West Temple Street, 13th Floor
Los Angeles, CA 90012
climate@planning.lacounty.gov

Re: Comments on Notice of Preparation of a Program Environmental Impact Report for the Los Angeles County 2045 Climate Action Plan

Dear Department of Regional Planning:

The Center for Biological Diversity ("Center") submits the following comments on the Notice of Preparation ("NOP") of a Program Environmental Impact Report ("PEIR") for the Los Angeles County 2045 Climate Action Plan ("CAP"). The Center submitted comments on an earlier version of the draft CAP on April 30, 2020 (the "April 2020 Letter"), which is attached here as Exhibit 1. We hereby incorporate the comments in the April 2020 Letter by reference and request that the issues raised in that letter be considered in preparing the Draft EIR and revised CAP. We appreciate that the upcoming draft of the CAP will include "more clear, specific, feasible, and quantifiable" greenhouse gas ("GHG") reduction strategies, as we requested in the April 2020 Letter.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over one million members and online activists throughout California and the United States. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles County ("County").

I. The Draft PEIR and CAP Should Explain How It is Consistent with Statewide Goals.

CEQA Guidelines section 15183.5(b)(1)(D) require that a climate action plan demonstrate that it will achieve planned reductions on a project by project basis. In *Cleveland National Forest Foundation v. San Diego Association of Governments*, the California Supreme Court provided more clarity on what facts, data, and goals projects should analyze in their greenhouse gas analyses under CEQA. ((2017) 3 Cal.5th 497.) The Court found that although an "Executive Order 'is not an adopted GHG reduction plan' and that 'there is no legal requirement to use it as a threshold of significance[,]' … [t]he Executive Order's 2050 goal of reducing California's greenhouse gas emissions to 80 percent below 1990 levels expresses the pace and magnitude of reduction efforts that the scientific community believes necessary to stabilize the climate. This scientific information has important value to policymakers and citizens in considering the emission impacts of a project like SANDAG's regional transportation plan." (*Id.* at 515-516.) Therefore, the Draft CAP should include further discussion on measures that could ensure the County meets statewide goals, including in the Scoping Plan published by California Air Resources Board ("CARB") and in executive orders on GHGs.

II. The Draft PEIR and CAP Should Include Binding and Enforceable Measures.

We appreciate that the County intends that the Draft PEIR and CAP include "more clear, specific, feasible, and quantifiable" GHG reduction strategies. We look forward to reviewing these strategies in the Draft PEIR and CAP and proposing recommendations to further improve and refine them. As outlined in the Draft CAP, a CAP must "[s]pecify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level...." (Draft CAP at 15.) We again caution that the Draft CAP should not include non-binding language in its mitigation measures (e.g., "encourage," "promote," "support" or "whenever feasible").

The Draft PEIR and CAP should also include evidence describing how they will include sufficient funding and staff to carry out the programs and mitigation strategies included in the Draft PEIR and CAP. (See, e.g., *Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1116-1118 [EIR invalid because agency offered no evidence that measures for reducing impacts would actually be effective].)

III. The Draft PEIR and CAP Should Demonstrate How They Are Consistent with the LA County Sustainability Plan.

CEQA requires that EIRs disclose and discuss the project or program's inconsistencies with an applicable regional plan, such as a habitat conservation plan or natural community conservation plan. (CEQA Guidelines § 15125(d); 1 Kostka & Zischke, Practice Under the Cal. Env. Quality Act (2d ed. 2015) § 6.56, p. 6-60.1.) The EIR should thus include a detailed analysis of the CAP's consistency with the LA County Sustainability Plan, including how the CAP meets or exceeds the Goals, Strategies, Targets, and Actions set forth in the Plan.

IV. The Draft PEIR and CAP Should Include Strategies to Substantially Reduce VMT.

As noted in our April 2020 Letter, the CAP and Draft PEIR should include robust strategies to significantly reduce vehicle miles travelled ("VMT") within LA County region and consider measures proposed by CARB including within the Scoping Plan. Such strategies should include limiting new large-scale development in areas that generate disproportionately high levels of VMT, including areas far from existing job centers. Consistent with the policies in the Draft LA County Safety Element, the CAP and Draft PEIR should reiterate that new subdivisions in very high fire hazard severity zones are prohibited and inconsistent with the CAP or the LA County General Plan.

V. The Draft PEIR and CAP Should Include Robust Strategies to Achieve Zero Net Energy for All New Development.

As outlined in the April 2020 Letter, the CAP offers LA County an opportunity become a leader in setting standards on requiring zero net energy ("ZNE") for new (and existing) development. The Draft PEIR and CAP should require zero net energy on all new commercial and residential construction. ZNE is feasible, as other projects in the County have recently been approved include a goal of zero net GHGs.[1] The Draft PEIR and CAP should include a ZNE Program that establishes clear standards for meeting ZNE for various sizes of commercial and residential development, and pair such standards with County programs to dramatically increase ZNE infrastructure including free or low-cost EV chargers throughout the county.

Consistent with statewide goals[2] on ZNE buildings, the Draft PEIR and CAP should include plans, incentives, and programs to retrofit at least 50 percent of commercial buildings to ZNE by 2030. This could include a crediting system to incentivize the retrofitting of existing commercial and residential developments with EV chargers and other ZNE infrastructure.

VI. The Draft PEIR and CAP Should Include Strategies to Increase Energy Resilience.

The Center supports the Draft CAP's goal to shift to a renewables-based electricity supply which ensures equitable access to affordable, local, and reliable energy sources. However, the Draft PEIR and CAP should include far more ambitious strategies to increase energy resilience through the widespread adoption of renewable energy. While the April 2020 Letter cites studies demonstrating the feasibility of distributed energy resources, the even more recent results of National Renewable Energy Laboratory ("NREL")'s Los Angeles 100% Renewable Energy Study ("LA100")[3] further demonstrate that achieving 100 percent reliable renewable energy is feasible in the near-term (e.g., by 2035).

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[1] *See* California Department of Fish and Wildlife, *Newhall Ranch Resource and Development Management and Development Plan, Final Additional Environmental Analysis*, Appendix 2.1, available at http://planning.lacounty.gov/assets/upl/case/tr_53108_appendix-2-0-cdfw-final-aea-excerpts.pdf.
[2] California Public Utilities Commission, *Zero Net Energy*, available at https://www.cpuc.ca.gov/ZNE/.
[3] The full report is available here: https://maps.nrel.gov/la100/report.

The Draft PEIR and CAP should also include a program or ordinance to fund and facilitate photovoltaic energy and storage, including through microgrid development, especially for unincorporated and fire-prone areas.

VII. Conclusion

Thank you for the opportunity to submit comments on the NOP. We look forward to reviewing the analysis and mitigation strategies in the Draft PEIR and CAP and proposing suggestions to refine and strengthen them. We also are happy to meet with County Planning staff to discuss any of the recommendations in this letter or the April 2020 Letter.

Sincerely,

J.P. Rose
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Exhibit 1

CENTER for BIOLOGICAL DIVERSITY Because life is good.

April 30, 2020

Sent via email

Los Angeles County
Department of Regional Planning
320 West Temple Street
Los Angeles, California 90012
climate@planning.lacounty.gov

Re: Comments on Public Review Draft of Los Angeles County Climate Action Plan

Dear Department of Regional Planning:

The Center for Biological Diversity ("Center") submits the following comments on the Los Angeles County Climate Action Plan Public Review Draft ("Draft CAP"). While the Draft CAP includes some laudable goals, it suffers from a lack of clear and enforceable measures to ensure significant reductions in regional greenhouse gas ("GHG") emissions. Many of our concerns were also reflected in our comments on the Draft Sustainability Plan, which is included as Attachment 1 and incorporated by reference.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over one million members and online activists throughout California and the United States. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles County ("County").

I. Climate Change Is an Urgent and Existential Concern.

Recent science has made clear that human-caused climate change is causing widespread harms to human society and natural systems, and climate change threats are becoming increasingly dangerous. In its 2018 *Special Report on Global Warming of 1.5°C*, the Intergovernmental Panel on Climate Change ("IPCC")—the leading international scientific body for the assessment of climate change—describes the devastating harms that would occur at 2°C warming. The report highlights the necessity of limiting warming to 1.5°C to avoid catastrophic impacts to people and life on Earth (IPCC 2018). The report also provides overwhelming evidence that climate hazards are more urgent and more severe than previously thought, and that aggressive reductions in emissions within the next decade are essential to avoid the most devastating climate change harms.

The impacts of climate change are already being felt by humans and wildlife. Thousands of studies conducted by researchers around the world have documented changes in surface, atmospheric, and oceanic temperatures; melting glaciers; diminishing snow cover; shrinking sea ice; rising sea levels; ocean acidification; and increasing atmospheric water vapor (USGCRP 2017). In California, climate change will transform our climate, resulting in impacts including, but not limited to, increased temperatures and wildfires and a reduction in snowpack and precipitation levels and water availability.

II. The County Has a Responsibility to Reduce GHG Emissions.

California gives local authorities like the County significant responsibility over land use and planning decisions within their jurisdictions. But with that responsibility comes a corresponding obligation to account for the negative environmental impacts of those decisions—especially when it comes to controlling GHG emissions. As the California Air Resources Board ("CARB") explains:

> Local governments are essential partners in achieving California's goals to reduce GHG emissions. Local governments can implement GHG emissions reduction strategies to address local conditions and issues and can effectively engage citizens at the local level. Local governments also have broad jurisdiction, and sometimes unique authorities, through their community-scale planning and permitting processes, discretionary actions, local codes and ordinances, outreach and education efforts, and municipal operations. Further, local jurisdictions can develop new and innovative approaches to reduce GHG emissions that can then be adopted elsewhere.

(CARB 2017.) California's Scoping Plan, which lays out the statewide blueprint for meeting the legislature's greenhouse gas reduction targets, also specifically calls out local governments as essential to meeting these targets:

> [L]ocal governments and agencies are critical leaders in reducing emissions through actions that reduce demand for electricity, transportation fuels, and natural gas, and improved natural and working lands management. . . . Over the last 60 years, development patterns have led to sprawling suburban neighborhoods, a vast highway system, growth in automobile ownership, and under-prioritization of infrastructure for public transit and active transportation. Local decisions about these policies today can establish a more sustainable built environment for the future.

(CARB 2017.) Thus, the County must take seriously its obligation to do its utmost to ensure that it is reducing GHG emissions and contributing to the state's achievement of its emissions reduction targets.

III. The Draft CAP Fails to Explain How It Will Meet State Goals.

While the Draft CAP acknowledges statewide climate goals (Draft CAP at 6-8 & 36), it does not explain how measures in the Draft CAP will actually meet these statewide climate goals. For instance, statewide targets require GHG emissions to be reduced to 1990 levels by 2020, 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050, and achieve statewide carbon neutrality by 2045. (Draft CAP at 17 & 36.)

In contrast, the Draft CAP includes a different set of goals: by 2025, reduce GHG emissions by 25 percent below 2015 levels; by 2035, reduce GHG emissions by 50 percent below 2015 levels; and by 2045, achieve carbon neutrality in unincorporated Los Angeles County. (Draft CAP at 8.) The Draft CAP fails to explain how these goals are either consistent or inconsistent with each of the statewide goals.

The Draft CAP therefore does not qualify as a CEQA "streamlining" document. CEQA Guidelines section 15183.5(b)(1)(D) require that a climate action plan demonstrate that it will achieve planned reductions on a project by project basis. In *Cleveland National Forest Foundation v. San Diego Association of Governments*, the California Supreme Court provided more clarity on what facts, data, and goals projects should analyze in their greenhouse gas analyses under CEQA. ((2017) 3 Cal.5th 497.) The Court found that although an "Executive Order 'is not an adopted GHG reduction plan' and that 'there is no legal requirement to use it as a threshold of significance[,]' … [t]he Executive Order's 2050 goal of reducing California's greenhouse gas emissions to 80 percent below 1990 levels expresses the pace and magnitude of reduction efforts that the scientific community believes necessary to stabilize the climate. This scientific information has important value to policymakers and citizens in considering the emission impacts of a project like SANDAG's regional transportation plan." (*Id.* at 515-516.) Therefore, the Draft CAP should include further discussion on measures that could ensure the County meets statewide goals.

IV. The Draft CAP's GHG Emissions Inventory Is Incomplete.

The Draft CAP lists five categories of GHG emissions in its GHG inventory: transportation, stationary energy, waste, industrial processes and product use ("IPPU"), and agriculture, forestry and, other land use ("AFOLU"). (Draft CAP at 30-32.) The CAP should set forth the emissions categories in more detail. A guide prepared by the Bay Area Air Quality Management District ("BAAQMD") recommends, for example, listing the GHG emissions of specific items such as streetlights and traffic signals. (BAAQMD 2009.)

The Draft CAP also does not explain whether "transportation" emissions include emissions outside the County by activity within the County (for example, from exported goods or tourist travel to County from outside the County). This very shortcoming led to a judge invalidating Sonoma County's CAP last year, after the judge determined that it failed to account for all of the County's emissions by excluding transboundary emissions.[1] (Attachment 2.)

[1] The court also held that the CAP's GHG reduction measures were not clearly defined or enforceable, which is also an issue with the Draft CAP here.

V. The Draft CAP's Reduction Strategies and Measures Are Non-Binding And Unenforceable.

The Draft CAP states that if future projects "tier" off of it, then compliance will negate the need for a qualitative analysis of future projects' GHG emissions. (Draft CAP at 15.) The Draft CAP also correctly lays out the legal requirements of a climate action plan. (Draft CAP at 15.) For instance, a CAP must "Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level...." (Draft CAP at 15.) Therefore, the Final CAP, and any such plan prepared pursuant to CEQA Guidelines 15183.5, must meet the requirements for all first-tier environmental review documents and thus must impose enforceable requirements and measures with defined performance standards.[2]

Unfortunately, many of the Draft CAP's reduction measures are largely non-binding and unenforceable, and generally lack performance standards. Notably, the words "encourage," "promote," "support" or "whenever feasible" occur many times in the sections describing the Draft CAP's implementation measures. These measures are legally inadequate and cannot be considered mitigation under CEQA and applicable case law. (*Lincoln Place Tenants Assn. v. City of Los Angeles* (2007) 155 Cal.App.4th 425, 445 ["A 'mitigation measure' is a suggestion or change that would reduce or minimize significant adverse impacts on the environment caused by the project as proposed"]); *Preserve Wild Santee v. City of Santee* (2012) 210 CA 4th 260, 281 [mitigation measures that are so undefined that their effectiveness is impossible to determine are legally inadequate].) The California Attorney General has also expressly disapproved such an approach for measures upon which an agency relies:

> **Can a lead agency rely on policies and measures that simply "encourage" GHG efficiency and emissions reductions?**
>
> No. Mitigation measures must be "fully enforceable." ***Adequate mitigation does not, for example, merely "encourage" or "support" carpools and transit options, green building practices, and development in urban centers***. While a menu of hortatory GHG policies is positive, it does not count as adequate mitigation because there is no certainty that the policies will be implemented.

(CA Attorney General 2009.) The California Attorney General further states that programmatic plans to reduce GHG emissions pursuant to CEQA Guidelines section 15183.5 must "[i]dentify a set of specific, enforceable measures that, collectively, will achieve the emissions targets…." (CA Attorney General 2019.)

In *Sierra Club v. County of San Diego* (2014) 231 Cal.App.4th 1152, the Fourth District Court of Appeal criticized the County of San Diego for including measures in its CAP that were not backed up by a firm commitment by the County that they would be implemented. The Court noted that many of the measures in the CAP "are not currently funded," such that the County of San Diego could not rely upon such unfunded programs to meet GHG reductions. (*Id.* at 1168-

[2] Specifically, CEQA Guidelines section 15183.5(b)(1)(D) states that measures should have "performance standards" which demonstrate they will achieve the planned reductions on a project by project basis.

1169.) The *Sierra Club* opinion also questioned whether people would actually participate in various programs outlined in the CAP, given that the record contained no evidence of such participation. (*Id*. at 1170.) Here, the Draft CAP suffers from similar defects – there is no evidence of funding for many of the various programs set forth in the Final CAP, nor evidence in the record that people or industry will actually participate in the voluntary programs described in the Draft CAP.

Accordingly, although the Draft CAP's reduction measures may generally be worthwhile objectives for the County to pursue, the Draft CAP fails as a CEQA compliance tool because it relies upon non-enforceable measures. The Draft CAP also does not have adequate mechanisms to monitor progress towards achieving verifiable reduction targets.

VI. Strategy 2 Fails to Include Sufficient Measures to Support Transit Oriented Communities.

The Center generally supports the goals of Strategy 2 to support transit oriented communities. However, the targets are unclear, inadequate, and do not provide a path to actually achieve this goal. For instance, the 2025 target is to (1) "increase new housing built within 1/2 mile of high frequency transit to 50%" and (2) "reduce VMT per capita to 20 miles." This target does not specify what the "50%" is a percent of – does this mean 50% of all new housing units in the County? This needs to be clarified in the Final CAP. In addition, it is unclear whether the County is intending to reduce VMT per capita to 20 miles *per day* or some other amount of time. More importantly, VMT per capita of 20 miles a day is still an extremely high number; the CAP should have more aggressive goals to reduce VMT per capita by 2025. As described in further detail in our comment letter on the Draft Sustainability Plan, significant reductions in VMT are required if the state is to meet its GHG reduction goals. (See Attachment 1 at p. 9-10.)

Unfortunately, the Actions supporting Strategy 2 provide no concrete requirements or criteria, or way to measure success. For instance, Action T1 states "Expand the number and extent of transit oriented communities, by encouraging development within High Quality Transit Areas, while ensuring vital public amenities such as parks and active transportation infrastructure are included." (Draft CAP at 50.) Action T1 fails to contain a clear plan how such development will be "encouraged" such that it is little more than a hortatory statement. Likewise, Action T2 states "Develop community plans that will increase the percentage of residents who could live and work within the same community, and that could decrease the vehicle miles traveled." (*Id.*) This action suffers from the same defects as Action T1. It is also fails to specify any target increase in percentage of residents who live or work in the same community, or elements of such "community plans."

VII. Strategy 3 Fails to Include Sufficient Measures to Reduce VMT.

Strategy 3 aims to reduce single occupancy vehicle ("SOV") vehicle trips. However, the Draft CAP does not contain sufficiently aggressive goals. For instance, the Draft CAP only seeks 15 percent of trips to be non-SOV trips by 2025. (Draft CAP at 51.) As we noted in our comments on the Draft Sustainability Plan (Attachment 1), even if this target is met, in five years 85 percent of trips in the County will still be by car. The Draft CAP should call for much stronger measures to reduce SOV trips and VMT. The best way to do this is to limit development

in areas far from existing cities, as remote developments generate disproportionately high levels of VMT.

The actions within Strategy 3 are similarly inadequate. For instance, Action T5 states "develop a transportation technology strategy to proactively address how evolving tech-enabled mobility options can support public transit and advance OurCounty goals." (Draft Plan at 51.) This is extremely vague and suffers from the defects outlined in Section V above. Similarly, Action T8 generally refers to "expand[ing] shade along and over pedestrian networks through zoning code revisions that encourage shade-providing building features," but provides no enforceable requirements or metrics as to how much "shade expansion" will be required. (Draft CAP at 52.) Also illustrative of this problem is Action T11, which states, "Develop and implement a transportation demand management (TDM) ordinance that requires developers to incorporate measures such as subsidized transit passes and car share." (Draft CAP at 53.) The time and opportunity to develop measures to require of developers for future projects is here in the CAP, if the County wishes to use the CAP as a CEQA streamlining document.

VIII. Strategy 4 Does Not Include A Clear Plan to Institutionalize Low-Carbon Transportation.

The Center supports Strategy 4 – institutionalize low-carbon transportation. (Draft CAP at 44.) However, the related "Targets" are woefully inadequate – the Draft Plan only seeks 500 EV and 200 ZEV charging stations at County-owned or public properties, and contains no targets for the remainder of the County (e.g., private businesses, residential developments). (Draft CAP at 55.) Likewise, the "Actions" provide no actual mandate for developers or landowners to incorporate charging stations into infrastructure.

If the County is serious about institutionalizing low carbon transportation, it needs to do far more than simply add a few hundred EV chargers at public venues. The CAP should instead include aggressive mandates for every new development (commercial and residential) to include an adequate number of EV chargers, as well as a crediting system in order to incentivize the retrofitting of existing commercial and residential developments with EV chargers.

The CAP should also require installation of charging stations at *all* County-owned properties and public venues, as well as in appropriate public right-of-ways.

And as with the other sections of the CAP, the "Actions" are vague, unenforceable, and do not include any performance criteria. For instance, Action T20 states: "Partner with a car or ride-sharing organization to provide access to EVs for low-income and disadvantaged community residents." (Draft CAP at 57.) Action T20 does not provide any guidance as to what "partnering" means, nor does it provide any benchmark for success. How much expanded access to EVs will the County pursue via this measure? By failing to include any actual target or goal to measure success, the Draft CAP dooms this (and many other Actions) to failure.

IX. Strategy 5 Does Not Contain Clear Plan To Accelerate Freight Decarbonization.

The Center supports the goal to accelerate freight decarbonization. Unfortunately, once again, the Draft CAP's Targets and Actions are not sufficient to meaningfully support this goal.

The Draft CAP does not even clear targets for medium-duty delivery trucks – it simply states that 25-50 percent of medium-duty delivery trucks should be electric or zero emission by 2025. (Draft CAP at 58.) This renders it unclear whether the goal is 25 percent or 50 percent. And the Draft CAP simply has no corresponding and more aggressive targets for 2035 and 2045.

Likewise, the Actions are untenably vague. By way of example, Action T25 states: "Implement freight decarbonization technologies along highway corridors passing through unincorporated communities ..." (Draft CAP at 59.) No specifics, enforceable mandates, or performance criteria are used to define this purportedly "Major Action."

X. Strategy 6 Contains No Plan to Implement Zero Emissions Technologies for Off-road Vehicles and Equipment.

The Draft CAP should include concrete plans to implement and eventually require zero emissions technologies off-road vehicles and equipment. Instead, the Action items include non-binding language like: "Partner with SCAQMD and AVAQMD to ***encourage*** the use of zero-emission and near-zero-emission construction, agriculture, and manufacturing equipment." (Draft CAP at 60, emphasis added.) The CAP can, and should, require zero emission or near-zero emission equipment by a specific date.

XI. Strategy 7 Does Not Provide A Plan To Decarbonize Building Energy Use.

The Center supports decarbonizing building energy use, but finds that the Draft CAP squanders an opportunity to establish the County as a leader in this area. The Final CAP should require zero net energy on all new commercial and residential construction. Zero net energy is feasible, as other projects in the County that have recently been approved include a goal of zero net greenhouse gas emissions.[3]

Indeed, the Draft CAP does not even contain goals that are consistent with state-wide goals. The California Energy Efficiency Strategic Plan provides:

> All new residential construction will be zero net energy (ZNE) by 2020.
> All new commercial construction will be ZNE by 2030
> 50% of commercial buildings will be retrofit to ZNE by 2030
> 50% of new major renovations of state buildings will be ZNE by 2025.[4]

In contrast, the Draft CAP only sets a target of 50 percent of all new buildings and major building renovations being "net zero carbon" by 2025 and 100 percent by 2045. (Draft CAP at 63.) The Draft Plan should contain far more aggressive goals that are consistent with climate science; the entire building sector should achieve zero emissions no later than later than 2045,

[3] *See* California Department of Fish and Wildlife, *Newhall Ranch Resource and Development Management and Development Plan, Final Additional Environmental Analysis,* Appendix 2.1, available at http://planning.lacounty.gov/assets/upl/case/tr_53108_appendix-2-0-cdfw-final-aea-excerpts.pdf.
[4] California Public Utilities Commission, *Zero Net Energy*, available at https://www.cpuc.ca.gov/ZNE/.

with interim enforceable benchmarks.[5] Moreover, the Draft CAP also does not explain whether term "net zero carbon" is consistent with the state definition of zero net energy.

Strategy 7's Actions fair no better. For instance, Action SE2 simply states "Establish carbon intensity limits for buildings over 20,000 square feet." (Draft CAP at 64.) This contains no objection performance criteria – at best, it is a promise to develop performance criteria at some unspecified time in the future. As such, it fails as a CEQA mitigation measure. (See discussion in Section V above.)

Action SE4 also vaguely promises to "Adopt building code requirements for electric water and space heating and encourage alternatives to other natural gas uses in new and existing buildings." (Draft CAP at 64.) The CAP needs to actually describe building code requirements or provide performance criteria. And "encouraging alternatives" is not a CEQA mitigation measure. Action SE7 likewise promises collaboration with the City of Los Angeles and Santa Monica to "develop building energy and emissions performance standards," but provides no specifics on what those standards will entail, or what level of emissions reductions they would be expected or required to provide. (Draft CAP at 65.)

Action SE5 states "Adopt CALGreen Tier 1 green building standards and identify which Tier 2 standards could be adopted as code amendments." (Draft CAP at 64.) However, significant portions of the California Green Building Standards are already mandatory. Such that it is unclear whether there is simply a restatement of existing law.[6]

Action SE6 is problematic for other reasons. This Action states, "Incentivize net zero energy residential and commercial buildings through streamlined development reviews." (Draft CAP at 65.) First, as noted above, zero net energy should be *required*, not simply incentivized. Second, the Action does not explain what or how development review will be "streamlined." While a CAP that complies with CEQA can streamline some aspects of development, development review should not be streamlined in a way that overlooks other non-climate impacts of a project, such as impacts on air quality, public health, wildlife, and traffic.

In contrast to the vague and unenforceable Actions in the Draft CAP, there are number of enforceable policies that can be used to reach achieve zero emissions by 2045 for all buildings. The Sierra Club's *Building Electrification Action Plan for Climate Leaders* outlines various proposals, including a zero emission building code, local ordinances restricting gas and requiring all-electric new construction for all building types, GHG performance benchmarking, and air pollution standards for appliances. (See footnote 5.)

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[5] Rachel Golden, *Building Electrification Action Plan for Climate Leaders* https://www.sierraclub.org/sites/www.sierraclub.org/files/Building%20Electrification%20Action%20Plan%20for%20Climate%20Leaders.pdf (Dec. 2019).

[6] See California Building Standards Commission, "California's Green Building Code," available at https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen.

XII. Strategy 9 Does Not Provide A Concrete Plan To Increase Energy Resilience.

The Center supports the Draft CAP's goal to shift to a renewables-based electricity supply which ensures equitable access to affordable, local, and reliable energy sources. (Draft CAP at 69.) The Center urges the County to include more ambitious targets for distributed energy resources ("DER"). The Draft CAP calls for a 200 megawatt increase in DER capacity by 2025 and a 1 gigawatt increase by 2045. The Center urges the County to incorporate a target of 1 gigawatt in photovoltaic ("PV") energy by 2025 and 4 gigawatts by 2045. The Draft CAP should include a target for 500 megawatts of distributed storage capacity by 2045 and 2 gigawatts by 2045.

DER plays a unique and vital role in creating a renewable energy future that not only promotes deeper renewable penetration, but also advances fundamental goals of equal access to clean energy, social justice, and biodiversity protection. With minimal water use, no emissions from generation, and minimal land use impacts, distributed solar is the most sustainable energy source currently in production.[7] Further, building up distributed solar allows communities to gain local control over their energy system rather than leaving that control in the hands of investor-owned monopoly utilities. This shift empowers communities to make their own energy choices and gives them access to cheaper and cleaner energy, driving energy democracy. Progressive community solar policy can also enable renters and individuals who cannot afford to buy solar energy systems to invest in renewable energy, which in turn creates economic growth and local employment opportunities.

Studies show that far more ambitious targets for DER are currently feasible. A study by the National Renewable Energy Laboratory found that Los Angeles could support 9 gigawatts of rooftop solar, or 60 percent of its estimated total energy demand, using fairly conservative estimates.[8] Another study by the Institute of the Environment and Sustainability at the University of California, Los Angeles ("UCLA") found that rooftop solar can provide 7200 gigawatt hours of on-site building demands in a study area of 1.2 million parcels in L.A. County, which would meet approximately 29 percent of on-site building demands.[9]

The UCLA study found that remaining building demand that would be met by grid sources is approximately 18,000 gigawatt hours, and the potential solar output to export to the grid that is not used on-site is 16,400 gigawatt hours – this significant amount of additional electricity could be available for use by neighboring properties or elsewhere. The UCLA study also found that existing policies regulating grid operations limit potential rooftop solar output; in 20 percent of communities, current policies would reduce the technical potential of net solar generation by limiting the size of the arrays that can be installed. Moreover, the UCLA study found that lower-income and at-risk communities have greatest capacity for solar energy exports

[7] Wiser, R. et al., "The environmental and public health benefits of achieving high penetrations of solar energy in the United States," Nature Energy Vol. 113, pp. 472-486 (2016); Hernandez, R.R., Hoffacker, M.K. and C. Fields, "Efficient Use of Land to Meet Sustainable Energy Needs," Nature Climate Change, Vol. 5: 353–358, (2015).
[8] Pieter Gagnon, et al., *Rooftop Solar Photovoltaic Technical Potential in the United States: A Detailed Assessment* (Jan. 2016), available at https://www.nrel.gov/docs/fy16osti/65298.pdf.
[9] Erik Porse, et al., *Net solar generation potential from urban rooftops in Los Angeles*, Energy Policy (July 2020).

to the grid. In short, the County should take a hard look at the actual solar capacity of the County based upon existing studies and include policies to meet or exceed the actual solar capacity.

The proposed Actions are also insufficient to address either the targets in the Draft CAP or the more aggressive targets proposed by the Center. Action SE14 proposes developing a community energy map that identifies opportunities for deploying distributed energy resources and microgrids in order to improve energy resiliency in disadvantaged communities. (Draft CAP at 69.) Instead of merely generating a map, the County should develop a program or ordinance to fund and facilitate PV and storage microgrid development, especially for unincorporated and fire-prone areas. The County could begin this program in fire-prone communities, and aim for a minimum of 10 percent PV and storage microgrids instead of simply 10 percent DER installation in fire-prone communities.

XIII. Strategy 10 Fails to Provide a Plan To Reach the Target Renewable Energy Goals.

The Center supports the general goal of Strategy 10 to increase renewable energy, but notes that much stronger targets should be incorporated into the Draft CAP. The Draft CAP calls for installation of solar on only 20 percent of commercial buildings over 50,000 square feet and at least 10 percent of single family residential buildings by 2025, and higher targets for 2035 and 2045.

The Draft CAP should set far more ambitious targets. It should require solar on 60 percent of commercial buildings of any size that are solar compatible and 50 percent of residential buildings by 2025, and 100 percent of all solar compatible buildings by 2030.

The Draft CAP also does not specify *how much* solar must be installed on buildings; by its own terms, a single small panel could be installed on a building, and that building could potentially count towards the goals. As with other sections of the Draft CAP, the Draft CAP does not explain or provide data (e.g., in appendices) how the anticipated GHG mitigation potential is supported by the target.

Once again, the proposed mitigation strategies or "Actions" fall far short of even meeting the Draft CAP's existing targets. For instance, Action SE17 simply promises that the County will "encourage 100% renewable energy resource mix by 2025." (Draft CAP at 72.) The severity and urgency of the climate crisis requires governments to do far more than simply "encourage" positive steps—the climate crisis (and state laws and policies) *requires* far more aggressive actions.

Moreover, the Draft CAP should strengthen the County's role in supporting the community choice aggregation program. More specifically, the Draft CAP should include a no-cost subscription program for low-income families as well as tenants to participate. Such programs could be funded by creating a Community Energy Benefits Fund that would then be overseen by citizen task force or other non-governmental body—the Portland Clean Energy Fund illustrate of how such a program could function. Another example is East Bay Community Energy, which serves Alameda County.

XIV. The Draft CAP Fails to Contain Any Clear Plan To Support Strategy 16, Conserve Forests and Working Lands

The Center supports the conservation of forests and working lands. The Center also supports the targets to increase urban tree canopy. However, the Draft CAP fails to acknowledge how this plan fits into other related plans and programs. In particular, the City of Los Angeles is currently moving forward with a "Safe Sidewalks" initiative that will likely result in the destruction of many thousands of urban trees.[10]

Moreover, the Center supports Action A1 – supporting "the preservation of agricultural and working lands, including rangelands, and restore forest lands, by limiting the conversion of these lands to residential or other uses through tools such as the creation of agricultural easements, particularly within high climate-hazard areas and SEAs." (Draft CAP at 87.) Yet, as outlined in our comments on the Draft Sustainability Plan, the County has a pattern and practice of *approving* large-scale development in rangelands and forest lands, particularly in high fire hazard areas. (See Attachment 1 at p. 4.) Action A1's unenforceable promise to "limit" such conversion is unavailing and fails as a CEQA mitigation measure. (Draft CAP at 87.)

XV. The Draft CAP Fails to Identify Funding Sources for Mitigation Strategies.

As noted above, in *Sierra Club v. County of San Diego* (2014) 231 Cal.App.4th 1152, the Court of Appeal determined that measures in a CAP were insufficient when they were not adequately funded. (*Id.* at 1168-1169.) Here, the various "actions" in the Draft CAP acknowledge that funding will be required (using icons ranging from a $ to $$$$$), but fail to include a specific estimate of how much funding may cost, or identify an available source of funding. Similarly, the handful of sentences in the Implementation Plans "identification of funding sources" provide no specificity nor commitment for funding any of the Draft CAP's Actions. (See Draft CAP at 92.) This renders the Draft CAP inadequate as a CEQA streamlining document. Moreover, this omission calls into question whether any of the programs outlined in the Draft CAP will ever be implemented.

XVI. The Draft EIR Should Provide Further Detail on Mitigation Measures for Individual Projects.

The Center understands that the County will be preparing an EIR for the CAP. (See, e.g., Draft CAP at 15 ["With the adopted CAP, project-specific environmental documents that incorporate applicable CAP actions can "tier off" the environmental document adopted for the CAP to meet project-level CEQA evaluation requirements for GHG emissions."].) In addition, CEQA Guidelines section 15183.5(b)(1)(F) requires that a climate action plan be adopted in a public process "after environmental review." Subdivision (b)(2) provides that "[a] plan for the reduction of greenhouse gas emissions, once adopted following certification of an EIR or adoption of an environmental document, may be used in the cumulative impacts analysis of later project."

[10] Safe Sidewalks LA, Draft Environmental Impact Report, available at https://sidewalks.lacity.org/environmental-impact-report.

The Center hereby requests a minimum 90-day comment period for the Draft EIR in order to allow for adequate review by the public, particularly given the importance of the document for region-wide planning and the complexity of the issues. We hope that the Draft EIR and next draft of the CAP include and evaluate clear and enforceable measures to put the County on track to reach each of the statewide goals.

XVII. Conclusion

Thank you for the opportunity to submit comments on the Draft CAP. The Center strongly supports many of the goals of the Draft CAP. But these goals are not supported by clear, enforceable, and funded policies. The Center urges the County to significantly revise the CAP in order to address these deficiencies.

Please do not hesitate to contact us if you would like to meet to further discuss these issues.

Sincerely,

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(attached via OneDrive link)

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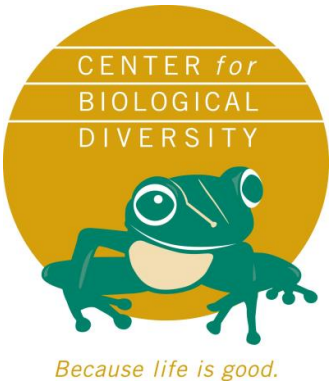
Attachment 1



May 24, 2019

Sent via email and FedEx

Los Angeles County Chief Sustainability Office
Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, California 90012
sustainability@lacounty.gov

Re: Comments on Discussion Draft of Los Angeles Countywide Sustainability Plan

Dear Los Angeles County Chief Sustainability Office:

These comments are submitted on behalf of the Center for Biological Diversity ("Center") regarding the Discussion Draft of the Los Angeles Countywide Sustainability Plan ("Draft Plan"). The Center appreciates the Chief Sustainability Office's efforts in developing the Draft Plan and generally supports the goals of the Draft Plan. We urge the Chief Sustainability Office and the Los Angeles County Board of Supervisors ("Board") to ensure that the strategies and policies supporting these goals are clear and enforceable.

A. Background on the Center for Biological Diversity.

The Center for Biological Diversity ("Center") is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over one million members and online activists throughout California and the United Sates. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Los Angeles County.

B. The Center Urges Stronger Buffers to Ensure Healthy Community Environments.

We strongly support Goals 1 and 4—"resilient and healthy community environments where residents thrive in place" and opportunities for residents and businesses to "transition to clean economy sectors." (Draft Plan at 20 & 72.) We also support strong efforts to decrease the public health problems generated by freeways and oil and gas drilling, but are concerned that the proposed targets and actions do not go far enough.

The Plan Should Require Larger Buffers between Sensitive Uses and Freeways

We support "siting of new sensitive uses, such as playgrounds, daycare centers, schools, residences, or medical facilities" farther from freeways, but are concerned that the proposed 500-foot buffers are insufficient. Studies indicate even people ***900 to 1200 feet*** from freeways experience health impacts and sensitive receptors such as children and the elderly suffer the most. (Lin 2002.) A review of 700 studies concluded that pollution causes asthma attacks in children, the onset of childhood asthma, impaired lung function, premature death and death from cardiovascular diseases, and cardiovascular morbidity. (Health Effects Institute 2010.) The Health Effects Institute study concluded that the "exposure zone" was 300 to 500 meters from the highways (984 feet to 1640 feet). (*Id.*) Other studies have reached similar conclusions. (Suglia 2008.) Living near expressways also increases the likelihood that residents will suffer from dementia. (Chen 2017.) The University of Southern California's Environmental Health Centers have also collected data and studies showing risks and health impacts to pregnant women, babies, children, teenagers, adults, and seniors of living by a freeway.[1]

The Plan Should Require 2500-foot Setbacks to Separate Oil and Gas Facilities from Homes

We would like to emphasize our support for the Draft Plan's inclusion of a series of actions to address the disproportionate exposure of low-income communities of color to fossil fuel extraction and refining (Actions 2, 3, 4, 5 and 7). In addition, we support Action 78 that calls for collaborating with the City of Los Angeles to develop a sunset strategy for oil and gas operations that prioritizes disproportionately impacted neighborhoods. In the final adoption of the plan, we urge the County to incorporate a more specific, concrete and common sense measure that we have supported at the City and County as an ally of the STAND-LA coalition: a 2500-foot setback (or buffer zone) to separate oil and gas facilities from homes, schools and other sensitive land uses, with a plan to phase out existing oil and gas within no more than five years. We are also supportive of the Draft Plan's inclusion of a commitment to a "Just Transition" that examines the impact of the transition to a cleaner economy and develops strategies for supporting displaced workers and connecting them with meaningful job training and employment opportunities (Actions 56 and 57).

[1] University of Southern California Environmental Health Centers, *References: Living Near Busy Roads or Traffic Pollution* , available at http://envhealthcenters.usc.edu/infographics/infographic-living-near-busy-roads-or-traffic-pollution/references-living-near-busy-roads-or-traffic-pollution (collecting studies). See also Tony Barboza and Jon Schleuss, "L.A. keeps building near freeways, even though living there makes people sick," *Los Angeles Times* (Mar. 2, 2017), available at http://www.latimes.com/projects/la-me-freeway-pollution/.

Reducing Asthma and Toxic Emissions through Less VMT

The Center strongly supports decreasing child asthma rates as proposed by the Draft Plan. However, this will not be possible if the Board continues to approve projects that add more unnecessary freeway traffic and air pollution to the region. An example of this is the recently-approved Centennial development approved by the Board, which will add 75,000 new long distance car commuters onto our freeways, increasing air pollution and hindering efforts to reduce toxic emissions.

C. The Center Supports Goal 2 and Urges Implementation of Zero Net Energy Standards.

We support the Plan's Goal 2—ensuring that "[b]uildings and infrastructure that support human health and resilience." (Draft Plan at 42.) The Center notes that Action Item 30 envisions the County will "Pilot high performance building standards for new County buildings beyond the current LEED Gold standard, such as Passive House, Zero Net Energy, Net Zero Water, Net Zero Waste..." (Draft Plan at 50.) The Center urges the Plan to require more than just a "pilot" for Zero Net Energy and instead move forward with policies and standards to require zero net energy for new construction.

Zero net energy is feasible, as other projects in the County that have recently been approved include a goal of zero net greenhouse gas emissions. Such projects intend to achieve that goal through reducing onsite greenhouse gas emissions to the greatest extent practicable, but also by offsetting any other emissions through local emissions reductions projects.[2]

D. The Center Supports Goal 3 and Urges Concrete and Enforceable Policies to Limit Sprawl Development.

The Center strongly supports the Draft Plan's goal of equitable and sustainable land use and development without displacement. (Draft Plan at 58.) The Center agrees that the way the County "choose[s] to direct that growth has huge implications for the environment, the economy and social equity." (*Id*.) Likewise, the Center agrees:

> Patterns of exurban sprawl and development in high-hazard areas can place major burdens on our infrastructure and public budgets, especially for unincorporated communities where the County of Los Angeles acts as the municipal service provider. Outward growth limits the resources we could otherwise be investing in our existing communities, where we can promote sustainability, health and well-being by improving walkability and promoting a mixture of uses.

(Draft Plan at 58.) The Draft Plan is correct that exurban sprawl imposes a hidden tax on existing communities. Studies recognize that sprawl "may deprive the poor of economic

[2] *See* California Department of Fish and Wildlife, *Newhall Ranch Resource and Development Management and Development Plan, Final Additional Environmental Analysis*, Appendix 2.1, available at http://planning.lacounty.gov/assets/upl/case/tr_53108_appendix-2-0-cdfw-final-aea-excerpts.pdf.

opportunity...when jobs, stores, good schools and other resources migrate outward from the core city, poverty is concentrated in the neighborhoods that are left behind." (Frumkin 2002.) Studies also show that sprawl disproportionately increases costs on local government through increased infrastructure costs. (Litman 2015.) One study found that the external costs of sprawl are around $500 billion annually and $650 billion internally. (*Id*.) Sprawl also has significant equity implications—"the abandonment of the metropolitan core leaves inner cities and first-ring suburbs struggling to provide adequate services with an eroded tax base even as growth continues on the periphery." (Belzer 2002.)

The Draft Plan is also correct that "[u]rban sprawl generally requires expensive and expansive infrastructure networks that drain resources and contribute significantly to greenhouse gas emissions." (Draft Plan at 60.)

Unfortunately, with the exception of Supervisor Kuehl, the Board has not shown they are serious about curbing urban sprawl. County supervisors just approved one of the biggest urban sprawl projects in California history last month, the 12,000-acre Centennial Specific Plan, on remote wildlands in the northern corner of the County. The Center informed the County that Centennial would result in less investment in existing communities and—as observed by the developer's own consultants—draw demand away from existing communities in Santa Clarita and San Fernando. The development would also require the construction of a new six-lane freeway (the Northwest 138 Corridor "Improvement Project"), at an initial cost to taxpayers of $830 million.

The Board also just approved the 1,300-acre Northlake development over the objection of the Santa Monica Mountains Conservancy (and the Center). That project will pave over pristine wildlands, inhibit wildlife connectivity in the region, and disproportionately contribute to greenhouse gas emissions, traffic, and air pollution.

If the County is serious about ending its historical pattern of approving more development in the county's diminishing wildlands and rangelands, then it needs to adopt strong enforceable policies to meet this goal. Action 44 is a step in the right direction. The Draft Plan states, "Prohibit the conversion of working lands to residential uses, including farms and rangelands." (Draft Plan at 60.) Such a policy—if it were actually consistently enforced—would be a strong step forward in protecting the County's natural resources.

E. The Center Supports the Draft Plan's Target to Limit Discretionary Development in High Fire Areas.

We support Strategy 3E—limiting development in high fire areas. The science is clear that we can no longer continue building new large-scale development in high fire areas. In Southern California, sprawl developments with low/intermediate densities extending into chaparral and sage scrub habitats that are prone to fire have led to more frequent wildfires caused by human ignitions, like arson, improperly disposed cigarette butts, debris burning, fireworks, campfires, or sparks from cars or equipment (Keeley et al. 1999; Keeley and Fotheringham 2003; Syphard et al. 2007; Syphard et al. 2012; Bistinas et al. 2013; Balch et al. 2017; Radeloff et al. 2018). Human-caused fires account for 95% of all fires in Southern California (Syphard et al.

2013), and homes filled with petroleum-based products, such as wood interiors, paint, and furniture, provide additional fuel for the fires to burn longer and spread farther (Keeley et al. 2007). The most numerous and largest fires in Southern California have been caused by equipment and powerlines in the wildland-urban interface, where housing density is low to intermediate (Syphard and Keeley 2015), and leapfrog developments have been found to have the highest predicted fire risk in the County (Syphard et al. 2013).

More development in high fire areas such as chaparral and sage scrub would lead to a dangerous feedback loop of deadly fires and habitat destruction. These habitats are adapted to infrequent (every 30 to 150 years), large, high-intensity crown fire regimes (Pyne et al. 1996; Keeley and Fotheringham 2001), and if these regimes are disrupted, the habitats become degraded (Keeley 2005, 2006a,b; Syphard et al. 2018). When fires occur too frequently, type conversion occurs and the native shrublands are replaced by non-native grasses and forbs that burn more frequently and more easily, ultimately eliminating native habitats and biodiversity while increasing fire threat over time (Keeley 2005, 2006a,b; Syphard et al. 2009; Safford and Van de Water 2014; Syphard et al. 2018). Thus, placing developments in these high fire-prone areas will lead to more frequent fires while degrading the health and biodiversity of Southern California's ecosystems.

Nonetheless, the "actions" in the Draft Plan do not set forth a clear plan to actually limit development in high fire areas. In particular, while the Countywide "Target" states "no new discretionary development in high hazard areas" by 2025, there is no "action" proposed to meet this target. (Draft Plan at 70.) Instead, as mentioned above, the County has been approving large-scale development such as Centennial and Northlake in high fire areas. By approving entitlements for these projects now despite the science showing such development is dangerous, costly, and environmentally harmful, the County is ensuring large-scale development will continue in fire-prone areas for many years.

F. The Center Strongly Supports Goal 5 and Urges The County To Develop a Wildlife Connectivity Ordinance

The Center strongly supports the Draft Plan's goal of thriving ecosystems, habitats, and biodiversity. (Draft Plan at 78.) To realize this goal, the Plan must consider the issue of wildlife connectivity and the effects of suburban development on wild areas, as explained below.

Habitat Connectivity Is Essential for Wildlife Movement and Biodiversity Conservation.

Habitat connectivity is vital for wildlife movement and biodiversity conservation. Limiting movement and dispersal with barriers (*e.g.*, development, roads, or fenced-off croplands) can affect animals' behavior, movement patterns, reproductive success, and physiological state, which can lead to significant impacts on individual wildlife, populations, communities, and landscapes (Trombulak and Frissell 2000; Tewksbury et al. 2002; Cushman 2006; van der Ree et al. 2011; Haddad et al. 2015; Ceia-Hasse et al. 2018). Individuals can die off, populations can become isolated, sensitive species can become locally extinct, and important ecological processes like plant pollination and nutrient cycling can be lost. In addition, connectivity between high quality habitat areas in heterogeneous landscapes is important to

allow for range shifts and species migrations as climate changes (Heller and Zavaleta 2009, Cushman et al. 2013). Lack of wildlife connectivity results in decreased biodiversity and degraded ecosystems. Thus, preserving and maintaining natural and created corridors is critical for species and habitat conservation in fragmented landscapes (Gilbert-Norton et al., 2010).

Wildlife connectivity and migration corridors are important at the local, regional, and continental scale. Local connectivity that links aquatic and terrestrial habitats would allow various sensitive species to persist, including state- and federally-protected California red-legged frogs (*Rana draytonii*), arroyo toads (*Anaxyrus californicus*), and other species. At a regional scale, medium- and large-sized mammals that occur in Los Angeles County, such as mountain lions (*Puma concolor*), bobcats (*Lynx rufus*), gray foxes (*Urocyon cinereoargenteus*), ring-tailed cats (*Bassariscus astutus*), and mule deer (*Odocoileus hemionus*), require large patches of heterogeneous habitat to forage, seek shelter/refuge, and find mates.

Climate Change Is Likely to Significantly Alter Wildlife Behavior and Movement.

A strong, international scientific consensus has established that human-caused climate change is causing widespread harms to human society and natural systems, and climate change threats are becoming increasingly dangerous. In a 2018 *Special Report on Global Warming of 1.5°C* from the Intergovernmental Panel on Climate Change (IPCC), the leading international scientific body for the assessment of climate change describes the devastating harms that would occur at 2°C warming, highlighting the necessity of limiting warming to 1.5°C to avoid catastrophic impacts to people and life on Earth (IPCC 2018). In addition to warming, many other aspects of global climate are changing. Thousands of studies conducted by researchers around the world have documented changes in surface, atmospheric, and oceanic temperatures; melting glaciers; diminishing snow cover; shrinking sea ice; rising sea levels; ocean acidification; and increasing atmospheric water vapor (USGCRP, 2017).

Climate change is increasing stress on species and ecosystems, causing changes in distribution, phenology, physiology, vital rates, genetics, ecosystem structure and processes, and increasing species extinction risk (Warren et al., 2011). A 2016 analysis found that climate-related local extinctions are already widespread and have occurred in hundreds of species, including almost half of the 976 species surveyed (Wiens 2016). A separate study estimated that nearly half of terrestrial non-flying threatened mammals and nearly one-quarter of threatened birds may have already been negatively impacted by climate change in at least part of their distribution (Pacifici et al. 2017). A 2016 meta-analysis reported that climate change is already impacting 82 percent of key ecological processes that form the foundation of healthy ecosystems and on which humans depend for basic needs (Scheffers et al. 2016). Genes are changing, species' physiology and physical features such as body size are changing, species are moving to try to keep pace with suitable climate space, species are shifting their timing of breeding and migration, and entire ecosystems are under stress (Cahill et al., 2012; Chen et al., 2011; Maclean & Wilson, 2011; Parmesan, 2006; Parmesan & Yohe, 2003; Root et al., 2003; Warren et al., 2011). As such, it is imperative that current and future land use planning consider the impacts of climate change on wildlife movement.

Corridor Redundancy Helps Retain Functional Connectivity and Resilience.

Corridor redundancy (*i.e*. the availability of alternative pathways for movement) is important in regional connectivity plans because it allows for improved functional connectivity and resilience. Compared to a single pathway, multiple connections between habitat patches increase the probability of movement across landscapes by a wider variety of species, and they provide more habitat for low-mobility species while still allowing for their dispersal (Mcrae et al., 2012; Olson & Burnett, 2013; Pinto & Keitt, 2008). In addition, corridor redundancy provides resilience to uncertainty, impacts of climate change, and extreme events, like flooding or wildfires, by providing alternate escape routes or refugia for animals seeking safety (Cushman et al., 2013; Mcrae et al., 2008; Mcrae et al., 2012; Olson & Burnett, 2013; Pinto & Keitt, 2008).

Human Development and Associated Noise and Lighting Can Interfere with the Behavior of Local Wildlife Such as Mountain Lions.

Human development and associated noise can degrade adjacent wildlife habitat and behavior. (*See, e.g.*, Slabbekoorn 2008.) For instance, field observations and controlled laboratory experiments have shown that traffic noise can significantly degrade habitat value for migrating songbirds. (Ware et al. 2015.) This finding followed lab results indicating that subjects exposed to 55 and 61 dBA simulated traffic noise exhibited decreased feeding behavior and duration, as well as increased vigilance behavior. (*Id*.) Such behavioral shifts increase the risk of starvation, thus decreasing survival rates. A recent study also highlighted the detrimental impacts of siting development near areas protected for wildlife. The study noted that "Anthropogenic noise 3 and 10 dB above natural sound levels . . . has documented effects on wildlife species richness, abundance, reproductive success, behavior, and physiology." (Buxton, et al.) The study further noted that "there is evidence of impacts across a wide range of species [] regardless of hearing sensitivity, including direct effects on invertebrates that lack ears and indirect effects on plants and entire ecological communities (e.g., reduced seedling recruitment due to altered behavior of seed distributors)." (*Ibid*.) Moreover, human transportation networks and development resulted in high noise exceedances in protected areas. (*Ibid*.)

There also is strong evidence documenting the effects of human activity specifically on mountain lions. One study found that mountain lions are so fearful of humans and noise generated by humans that they will abandon the carcass of a deer and forgo the feeding opportunity just to avoid humans. (Smith 2017.)[3] The study concluded that even "non-consumptive forms of human disturbance may alter the ecological role of large carnivores by affecting the link between these top predators and their prey." (Smith 2017.) In addition, the study found that mountain lions respond fearfully upon hearing human vocalizations. Another study demonstrates that mountain lions exposed to other evidence of human presence (lighting, vehicles, dogs) will impact mountain lion behavior. (Wilmers 2013.) Other studies documented diet shifts in mountain lions near human development, and recommended minimizing any development in mountain lion habitat. (Smith 2016; *see also* Smith 2015.)

[3] *See also* Sean Greene, "How a fear of humans affects the lives of California's mountain lions," *Los Angeles Times* (June 27, 2017), available at http://beta.latimes.com/science/sciencenow/la-sci-sn-pumas-human-noise-20170627-story.html.

Additional studies similarly documented that mountain lions avoid "urban, agricultural areas, and roads and prefer[] riparian areas and more rugged terrain." (Zeller 2017; *see also* Vickers 2015.) One study found that over half (55 percent) of radio collared mountain lions in urban areas did not survive, and the majority were killed by humans either by vehicle strikes or using depredation permits. (Vickers 2015.) As such, the Plan should include policies to minimize development in open space areas, as "edge effects" from such development can interfere with animal behavior and movement.

Creating and Enhancing Wildlife Crossings Is Critical to Maintaining Healthy Ecosystems.

We recommend that the Draft Plan include stronger policies to promote wildlife movement and/or include a goal to develop a county wildlife connectivity ordinance. Enhanced connectivity helps sustain functional ecosystems and ensure public safety. Although natural, existing corridors in fragmented landscapes have been shown to have more wildlife movement compared to created corridors (Gilbert-Norton et al., 2010), crossing structures combined with setbacks at the entrances and exits are useful as retroactive restoration in areas where existing roads have high incidence of wildlife vehicle conflict or where species movement has been severely impacted. When appropriately implemented, wildlife crossing infrastructure has been shown to improve wildlife permeability and reduce wildlife vehicle collisions (Bissonette & Rosa, 2012; Dodd Jr. et al., 2004; Dodd et al., 2012; Kintsch et al., 2018; Sawaya et al., 2014; Sawyer et al., 2012).

Outside of California many other states and jurisdictions have been proactively addressing wildlife connectivity issues. For example, Arizona, Colorado, and Wyoming have seen 80-96% reductions in wildlife vehicle collisions while gradually increasing the level of wildlife permeability over time (it appears that some species take more time than others to adapt to crossings) on sections of highways where they have implemented wildlife crossing infrastructure, such as underpasses, culverts, overpasses, wildlife fencing, and escape ramps (Dodd et al., 2012; Kintsch et al., 2017; Kintsch et al., 2018; Sawyer et al., 2012). Utah just completed the state's largest wildlife overpass at Parleys Canyon for moose, elk, and deer. Washington State is about to complete its largest wildlife overpass on I-90, which is anticipated to provide habitat connectivity for a wide variety of species between the North and South Cascade Mountains. The overpass cost $6.2 million as part of a larger $900 million expansion project that will include multiple wildlife crossings along a 15-mile stretch of highway. Savings from less hospital bills, damage costs, and road closures from fewer wildlife vehicle collisions will make up those costs in a few years (Valdes 2018). State and local officials are actively pursuing these types of projects because of the benefits for wildlife connectivity, public safety, and the economy. And in neighboring Ventura County, the Board of Supervisors recently adopted a first-of-its-kind ordinance to protect wildlife connectivity.

The Draft Plan Should Provide Clear Action Items To Support Wildlife Connectivity

We are concerned that the action items proposed in the Draft Plan are insufficient to support Goal 5. In particular, lacking from the action items is any clear plan for ensuring habitat connectivity within the region.

Instead, it appears that the County has not prioritized this issue. For instance, the County General Plan EIR anticipated a significant adverse effect on wildlife movement.[4] The California Department of Fish and Wildlife ("CDFW") urged the County to develop mitigation opportunities for wildlife connectivity, since such "opportunities for wildlife corridors and nursery sites are best established during large scale planning efforts such as this General Plan." CDFW noted that "Wildlife corridor areas can be delineated and set aside in the General Plan for current and future conservation efforts. An assessment could be placed on development within the Project area to secure the acquisition of these critical linkages and sites, therefore reducing impacts to wildlife corridors and nursery sites and ensuring biological diversity."[5] The County did not implement CDFW's recommendations.

The Plan should include a goal to develop a wildlife connectivity ordinance. Moreover, while the proposed "actions" to support Goal 5 are all helpful measures, more is needed. The Plan should incorporate policies that support an "urban growth boundary." Urban growth boundaries have been used in other jurisdictions as a tool to encourage development in or near existing communities while leaving natural areas undeveloped. Without a clearly defined urban growth boundary, developers will continue to propose—and the Board will continue to approve—development in wild and fire-prone areas, which will further inhibit wildlife connectivity while increasing traffic and air pollution.

G. The Center Supports Goals 7 and 8 and Encourages Stronger Policies To Reduce VMT.

We support Goals 7 and Goal 8—a fossil fuel-free LA County with convenient, safe and affordable transportation that reduces car dependency. However, the targets and associated actions do not include sufficiently ambitious goals to reduce vehicle miles travelled ("VMT"). The Draft Plan's aims for "[a]t least 15% of all trips will be by foot, bike, micromobility, or public transit." (Draft Plan at 108.) This means that even if this target is met, in six years 85 percent of trips in the County will still be by car. The Draft Plan should call for much stronger measures to reduce single occupancy vehicle trips and VMT. The best way to do this is to limit development in areas far from existing cities that generate high VMT and limit new freeway development, which induces additional VMT.

The December 2018 Technical Advisory issued by the Governor's Office of Planning and Research (the "VMT Report")[6] contains helpful guidance and analysis that could be

[4] County of Los Angeles, *Los Angeles County General Plan Update Draft Environmental Impact Report* (June 2014), available at http://planning.lacounty.gov/assets/upl/project/gp_2035_deir.pdf.
[5] County of Los Angeles, *Los Angeles County General Plan Update Final Environmental Impact Report* (March 2015), available at http://planning.lacounty.gov/assets/upl/project/gp_2035_lac-gpu-final-eir-final.pdf.
[6] The VMT Report is available at http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

incorporated into the Draft Plan. For instance, the VMT Report states that land use decisions to reduce GHG emissions associated with the transportation sector are crucial in order to meet the GHG reductions set forth in SB 375. (VMT Report at 3.) The VMT Report further notes that California cannot meet its climate goals without curbing single-occupancy vehicle activity; land use patterns and transportation options will need to change to support reductions in VMT. (*Id*. at 10.) The VMT Report also proposes a "per capita" or "per employee" threshold of 15 percent below existing development as a reasonable threshold. (*Id*. at 10.) The VMT Report reiterates the conclusion of the California Air Resources Board that "there is a gap between what SB 375 can provide and what is needed to meet the State's 2030 and 2050 goals." (*Id*.)

The VMT Report confirms that VMT-intensive development impacts human health and the environment: "Human health is impacted as increases in vehicle travel lead to more vehicle crashes, poorer air quality, increases in chronic diseases associated with reduced physical activity, and worse mental health. Increases in vehicle travel also negatively affect other road users, including pedestrians, cyclists, other motorists, and many transit users. The natural environment is impacted as higher VMT leads to more collisions with wildlife and fragments habitat. Additionally, development that leads to more vehicle travel also tends to consume more energy, water, and open space (including farmland and sensitive habitat). This increase in impermeable surfaces raises the flood risk and pollutant transport into waterways." (VMT Report at 3.) As such, if the County took strong steps to reduce VMT, it would have co-benefits of better air quality, decreased chronic disease, decreased wildlife-vehicle collisions, and less habitat fragmentation.

The VMT Report further states that roadway expansion projects can induce substantial VMT such that the environmental reviews should incorporate quantitative estimates of induced VMT. (VMT Report at 23.) The VMT Report explains that "[b]uilding new roadways, adding roadway capacity in congested areas, or adding roadway capacity to areas where congestion is expected in the future, typically induces additional vehicle travel." (*Id.* at 24.) The Plan should thus contain policies to discourage unnecessary highway development and instead focus infrastructure resources on alternative transportation projects.

H. Conclusion

Thank you for the opportunity to submit comments on the Draft Plan. Again, the Center strongly supports the goals of the Draft Plan. But if the goals in the plan are not supported by clear and enforceable policies, then the final Plan will be ineffective in achieving these goals.

Los Angeles County's traffic jams, air pollution, fragmented wildlife habitat, and diminishing wildlands are a legacy of poor planning decisions made by local officials, often made under pressure from profit-driven developers. Unfortunately Los Angeles County and its Board have continued to approve costly, dangerous, and environmentally-damaging development despite (1) strong public opposition and (2) science confirming that such development is inappropriate in light of the climate crisis, extinction crisis, and the risks of building in fire-prone landscapes.

The Center urges the Chief Sustainability Office and Board to use this Plan as a means to establish a new vision for Los Angeles County that supports healthy communities and healthy wildlands. For such a vision to become reality, it must be supported by clear, binding, and legally enforceable policies. As long as such policies are vague or absent, developers will continue proposing—and officials will likely keep approving—projects that take the county in the wrong direction.

Please do not hesitate to contact the Center at the number or email listed below.

Sincerely,

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(Attached on CD)

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Attachment 2

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FILED
SUPERIOR COURT OF CALIFORNIA
COUNTY OF SONOMA

JUL 20 2017

BY M. [illegible]
Deputy Clerk

SUPERIOR COURT FOR THE STATE OF CALIFORNIA

COUNTY OF SONOMA

CALIFORNIA RIVERWATCH, Petitioner, v. COUNTY OF SONOMA, ET AL. Defendants.	Case No.: SCV-259242 ORDER GRANTING PETITION FOR WRIT OF MANDATE

This matter was tried to the court on March 23, 2017, the Honorable Nancy Case Shaffer presiding. The Law Office of Jack Silver and Jerry Bernhaut and Jack Silver appeared on behalf of Petitioner; the Office of Sonoma County Counsel and Bruce Goldstein and Verne Ball appeared on behalf of Respondent Sonoma County Regional Climate Protection Authority. At the conclusion of the hearing, the court ordered further briefing. The matter was deemed submitted on April 21, 2017, when all briefs were submitted.

I. SUMMARY OF RULING

The court finds that the Sonoma County Regional Climate Protection Authority's Final Programmatic EIR ("the PEIR") for Climate Action 2020 and Beyond, its Climate Action plan ("CAP") and the County of Sonoma's approval of the CAP violate CEQA, in that the inventory of greenhouse gas emissions is based on insufficient information; the PEIR fails to

include effectively enforceable, clearly defined performance standards for the mitigation measures regarding Green House Gas ("GHG") emissions, identified as "GHG Reduction Measures;" and fails to develop and fully analyze a reasonable range of alternatives.

Accordingly, the approval of the PEIR was a prejudicial abuse of discretion by Respondent. Given the lack of information and other material defects, as a matter of law the PEIR cannot fulfill its basic CEQA purpose as an information document.

The court finds that there is insufficient information in the administrative record to support the factual conclusion that the CAP will achieve its fundamental purpose of reducing Respondent's countywide GHG emissions to the stated target of 25% below 1990 levels by 2020.

I. FACTS

Petitioner seeks a writ of mandate overturning Respondent's certification and of a Final Programmatic EIR (the PEIR) for its Climate Action Aplan (CAP) and the approval of the CAP on the grounds that the approvals violate CEQA.

A. The Project

The CAP Project is a planning-level document to guide analysis of the greenhouse gas (GHG) impacts of future projects in the county.

In 2006, the California legislature passed AB 32, the Global Warming Solutions Act (the Act) which, among other things, establishes a statewide goal of achieving 1990-level GHG impacts by 2020.

CEQA Guideline 15183.5 allows agencies to adopt an overall long-range plan such as a general plan or similar plan governing GHG analysis of subsequent projects. Respondent adopted the CAP in accord with Guideline 15183.5 as a method of providing an overall *tiered analysis* of GHG impacts in subsequent projects as a method of complying with the Act's mandate. (1 AR 4, 10.)

B. The Petition for Writ of Mandamus

Petitioner argues that the EIR fails to provide an accurate description of the existing conditions or a means for calculating GHG emissions; that the PEIR contains inadequate mitigation measures, alternatives analysis, or response to public comments.

Respondent opposes the petition, contending that Petitioner relies on non-existent requirements in 15183.5; that Petitioner fails to discuss the substantial evidence in the record, that the EIR sufficiently discusses existing conditions; that the PEIR properly discloses methodology; that the CAP is not a mitigation measure and does not need to contain mitigation measures; that substantial evidence supports the CAP emissions reduction estimates; that the alternatives analysis complies with CEQA; that Petitioner failed to exhaust administrative remedies on the responses to comments; and that Petitioner has demonstrated no prejudicial error.

II. ANALYSIS

A. Request for Judicial Notice

The court grants, in full, Respondents' request to take judicial notice of certain government and regulatory documents, including a statement from the Natural Resources Agency on amendments to the Guidelines regarding GHG emissions; the California Air Resources Board ("CARB") Climate Change Scoping Plan; the CARB draft 2030 Target Scoping Plan Update; the County of Napa CAP; Guideline 15183.5, AB32, and SB 97; and the lodgment of the record in this case.

B. **CEQA**

An EIR is required for a project which substantial evidence indicates may have a significant effect on the environment. (Guidelines for the Implementation of CEQA (Guidelines), 14 CCR section 15063(b)[1]; PRC sections 21100, 21151.) EIRs are, in the words

[1]These are at 14 Cal Code Regs §§ 15000, *et seq.* Courts should at a minimum afford great weight to the Guidelines except when a section is clearly unauthorized or erroneous under CEQA. *Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.* (*Laurel Heights I)* (1988) 47 Cal.3d 376, 391, fn 2; *Sierra Club v. County of Sonoma* (1992) 6 Cal.App.4th 1307, 1315.

of the California Supreme Court, "the heart of CEQA." *Laurel Heights Improvement Assn. v. Regents of the University of California* (1988) 47 Cal.3d 376, 392 (*Laurel Heights I*).

The ultimate mandate of CEQA is "to provide public agencies and the public in general with *detailed information* about the effect [of] a proposed project" and to minimize those effects and choose possible alternatives. (emphasis added) (PRC 21061.) The public and public participation hold a "privileged position" in the CEQA process based on fundamental "notions of democratic decision-making." (*Concerned Citizens of Costa Mesa, Inc. v. 32nd District Agricultural Association* (1986) 42 Cal.3d 929, 936.)

As a fundamental benchmark that generally applies to all issues in CEQA the court, is that the court, in considering an issue, should look to see if "the public could discern... the 'analytic route the... agency traveled from evidence to action.'" (See ***Al Larson Boat** Shop Inc. v. Bd. of Harbor Commissioners* (1993) 18 Cal.App.4th 729, 749; see also *Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 513-514, 522.)

The burden of investigation rests with the government and not the public. (*Lighthouse Field Beach Rescue v. City of Santa Cruz* (2005) 131 Cal.App.4th 1170, 1202.)

C. Standard of review

1. Preliminary Basis for Standard of Review

The standard of review is in dispute here. This dispute arises out of the divergent characterizations of the issues by the parties.

Public Resources Code section 21168 provides that when a court reviews a determination, finding, or decision of a public agency, "as a result of a proceeding in which by law a hearing is required to be given, evidence is required to be taken and discretion in the determination of facts is vested in a public agency ... the court shall not exercise its independent judgment on the evidence but shall only determine whether the act or decision is supported by substantial evidence in the light of the whole record." However, review is *de novo* when the court must determine whether the agency has prejudicially abused its discretion either by failing to proceed in the manner required by law or by reaching a decision that is not supported by substantial evidence. (*Laurel Heights I, supra* 47 Cal.3d 392, fn.5.)

"[A] reviewing court must adjust its scrutiny to the nature of the alleged defect, depending on whether the claim is predominantly one of improper procedure or a dispute over the facts." *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 435 (*"Vineyard"*).

As the court explained in *Vineyard*:

> [A]n agency may abuse its discretion under CEQA either by failing to proceed in the manner CEQA provides or by reaching factual conclusions unsupported by substantial evidence. (§21168.5.) Judicial review of these two types of error differs significantly: while we determine de novo whether the agency has employed the correct procedures, "scrupulously enforc[ing] all legislatively mandated CEQA requirements" (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564...), we accord greater deference to the agency's substantive factual conclusions. In reviewing for substantial evidence, the reviewing court "may not set aside an agency's approval of an EIR on the ground that an opposite conclusion would have been equally or more reasonable," for, on factual questions, our task "is not to weigh conflicting evidence and determine who has the better argument."(*Laurel Heights I, supra,* 47 Cal.3d at p. 393....) [2]

While courts must give deference as to substantive factual decisions, courts demand strict compliance with "legislatively mandated CEQA requirements." (*Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 564 (*Goleta II*).) A Respondent is entitled to no deference where the law has been misapplied, or where the decision was based on "an erroneous legal standard." (*East Peninsula Educ. Council, Inc. v. East Peninsula Unif. Sch. Dist.* (1989) 210 Cal.App.3d 155, 165.)

Courts must 'determine de novo whether the agency has employed the correct procedures, "scrupulously enforc[ing] all legislatively mandated CEQA requirements"....' (*Vineyard Area Citizens for Responsible Growth, supra,* 40 Cal.4th 435, citing *Goleta II,* 52 Cal.3d at 564.) *Failure to include required information is a failure to proceed in the manner*

[2] *Laurel Heights I* is *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 400 (*Laurel Heights I*

required by law and demands strict scrutiny. (*Sierra Club v. State Bd. of Forestry* (1994) 7 Cal.4th 1215, 1236; *Vineyard, supra,* 40 Cal.4th at 435.) The court reviews the PEIR here de novo.

Nevertheless, agency actions are presumed to comply with applicable law unless the petitioner presents proof to the contrary. (Evid. Code § 664; *Foster v. Civil Service Commission of Los Angeles County* (1983) 142 Cal.App.3d 444, 453.) The petitioner in a CEQA action thus has the burden of proving that an EIR is insufficient. (*Al Larson Boat Shop, Inc. v. Board of Harbor Commissioners* (1993) 18 Cal.App.4th 729, 740.)

2. Standard of Review: Substantial-Evidence Test

The substantial-evidence test applies to substantive issues in a decision certifying an EIR. The court must uphold the decision if it is supported by substantial evidence in the record as a whole. (*Bowman v. City of Petaluma* (1986) 185 Cal.App.3d 1065, 1075; see *River Valley Preservation Project v. Metropolitan Transit Dev. Bd.* (1995) 37 Cal.App.4th 154, 166; see *Santa Teresa Citizen Action Group v. City of San Jose* (2003) 114 Cal.App.4th 689, 703. The "substantial evidence" test requires the court to determine "whether the act or decision is supported by substantial evidence in the light of the whole record." (*Chaparral Greens v. City of Chula Vista* (1996) 50 Cal.App.4th 1134, 1143; *River Valley Preservation Project v. Metropolitan Transit Develop. Bd.* (1995) 37 Cal.App.4th 154, 168.)

When applying the substantial-evidence standard, the court must focus not upon the "correctness" of a report's environmental conclusions, but only upon its "sufficiency as an informative document."(*Laurel Heights I* 47 Cal.3d at 393.) The findings of an administrative agency are presumed to be supported by substantial evidence. *(Taylor Bus. Service, Inc. v. San Diego Bd. of Education* (1987) 195 Cal.App.3d 1331.) The court must resolve reasonable doubts in favor of the findings and decision. (*Id.)*

A claim that the EIR lacks *sufficient* information regarding an issue will be treated as an argument that the EIR is not supported by substantial evidence. (*Barthelemy v. Chino Basin Munic. Water Dist.* (1995) 38 Cal.App.4th 1609, 1620.) The petitioners in *Barthelemy*

asserted that it was a failure to proceed in the manner required by law where an EIR did not include key information. The court rejected that argument.

a) The Definition of "Substantial Evidence"

Substantial evidence is "enough relevant information and reasonable inferences" to allow a "fair argument" supporting a conclusion, in light of the whole record before the lead agency. (14 CCR § 15384(a); PRC §21082.2; *City of Pasadena v. State of California* (2nd Dist.1993) 14 Cal.App.4th 810, 821-822.) Other decisions define "substantial evidence" as that with "ponderable legal significance," reasonable in nature, credible, and of solid value. (*Stanislaus Audubon Society, Inc., v. County of Stanislaus* (1995) 33 Cal.App.4th 144.)

Substantial evidence includes facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts. (PRC §21082.2(c); see also Guidelines 15064(g)(5), 15384.) It does not include argument, speculation, unsubstantiated opinion or narrative, clearly incorrect evidence, or social or economic impacts not related to an environmental impact. (Guideline 15384.)

3. Prejudicial Abuse of Discretion

A court may only issue a writ in a CEQA case for an abuse of discretion, including making a finding without substantial evidence, if the error was *prejudicial*. (*Chaparral Greens v. City of Chula Vista* (1996) 50 Cal.App.4th 1134, 1143.) The court must defer to the agency's substantive conclusions an uphold the determination unless. ((Id); *see* PRC § 21168, 21168.5, *Laurel Heights I, supra,* 47 Cal.3d at 392, fn.5; Remy, et al., Guide to the California Environmental Quality Act (10th Ed.1999) Chapter XI (D), p.590.)

4. Tiered EIRs

As discussed further below, the PEIR here is a tiered EIR prepared in accordance with Guideline 15183.5, which specifically allows for preparation of an overall, first-tier EIR and planning document to govern analysis of GHG emissions and control GHG emissions in order to comply with the statewide mandates to reduce GHG emissions.

A tiered EIR scheme allows an agency to produce a general EIR focusing on an overall plan or policy and later conduct more limited, narrow subsequent EIR review for

individual projects within the broad plan or scope of the original, general EIR. (PRC 21068.5, 21093(a); Guideline 15152; *Koster v. County of San Joaquin* (1996) 47 Cal.App.4th 29, 36.) "Tiering" is defined in PRC 21068.5 as:

> coverage of general matters and environmental effects in an [EIR] prepared for a policy, plan, program or ordinance followed by narrower or site-specific [EIRs] which incorporate by reference the discussion in any prior [EIR] and which concentrate on the... effects which (a) are capable of being mitigated, or (b) were not analyzed... in the prior [EIR].

In other words, it is 'a process by which agencies can adopt programs, plans, policies, or ordinances with EIRs focusing on "the big picture" and can use streamlined CEQA review for individual projects that are consistent with such... [first tier plans]....' (*Koster v. County of San Joaquin* (3d Dist. 1996) 47 Cal.App. 4th 29, 36.) The later EIRs need not repeat the analysis or revisit the issues from the original EIR. (Guideline 15385.)

Guideline 15152 is the overall provision governing first-tier documents in general and in its detailed discussion demonstrates clearly what such documents must do, what they must include, and how they may be used.[i] Environmental impact reports "shall be tiered whenever feasible, as determined by the lead agency." (PRC 21093(b).) This "is needed in order to provide increased efficiency in the CEQA Process. It allows agencies to deal with broad environmental issues in EIRs at planning stage and then to provide more detailed examination of specific effects....These later EIRs are excused by the tiering concept from repeating the analysis of the broad environmental issues examined in the [first tier] EIRs." (Discussion following Guideline 15385.)

PRC 21094(c) states that "[f]or purposes of compliance with this section, an initial study shall be prepared to assist the lead agency in making the determinations required by this section."

C. GREENHOUSE GAS EMISSIONS

The Global Warming Solutions Act ("the Act") 'implements deep reductions in greenhouse gas emissions, recognizing that "[g]lobal warming poses a serious threat to the

economic well-being, public health, natural resources, and the environment of California...." (Health & Saf.Code, § 38501, subd. (a).) Through this enactment, the Legislature has expressly acknowledged that greenhouse gases have a significant environmental effect.' (*Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 91 (*CEB*).) Guideline 15183.5 governs tiering and streamlining the analysis of GHG emissions.[ii] Subdivision (b) sets forth the specific things such a plan should do.

1. The Role of the CAP in Subsequent GHG Analysis

A key issue is the ultimate role this CAP will play in subsequent GHG analysis of future projects. Here neither party clearly addresses the intended role and effect of the CAP in the review of subsequent projects.

The CAP at 1013-1016 generally indicates that the CAP is intended to eliminate any need to conduct any GHG analysis in future discretionary projects that comply with the CAP. Specifically, the introduction to the checklist of standards and measures, states that:

> Discretionary projects that utilize the checklist, as modified by the individual agency, and can demonstrate consistency with all applicable mandatory local or regional measures in the CAP, can conclude that their impacts related to [GHG] emissions would be less than significant under CEQA because the project would be consistent with a qualified GHG reduction plan under... Guidelines Section 15183.5.

The introduction then quotes 15183.5(b) and (b)(2) in part as follows:

> (b) Pursuant to sections 15064(h)(3) and 15130(d), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan or mitigation program under specified circumstances.
>
> ...
>
> (b)(2) A plan for the reduction of greenhouse gas emissions, once adopted following certification of an EIR or adoption of an environmental document, may be used in the cumulative impacts analysis of later projects. An environmental document that relies on a greenhouse gas reduction plan for a cumulative impacts analysis must identify

those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project.

It reiterates that the 'significance threshold for projects using the checklist for streamlining is "consistency with an applicable plan for the reduction of [GHG] emissions meeting the requirements of...15183.5" ' All of this indicates an intent that a future project complying with this CAP and its standards and measures need include no independent GHG analysis.

2. Respondent's Contention That Petitioner Imposes Non-Existent Requirements

Respondent argues, that Petitioner is improperly trying to impose requirements on the CAP that do not exist in Guideline 15183.5. This argument is expressly stated at the start of its brief and is repeated throughout its papers. This argument is itself groundless; it is contrary to the fundamental purpose of CEQA requirements.

First, Respondent contends that the Guideline merely gives a list of what such a plan "should" do; not what it "must" do. Although the Guideline does only state what such a plan "should" include, (see end note ii, Guideline 15183.5), it expressly states that it is a tiering mechanism and that it must comply with the standards for first-tier programs or plan EIRs. It is *titled* "*Tiering* and Streamlining the Analysis of Greenhouse Gas Emissions." (Emphasis added.) It beings by explaining that agencies may develop a GHG plan or standards in a plan using a tiering method, governed by the standards for tiering. It states that agencies *may* handle GHG analysis:

> at a *programmatic* [i.e., first-tier] level, such as in a general plan, a long range development plan, or a separate plan to reduce greenhouse gas emissions. *Later* project-specific environmental documents *may tier from* and/or incorporate by reference that existing programmatic review. Project-specific environmental documents *may* rely on an EIR containing a programmatic analysis of greenhouse gas emissions as provided in *section 15152 (tiering), 15167 (staged EIRs) 15168 (program EIRs)*, 15175-15179.5 (Master EIRs), 15182 (EIRs Prepared for Specific Plans), and 15183 (EIRs Prepared for General Plans, Community Plans, or Zoning).

(emphasis added.)

As noted above, the CAP also makes it clear that, as a first-tier document, it is to be used in such a manner that, if complied with, will excuse the analysis of a future project from revisiting GHG emissions. Therefore, the CAP, and any such plan prepared under 15183.5, must meet the requirements for all first-tier documents and thus must impose effectively enforceable requirements and measures with defied performance standards.

Second, although Respondent is correct that the requirements on which Petitioner relies are not necessarily in the Guideline itself, they are applicable to *all* CEQA review and, specifically, to first-tier documents, as explained above. Petitioner's further arguments, such as that the CAP must provide a clear, complete, and accurate GHG "inventory," i.e., the existing GHG emissions associated with activities in the county, are consistent with a standard CEQA mandate, which is that an environmental document must present clear, meaningful information sufficient to allow the agency and public to make an intelligent, informed decision, or, stated another way, sufficient to make clear the analytic route of the agency. (*Concerned Citizens of Costa Mesa, Inc. v. 32nd District Agricultural Association* (1986) 42 Cal.3d 929, 936; ***Al Larson Boat** Shop Inc. v. Bd. of Harbor Commissioners*, *supra,* 18 Cal.App.4th at 749; *Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 513-514, 522. Therefore, it must be based on substantial evidence. (See section C.2., above.)

3. Existing Conditions

Petitioner first argues that the PEIR fails to describe existing conditions accurately because it limits the range of emissions from vehicles miles traveled (VMT) associated with land-use activities in the county and to and from 18 nearby regional locations. Petitioner contends that the baseline or current GHG emissions level associated with the county should include all VMT for trips associated with activities in the county, not only within the county and to and from the 18 nearby regional locations used in the PEIR and that Respondent thus understates the current GHG emissions. Respondent focuses on two general categories of VMT omitted from the PEIR: VMTs generated by goods exported from the county to

locations beyond (produce, medical equipment, beer, and wine) , and tourist travel to Sonoma County.

a) CEQA Baselines and Quantifying Current GHG Levels

Ordinarily, an EIR must clearly and consistently describe the baseline, which is *normally* the *existing* environmental setting or conditions. The existing conditions, at the time the notice of preparation ("NOP") is published, "normally constitute the baseline physical conditions by which the lead agency determines whether an impact is significant." (Guideline 15125(a).) Guideline 15126.2(a) states that the agency "should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time...environmental analysis is commenced."

Guideline 15183.5(b)(1)(A) sets forth special requirements for GHG first-tier plans such as the CAP. Such plans are required to "[q]uantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area."

Respondent notes that the ordinary requirements governing determination of the "baseline" apply where there is a project that may alter this in of itself in order to determine the extent of any impact which a project will have. (See Guideline 15126.2(a).)

b) VMT Data

The CAP explanation of how it determined the GHG inventory is found at AR 1050, et seq. It used 2010 data because that year includes largely complete or complete activity data for all sectors as needed to calculate GHG levels; this is not challenged by Petitioner. (See AR 1052; Memorandum of Points and Authorities in Support of Petition for Writ of Mandate, 9:1-3.) The response to comment at AR 1084 explains that the VMTs were determined by considering the travel in the county plus travel between the county and 18 external "traffic analysis zones" ("TAZ").

Respondent relies on Guideline 15130(b) which provides that studies of cumulative impacts are guided by "standards of practicality and reasonableness." According to Guideline 15364, ""Feasible" means capable of being accomplished in a successful manner within a

reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.' Thus, "[a]n evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible .... The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure." (Guideline 15151; see also *Citizens to Preserve the Ojai v. County of Ventura, supra,* 176 Cal.App.3d at 429.) Petitioner argues that an agency is "not required to engage in sheer speculation as to future environmental consequences [Citations], [but an] EIR [is] required to set forth and explain the basis for any conclusion that analysis of the cumulative impact of offshore emissions [is] wholly infeasible and speculative." (*Citizens to Preserve the Ojai, supra,* 176 Cal.App.3d at 430.)

Respondent correctly argues that ultimately GHG emissions must be considered in light of their cumulative worldwide impact because of their nature. The Supreme Court in *Center for Biological Diversity v. California Dept. of Fish and Wildlife* (2015) 62 Cal.4th 204, at 219-220, considered a challenge to an agency's GHG analysis. The Court explained:

> [W]e address two related aspects of the greenhouse gas problem that inform our discussion of CEQA significance.
>
> First, because of the global scale of climate change, *any one project's contribution is unlikely to be significant* by itself. *The challenge for CEQA purposes is to determine whether the impact of the project's emissions of greenhouse gases is cumulatively considerable*, in the sense that "the incremental effects of [the] individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." (§ 21083, subd. (b)(2); see Guidelines, § 15064, subd. (h)(1).) "With respect to climate change, an individual project's emissions will most likely not have any appreciable impact on the global problem by themselves, but they will contribute to the significant cumulative impact caused by greenhouse gas emissions from other sources around the globe. *The question therefore becomes whether the project's incremental addition of greenhouse gases is 'cumulatively considerable' in light of the global problem*, and thus

> significant." (Crockett, Addressing the Significance of Greenhouse Gas Emissions Under CEQA: California's Search for Regulatory Certainty in an Uncertain World (July 2011) 4 Golden Gate U. Envtl. L.J. 203, 207–208 (hereafter Addressing the Significance of Greenhouse Gas Emissions).)
>
> Second, the global scope of climate change and the fact that carbon dioxide and other greenhouse gases, once released into the atmosphere, are not contained in the local area of their emission means that *the impacts to be evaluated are also global rather than local. For many air pollutants, the significance of their environmental impact may depend greatly on where they are emitted; for greenhouse gases, it does not.* For projects, like the present residential and commercial development, which are designed to accommodate long term growth in California's population and economic activity, this fact gives rise to an argument that a certain amount of greenhouse gas emissions is as inevitable as population growth. Under this view, a significance criterion framed in terms of efficiency is superior to a simple numerical threshold because CEQA is not intended as a population control measure.

(emphasis added.)

Consistent with the Supreme Court's discussion in that case, the EIR here expressly discusses the global nature of GHG emissions, explaining that "unlike other resource areas that are primarily concerned with localized project impacts… the global nature of climate change requires a broader analytic approach. Although this section focuses on GHG emissions generated as a result of the CAP, the analysis considered them in the context of potential state, national, and global GHG impacts." (AR 314.) It also noted global GHG concentrations. (AR 81, 106, 316.)

The PEIR analysis considered VMT for the county and the 18 TAZs in the region, and only for automobile traffic and "emissions that local governments have primary influence or control over." (AR 85.) It did not consider travel by other means such as by airplane or emissions over which the local entities have no direct control. (AR 85.) The PEIR explained

at AR 82 and 85 that it was relying on the International Council for Local Environmental Initiatives (ICLEI) Protocol and that:

> the ICLEI Community Protocol does not require air travel emissions to be included in the basic emissions necessary for protocol-compliance GHG inventories because it recognizes that local governments have less control over such sources as air travel and that information is often not available to precisely describe an airport's emissions to a specific community.

Similarly, it noted that methodologies exist to estimate emissions further afield but associated with local activities but rejected these methodologies because the information might be difficult to obtain or are not "common" approaches. (AR 85-86.) For example, the response to the comment at AR 85-86 stated:

> [w]hile there are methodologies to estimate upstream emissions..., these methodologies are commonly used to prepare what is known as a "consumption-based" inventory, which estimate the life cycle "carbon footprint" of everything households (and...other consumers) consume. There are also methodologies to estimate "downstream" emissions associated with the transportation, end use, and disposal of goods produced in a jurisdiction, but such methodologies require highly detailed information about the entire downstream supply chain, including the ultimate geographical destination of goods that can be difficult to come by, especially if such data is privately held. While one could estimate emissions using a consumption-based approach of a "downstream" emissions method, these are not the common approach used for community emissions, or national emissions at present, and if used, would make it impossible to compare regional inventories.

As a result, the response contends, "nearly every" national, state, and local agency preparing a CAP has used the "activity-based" approach to calculate and define the GHG inventories. (AR 86.) Respondent asserts that by avoiding the methodologies which include upstream or downstream data, and instead using the ICLEI Protocol, the CAP inventory "can be compared to those other communities, using a common standard...." (Ibid.)

The question before the court is whether there is information in the record showing that Respondent might or might not feasibly have included the additional data as Petitioner contends, or whether Respondent did not need to include it.

Respondent's primary argument that it did not need to include additional emissions estimates is based on its assertion that CEQA only requires an agency to do what is feasible, and further that it need not, and should not, engage in speculation over data that is unknowable. The basic that a public agency is only required to do what is feasible, discussed above, is correct, but Respondent has not persuasively shown that it defeats Petitioner's arguments regarding the need for more information about MVT. The response to comments at AR 84-86 expressly admits that there are methodologies to quantify the additional sources of GHG emissions Petitioner identifies, but did not use them because they are not "commonly" used or the information "can be difficult to come by." This argument does not establish that Respondent had substantial evidence to support its approval.

The record, including the admissions in the PEIR shows that Respondent had a feasible ability to include the additional GHG data. Respondent compares the data used in this CAP to that used by other agencies. (AR 86; generally AR 84-86.) This is a logical explanation for employing the ICLEI Protocol used, but it does not demonstrate that it was "infeasible" to obtain the additional MVT data, especially given that Respondent acknowledges that the methodologies exist.

Had the EIR explained that it was unable to obtain the necessary information, or that there were no methodologies that it could have used to obtain/include it, Respondent's would have been justified in failing to obtain this data. However, here, Petitioner complains that Respondent appears merely to have avoided including greater, more complete, information based on the assumption that it would be "too much work."

The court grants the petition on this point.

D. MITIGATION MEASURES

Petitioner also argues that Respondent failed to adopt "definite, clearly defined and enforceable" mitigations measures. It contends that at least some of the mitigation measures

and standards it sets forth are unclear, vague, and not fully enforceable. Petitioner points out that the EIR concludes that the CAP would be "beneficial" and would thus support applicable regulatory plans for reducing GHG emissions, so, it contends, no mitigation for GHG emissions is necessary. (AR 204.)

Respondent argues that the CAP is not intended as a mitigation measure. No mitigation is needed because it is a plan to reduce GHG emissions in subsequent projects.

What Petitioner contends is not that the CAP and EIR need to adopt mitigation measures for the CAP itself, but instead that the CAP, in setting forth purported mitigation measures for future analysis and handling of GHG emissions, fails to present sufficient clearly defined and enforceable mitigation measures and standards.

Respondent points out this is not a "project" in the sense of an activity that will do anything that might create GHG emissions but instead is a plan for handling analysis and mitigation of GHG emissions in future projects. Therefore, there is clearly nothing about this Project to mitigate. Petitioner's contention that the PEIR should imposing sufficiently defined and enforceable mitigations measures, is a different issue.

Guideline 15183.5(b)(1)(D) and (E) are instructive. Subdivision (D) states that the plan should "*[s]pecify measures or a group of measures, including performance standards*, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level. Subdivision (E) states that the plan should "[e]stablish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels." (Emphasis added.)

1. Role and Purpose of Mitigation Measures in CEQA

Mitigation measures are needed, even required, where a project may have a significant impact and the purpose of the measures is to reduce any impact to less than significant. (PRC 21003.1(b); Guideline 15002(a)(3).)

2. Deferral of Mitigation

In general, it is improper for an agency to rely on *deferred* mitigation. (*Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 306; *Defend the Bay v. City of Irvine*

(2004) 119 Cal.App.4th 1261, 1275-1276.) An agency cannot find a significant impact to be mitigated to a less-than-significant level based on a deferred mitigation measure. (*Sundstrom v. County of Mendocino, supra,* 202 Cal.App.3d at 306. It is a violation of CEQA when an agency "simply requires a project applicant to obtain a biological report and then comply with any recommendations that may be made in the report. [Citation.]" (*Defend the Bay v. City of Irvine* (2004) 119 Cal.App.4th 1261, 1275; see also *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 793.)

"Deferral of the specifics of mitigation is permissible where the local entity commits itself to mitigation and lists the alternatives to be considered, analyzed and possibly incorporated in the mitigation plan." (*Defend the Bay v. City of Irvine* (2004) 119 Cal.App.4th 1261, 1275-1276; see also *Sacramento Old City Assn. v. City Council* (1991) 229 Cal.App.3d 1011, 1028-1030.) This applies where "mitigation is known to be feasible, but where the practical considerations prohibit devising such measures early," so that "[w]here future action to carry a project forward is contingent on devising means to satisfy such criteria, the agency should be able to rely on its commitment as evidence that significant impacts will in fact be mitigated." (*Sacramento Old City Assn., supra*, 229 Cal.App.3d at 1028-1029.)

Because of the nature of first-tier tier EIRs, in particular, deferral of the specifics of mitigation measures, as long as they contain clear performance standards, is particularly appropriate and logical. (See, e.g., *Rio Vista Farm Bureau Center v. County of Solano* (1st Dist.1992) 5 Cal.App.4th 351 ("*Rio Vista Farm Bureau*"); *Al Larson Boat Shop Inc. v. Bd. of Harbor Commissioners, supra,* 18 Cal.App.4th 729.) In *Rio Vista Farm Bureau*, a first-tier "program EIR" serving as "primary planning document for hazardous waste management in the county" was found to contain sufficient mitigation measures adopted as policies to guide subsequent projects. The court rejected a challenge based on the assertion that the mitigation measures were "vague, inconclusive, and even inconsistent," finding the measures sufficient "given the broad, nebulous scope of the project under evaluation." (*Rio Vista Farm Bureau, supra,* 5 Cal.App.4th at 376.) The court found that the specificity of mitigation measures

should be proportionate to the specificity of the underlying project, which in that case was a broad planning document to guide later site-specific projects.

The court in *Coastal Hills Rural Preservation v. County of Sonoma* (2016) 2 Cal.App.5th 1234, 1258, upholding the trial court's order denying a CEQA petition for writ of mandate, explained that although "CEQA usually requires mitigation measures to be defined in advance" and not deferred, "deferral [of mitigation measures] is permitted if, in addition to demonstrating some need for deferral, the agency (1) commits itself to mitigation; and (2) spells out, in its environmental impact report, the possible mitigation options that would meet "specific performance criteria" contained in the report."

In *Sundstrom*, *supra*, the county required future hydrological studies as conditions of a use permit and required that any mitigation measures that the study suggested would become mandatory. This was held to be improper because the impacts and mitigation measures were not determined.

The court in *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359 found an Negative Declaration defective because it improperly relied on deferred formulation of specific mitigation measures. There, the city required the applicant to comply with any existing ordinance protecting the Stephens' kangaroo rat and allowed the city to require a biological report on the rat and compliance with any recommendations in the report. The court found this to be insufficient because it, like the approval in *Sundstrom*, was based on compliance with a report that had not yet even been performed.

By contrast, the court in *Schaeffer Land Trust v. San Jose City Council* (1989) 215 Cal.App.3d 612, upheld an Negative Declaration for a general plan amendment for a parcel of land which, regarding traffic issues, required any future development to comply with applicable "level of service" standards. Unlike the other cases mentioned above, here the mitigation measures were delayed because the development and impacts were not concrete, but the mitigation was fixed to set standards which, by definition, ensured that there would be no significant impact. Mitigation with deferred specifics was found to satisfy CEQA where the lead agency had committed to mitigation meeting a specified range of criteria and project

approval required the developer to obtain permits and adopt seven itemized measures in coordination and consultation with relevant agencies. *Defend the Bay, supra,* 1276.

In *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 794, the court found a mitigation measure that required replacement habitat preservation to satisfy CEQA even though the specifics were not fully determined but where the approval set forth *specific possibilities and parameters that the mitigation needed to meet.*

3. The Role of the CAP in Subsequent GHG Analysis

The key issue here in determining the sufficiency of mitigation measures is the role this CAP is intended to play in s GHG analysis of future projects. As noted above, one aspect of first-tier plans and EIRs is that they may obviate the need for later projects falling within their ambit to conduct new CEQA review on certain issues where the future projects comply with the first-tier plan. Any later discretionary project that complies with its criteria, such as the standards and requirements it imposes, would not need to do further study of GAG emissions. Accordingly, the standards and requirements the CAP imposes for reducing or minimizing GHG emissions must be considered mitigation measures for purposes of CEQA and must comply with the CEQA requirements. This means that they must set forth clearly defined and enforceable performance standards to be met. Because of the intended streamlining, Petitioner correctly contends that the performance standards and measures set forth the PEIR must be clear, definite, and enforceable.

Here also, Respondent contends that Petitioner is imposing requirements and standards that do not exist in Guideline 15183.5. Respondent ignores the fundamental CEQA requirements which underlie Petitioner's claims. Respondent contends that Guideline 15183.5 does not require mitigation measures for the CAP or within the CAP imposed on future projects. This position not only conflicts with 15183.5 itself, it is fundamentally contrary to the principles of CEQA review.

It is axiomatic in CEQA that any measures or requirements imposed be sufficiently defined to be enforceable and that, in the context of tiering, any subsequent project may avoid analysis of an issue only if it complies with a first-tier document that satisfies CEQA

requirements. As noted above, PRC 21094(a) states that where a prior first-tier EIR has been certified and applies to a subsequent project, the agency "*need not examine those effects which ... were either (1) mitigated or avoided...* as a result of the prior [EIR] *or (2) examined at a sufficient level of detail in the prior [EIR] to enable those effects to be mitigated or avoided by site specific revisions, the imposition of conditions, or by other means....*" Accordingly, to obviate the need to address an issue or impact as part of a later project's CEQA review, a first-tier plan or program document and EIR must sufficiently analyze that issue or impact to determine that compliance with the document and its mitigations will mitigate or avoid the impact. The mitigation requirements in a first-tier document for avoiding or mitigating the impact *must* include performance standards that are mandatory and include specific, and effectively enforceable performance standards. (*Coastal Hills Rural Preservation v. County of Sonoma* (2016) 2 Cal.App.5th 1234, 1258.)

The prior discussion of Guideline 15183.5 addresses the impact of tiering mechanisms. Again, the CAP, and any such plan prepared under 15183.5, must meet the requirements for all first-tier documents and thus must impose effectively enforceable requirements and measures with defied performance standards.

Further, Guideline 15183.5 *does require the CAP to impose mitigation measures* on future projects. As both Respondent and the CAP itself acknowledge, and as noted above, subdivision (b) expressly states that "a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable *if* the project complies with *the requirements* in a previously *adopted plan or mitigation program* under specified circumstances." This plan or mitigation program, i.e., the CAP, according to (b)(2), "*may* be used in the cumulative impacts analysis of later projects" which clearly means that it need not. However, (b)(2) continues to state that *if it is* so used for a later project, that project must comply with the requirements and mitigation measures from the CAP. Once again, in the Guideline's words, a later project that in fact "relies on [the CAP] for a cumulative impacts analysis *must* identify those *requirements specified in the plan* that apply to the project, and, *if*

those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures...."

In countering Petitioner's complaint that some of the so-called measures or standards are too vague or loose or ill-defined to be properly enforceable, Respondent asserts that this will be "cured" because Guideline 15183.5(b)(2) states that any requirements that are not "binding and enforceable" will be incorporated as mitigation measures in the project's CEQA document. This "interpretation" does not withstand scrutiny. As explained above, a first-tier document, in order to be used to avoid revisiting analysis of an issue in a later project, must have sufficiently analyzed the issue and found any significant impact to be mitigated or avoided by complying with the document. That means that any requirement, such as mitigation, must have sufficiently defined, clear, and mandatory performance standards to be effectively enforceable and to have predictable results. If the requirements or measures are so ill-defined as to be unenforceable as a practical matter, and effectively meaningless, merely "incorporating" them into the later project's CEQA document will obviously not fix that problem. What the state in the Guideline must mean, therefore, is not that an ineffective measure may simply be incorporated into a later project's document, as Respondent asserts, but that a measure or requirement must be incorporated in the document *if it is not enforced independently, or through some other mechanism.*

4. The Measures in the CAP

The CAP sets forth requirements and standards or mitigation measures at AR 1015-1048.

Respondent primarily argues that under Guideline 15183.5(b)(2), any measure which the CAP imposes and which is "not otherwise binding and enforceable" must be incorporated into future projects. As addressed above, this argument is not meritorious. Guideline 15183.5(b)(2) expressly requires that:

> "A*n environmental document that relies on a greenhouse gas reduction plan for a cumulative impacts analysis must identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and*

enforceable, incorporate those requirements as mitigation measures applicable to the project. *If there is substantial evidence that the effects* of a particular project *may be cumulatively considerable notwithstanding the project's compliance with the specified requirements in the plan* for the reduction of greenhouse gas emissions, *an EIR must be prepared* for the project.

(emphasis added.)

Petitioner singles out three of the specific measures or requirements in the CAP for discussion as demonstrating a lack of meaningful enforceability and clear standards.

a) 5-R4 (AR 1026)

The first is 5-R4 (AR 1026.) This "trip-reduction ordinance" requires employers with 50+ employees to offer one of several options to employees in order to reduce GHG emissions: "pre-tax transit expenses, transit or vanpool subsidy, free or low cost shuttle, *or an alternative benefit*." (Emphasis added.) It is the latter to which Petitioner objects, arguing that it is vague and undefined either in what it must be like or what it must achieve, so that there is no way to enforce this. As a result, Petitioner contends, a project could offer as "alternative benefit" which no-one can at this point predict, and argue that it need not do GHG analysis because it has "complied" with this measure. Respondent contends that an alternative of purchasing GHG offsets is considered and this is correct but this is not the definition of "an alternative benefit," which is left open and could be anything. Petitioner is correct on this point.

Respondent contended that Petitioner failed to exhaust administrative remedies on this specific issue.

According to PRC section 21177, "[a] person shall not maintain an action or proceeding unless that person objected to the approval of the project orally or in writing during the public comment period provided by this division or prior to the close of the public hearing on the project before the filing of the notice of determination." This does not, however, bar an association or organization formed after approval from raising a challenge which one of its constituent members had raised, directly or by agreeing with or supporting

another's comments. (PRC section 21177(c).) Moreover, someone may file a legal challenge based on an issue as long as "any person" raised that issue during the review process. PRC section 21177(a); see *Friends of Mammoth v. Board of Supervisors* (1972) 8 Cal.3d 247, 267-268. It also does not apply to any grounds of which the agency did not give required notice and for which there was no hearing or opportunity to be heard. PRC section 21177(e).

A party challenging decision under CEQA cannot, to exhaust administrative remedies, rely merely on "general objections" or "unelaborated comments." *Sierra Club v. City of Orange* (2008) 163 Cal.App.4th 523, 535; *Coalition for Student Action v. City of Fullerton* (1984) 153 Cal.App.3d 1194, 1197. However, "[l]ess specificity is required to preserve an issue for appeal in an administrative proceeding than in a judicial proceeding...." *Citizens Association for Sensible Development of Bishop Area v. County of Inyo* (1985) 172 Cal.App.3d 151, 163.

Petitioner responds that only the substance of the issue must be raised at the administrative level, relying on *Save Our Residential Environment v. City of West Hollywood* (1992) (Cal.App.4th 1745, 1750.) And further that less specificity is required to exhaust an issue in an administrative proceeding that in a judicial one, relying on *Woodword park Homeowners Assn. v. City of Fresno* (2007) 150 Cal.appp.4th 683, 712 and *Brothers Real Estate Group v. City of Los Angeles* (2008) 153 Cal.App.4th 1385, 1395. The court finds that Petitioner did articulate this as a basic contention in the underlying administrative proceedings. (AR 66 and AR 67.)

b) 4-L-1 (AR 1024)

Petitioner's attack 4-L-1, at AR 1024, which requires consistency with applicable "adopted policies" on mixed-use and transit-oriented development, such as zoning codes, general plans, etc., and states that agencies must "support mixed use [sic] development in city-centers and transit-oriented development locations through their General Plans, etc." is not persuasive. Petitioner contends that this is too vague because "mixed-use" has been interpreted to allow hotels and tourist destinations built downtown or near rail stations. Petitioner focuses on one portion of this requirement that is open-ended. Nothing indicates

that the type of use that could be allowed in a mixed-use development, whether store, museum, eatery, office, or hotel, has any bearing on GHG emissions. Petitioner cites no evidence or explanation in support of this claim and does not explain how this is material. What matters is that there are clear, adopted standards mandating such development and Petitioner does not challenge that portion of the measure at all.

It is possible that the measure could be found too vague and Petitioner may be challenging it on that basis as well. Petitioner refers to it when mentioning how an "undefined alterative... lacks the required specificity" and Petitioner again mentions it on the following page with reference to "tentative plans" for future mitigation in ill-defined subsequent regulation to be adopted. This, merely requires each jurisdiction to "identify such appropriate areas and include unspecified policies and incentives to encourage development near high-quality transit service." It requires the jurisdiction to define requirements and identify potential incentives, giving a list of the types that these "may include," the last being "other related items." Again, this does not give any clear performance standards regarding how to achieve this or what the parameters are. As Petitioner argues, for the third measure, the court in *Communities for a Better Environment v. City of Richmond,* 184 Cal.App.4th 70, 92, found a measure insufficiently specific where it required reduction of mobile emission sources though "transportation smart" development because "reliance on tentative plans for future mitigation... significantly undermines CEQA's goals of full disclosure and informed decision making." Under this analysis, this measure is also defective.

c) 2-L-1 (AR 1021)

Lastly, Petitioner argues that 2-L-1, at AR 1021, is defective. This measure mandates that the project "comply with local requirement(s) for rooftop solar PV on new residential development. It states that each jurisdiction "will define which new development must provide rooftop solar [PV] by defining qualifying criteria... and the amount of solar required...." As Petitioner argues, this sets no standards at all, just like 4-L-1, but instead merely general principles and future possibilities. This violates CEQA.

Petitioner further argues that the measures in general do not guarantee any likelihood of implementation. This is clear from the ones discussed above. Petitioner cites 1-R2 as another example. It states that two named agencies "will work with the participating communities to implement energy efficient retrofits. Actions may include: Implementing a... weatherization program, expanding energy efficiency outreach/education campaigns..., promoting the smart grid," etc. Again, none of this goes beyond stating wishful thinking, good intentions, and an intent to "work" with others. Measures that fall into this category violate CEQA as well.

Petitioner also generally attacks the measures as lacking meaningful enforceability. Petitioner also contends that of all of them, only 1-S1 and 1-S2 are actually enforceable because they govern building energy and lighting efficiency, both controlled by state regulation. The court finds a few others in addition to 1-S1 and 1-S2 to be similarly enforceable. These include 1-L1, based on Windsor's building code, 1-L2, requiring LED lights in new development.

Aside from those few, Petitioner is correct that most are not enforceable, either because they are too vague and lacking in meaningful mandatory requirements such as those already discussed, which only "require" some "alternative" that is not specified or governed by set parameters. Others, such as 1-L3 through2-L2, state mitigation measures but then state that these are "voluntary," or "encouraged," or only necessary where "applicable" based on circumstances or criteria that are not defined. Others again rely on other jurisdictions such as the cities creating applicable requirements that in some unspecified manner promote the stated, vague, open-ended policies that lack any parameters or requirements. These are too numerous to list them all here but this general characteristic dominates almost all of the measures from what I have read.

Accordingly, the court grants the petition with respect to mitigation. Because the record does not provide adequate information about extraterritorial emissions the agency and the public could not and the court cannot determine whether the CAP would achieve its stated goal to reduce GAG impacts to pre-1990 levels by 2020.

E. ALTERNATIVES

Petitioner asserts that Respondent violated CEQA by adopting as the "environmentally superior alternative" the Zero Net Energy Buildings Alternative because it fails to address GHG emissions from transportation while Respondent declined to evaluate an alternative with a moratorium on, or significant reduction of, new or expanded vineyards, wineries and tourist destinations. (AR 94; 426-427.)

Respondent contends that the analysis is sufficient because Petitioner believes that reducing or stopping growth, and in particular growth that involves travel of people and goods to and from the county, is necessary, and Petitioner cannot impose such mandates on R; Respondent considered a range of alternatives; and choosing the moratorium alternative would require the court to "dramatically substitute" its judgment for Respondent's.

CEQA requires all EIRs to consider alternatives to the project. (*Friends of the Old Trees v. Dept. of Forestry & Fire Protection* (1st Dist.1997) 52 Cal.App.4th 1383, 1393-1395 (*Friends of Old Trees*).)

1. Importance and Central Role of Alternatives Analysis

PRC section 21002 states that "it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects...." An agency may not approve a project that will result in significant impacts *unless it first finds that mitigation measures or alternatives are infeasible*. (PRC section 21081; Guidelines 15091, 15093.)

The Supreme Court decided that considering alternatives is one of the most important functions of an EIR. (*Wildlife Alive v. Chickering* (1976) 18 Cal.3d 190, 197.) In fact, "[t]he core of the EIR is the mitigation and alternatives sections." (*Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 564, 566 (*Goleta II*).)

Without evidence regarding why the alternatives are insufficient to meet the project or CEQA goals, meaningful analysis is impossible. An EIR must "explain in meaningful detail the reasons and facts supporting [the] conclusion." (*Marin Municipal Water Dist. v. KG Land*

Corp. California (1991) 235 Cal.App.3d 1652, 1664.) Failure to provide sufficient analysis or alternatives makes it impossible for the court to "intelligently examine the validity of the... action." (*Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 513-514, 522.)

The alternatives must be discussed in the EIR itself, provided for public review, and subject to analysis, and the agency cannot cure defects by providing analysis in its official response. (See *Friends of the Old Trees, supra*, 52 Cal.App.4th at 1403-1405.)

2. Authority on Analyzing Alternatives and Feasibility

The discussion should evaluate the relative merits of each alternative 14 CCR §15126.6(a). Respondents need not analyze or adopt alternatives that are not feasible. 14 CCR ' 15126.6(c), (f); *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 564, 566 (*Goleta II*). However, the document *must* consider alternatives that *are* feasible. *EPIC v. Johnson* (1985) 170 Cal.App.3d 604, 610; *Friends of the Old Trees, supra*, 52 Cal.App.4th 1404.

Ultimately, determining if alternatives are suitable involves a three-part test governed by the "rule of reason" as set forth in Guideline 15126.6. (See *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 564, 566 (*Goleta II*); *Save San Francisco Bay Association v. San Francisco Bay Conservation and Development Commission* (1992) 10 Cal.App.4th 908, 919.) The analysis must consider alternatives that 1) may "attain most of the basic objectives of the project," 2) reduce or avoid the project's impacts, and 3) are "potentially feasible." (Guideline 15126.6(a), (f).)

The analysis of alternatives is required to set forth facts and "*meaningful* analysis" of these alternatives rather than "'just the agency's bare conclusions or opinions.'" (*Laurel Heights I, supra*, 47 Cal.3d 376, 404-405; *Goleta II, supra*, 52 Cal.3d 569; *Preservation Action Council v. City of San Jose* (2006) 141 Cal.App.4th 1336, 1353.) All analysis must include "detail sufficient to enable those who did not participate... to understand and to consider meaningfully" the alternatives. (*Laurel Heights I, supra*, 404-405.)

As notes above, "feasible" means able to be "accomplished in a successful manner within a reasonable period... taking into account economic, environmental, social, and technological factors." (PRC section 21061.1.)

When the agency determines that alternatives are infeasible, it "shall describe the specific reasons for rejecting identified...project alternatives." (Guideline 15091(a), (c).) The analysis of alternatives is required to set forth facts and "*meaningful* analysis" of these alternatives rather than "'just the agency's bare conclusions or opinions.'" (*Laurel Heights I, supra*, 47 Cal.3d 376, 404-405; *Goleta II, supra*, 52 Cal.3d 569; *Preservation Action Council v. City of San Jose* (2006) 141 Cal.App.4th 1336, 1353.) All analysis must include "detail sufficient to enable those who did not participate… to understand and to consider meaningfully" the alternatives. (*Laurel Heights I, supra*, 404-405.)

The agency must make findings identifying specific considerations making an alternative infeasible and the specific benefits of the Project that outweigh the relative harm. (PRC § 21002.1(b), 21081, Guideline 15092(b); *Preservation Action Council, supra*, 1353.)

On the other hand, as usual, the requirement is one of reasonableness and a "crystal ball" inquiry is not necessary. (*Residents Ad Hoc Stadium Committee v. Bd. of Trustees* (3d Dist.1979) 89 Cal.App.3d 272, 286.) The key, as with most aspects of an EIR is that the agency must provide enough information about the analytical path taken to allow the court to "intelligently examine the validity of the administrative action." (*Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 513-514, 522.) However, no "ironclad rule" other than the "rule of reason" governs the decision. (Guideline 15126.6(a).)

An agency cannot find an alternative infeasible simply because the developer does not want to do it. (*Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 601.) In fact, the analysis must include alternatives that are reasonable "even if they substantially impede the project or are more costly." (*San Bernardino Valley Audubon Society v. County of San Bernardino* (1984) 155 Cal.App.3d 738, 750; see also *Preservation Action Council v. City of San Jose* (2006) 141 Cal.App.4th 1336.)

An EIR or decision thereon also cannot merely state that an alternative is infeasible simply because it is too expensive or will not lead to sufficient return without providing supporting analysis. (*Preservation Action Council v. City of San Jose* (2006) 141 Cal.App.4th 1336.) "The fact that an alternative may be more expensive or less profitable is not sufficient to show that the alternative is financially infeasible. What is required is evidence that the *additional costs or lost profitability* are sufficiently *severe as to render it impractical* to proceed with the project." (*Citizens of Goleta Valley v. Board of Supervisors* (1988) 197 Cal.App.3d 1167, 1181; *Uphold Our Heritage, supra*, 599; (emphasis added).)

An alternative should be capable of "substantially lessening" adverse impacts but it need only have fewer impacts and it need not be impact free. PRC 21002; Guideline 15126.6(a); *Citizens of Goleta Valley v. Board of Supervisors (Goleta II)* (1990) 52 Cal.3d 553, 566.

3. Reasonable Range

An EIR must describe a reasonable range of alternatives to the proposed project or its location that would feasibly achieve most of the project's objectives, while reducing or avoiding any of its significant effects. (Guideline 15126.6(a), (d).)

The EIR "shall focus on alternatives... which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objective, or would be more costly." (Guideline 15126.6(b).)

The EIR must set forth the alternatives necessary to permit a reasoned choice and in a manner that will allow "meaningful evaluation." (Guideline 15126.6(a), (d), (f); *Goleta II;* see also *Laurel Heights I, supra*; see also *San Bernardino Valley Audubon Soc., Inc. v. County of San Bernardino* (1984) 155 Cal.App.3d 738, 750-751 (the detail must allow a reasonable choice "so far as environmental aspects are concerned.").)

If an EIR excludes certain alternatives, it should identify the alternatives and set forth the reasons. (*Goleta II, supra,* 569; Guideline 15126.6(b).) The court in determining if the

EIR included a reasonable range of alternatives may consider the entire record to determine if alternatives were properly excluded from consideration. (*Goleta II, supra*, 569.)

Alternatives that would eliminate or reduce significant environmental impacts *must* be considered even if they would cost more or "to some degree" impede attainment of the project's objectives. (Guideline 15126.6(b).)

4. Detail of Relevant Decisions on the Adequacy of Alternatives

In *Friends of the Old Trees, supra*, 52 Cal.App.4th 1383, an extreme case, there was no discussion of alternatives in the versions submitted for public review. The agency argued that the fact it considered mitigation should suffice, while the real party marked a box selecting a certain method of cutting. The court also noted that the *public* brought forth "the only true alternatives," and that these were discussed only after the document was approved. (*Friends of the Old Trees, supra,* 52 Cal.App.4th 1405.) The court found the discussion inadequate. (*Id.*, 1403-1405.)

In *Citizens of Goleta Valley v. Board of Supervisors (Goleta I),* (1988) 197 Cal.App.3d 1167, the EIR considered a smaller hotel to be an economically infeasible alternative to the proposed hotel at issue. Because the EIR lacked *evidence* that the smaller hotel was economically infeasible, the court considered it error to deny the writ of mandate. The court found that although the EIR contained estimated figures of costs, the record did not reveal any *evidence* which *analyzed* the alternative in terms of comparative costs, comparative profits or losses, or comparative economic benefit to the project proponent, residents, or the community at large. (*Id.*, 1180.)

The court in *Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, at 599, addressed a project to demolish an historic mansion in order to construct a new, smaller single-family residence. The court found that evidence that alternatives of historic rehabilitation or rehabilitation with a new addition, would cost between $4.9 million and $10 million was not substantial evidence that alternatives were not economically feasible since there was no evidence of the likely cost of a proposed replacement home or average cost of

building the proposed 6,000 square foot home in the city. It also found that whether the developer wanted to do the alternative was irrelevant to determining if it is not feasible.

San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus (Arambel and Rose Development, Inc.) (1994) 27 Cal.App.4th 713, also dealt with alternatives analysis. The court found, in the context of a proposed housing development, that the discussion of housing density alternatives was inadequate. The DEIR stated that a lower density would "lessen the impacts," but failed to identify which impacts it meant or to what degree. The court ruled that " [s]uch a bare conclusion without an explanation of its factual and analytical basis is insufficient." *Id.*, at 736. The court went on to state:

> That lower density might not be "economically feasible," is not sufficient justification for the failure to give basic information as to density alternatives which were considered and rejected. Contrary to [respondent's] argument, [petitioners] are not required to show there are reasonable alternatives. *It is the project proponent's responsibility to provide an adequate discussion of alternatives....* If the project proponent concludes there are no feasible alternatives, it must explain in *meaningful detail* in the EIR the basis for that conclusion. Thus, even if alternatives are rejected, an EIR *must explain why* each suggested alternative either does not satisfy the goals of the proposed project, does not offer substantial environmental advantages or cannot be accomplished.

Id., at 737 (emphasis added).

5. Whether Feasibility Finding Is Necessary

As noted above, PRC sections 21002, 21081, and Guidelines 15091, 15093 together forbid approval of a project that *will result in significant impacts without first finding that any environmentally superior alternatives are infeasible*. Petitioner argues that Respondent failed to consider an alternative that is environmentally superior.

6. The Alternatives Analysis for the CAP

The alternatives analysis is at AR 425-438. The PEIR explains that it developed and analyzed only *one* other alternative, the Carbon Offset Alternative, in addition to the chosen Zero Net Energy Buildings plan and the mandatory no-project alternative. It expressly rejected a growth moratorium, reduced density, greater density, increased Sonoma Clean Power, expanded transit service, 1990 Levels by 2020 (AB32), and 80% Below 1990 Levels by 2020.

The real issue here is whether the Respondent, in rejecting formulating other alternatives, has considered a reasonable range, as required, and whether Respondent has provided sufficient explanation of infeasibility or other reasoning to support not considering other proposed alternatives.

Respondent's analysis is insufficient. Respondent considered almost no range at all, and only one other alternative that essentially is one that does nothing other than to authorize Respondent to buy GHG offsets for all GHG impacts from projects. Although Respondent argues to the contrary, this alternative seems both infeasible and at the same time would not actually do anything to control or limit actual GHG production. As an alternative, this appears to be one of form, but not of substance.

By contrast, the moratorium or reduced-development alternative which Petitioner proposes, and which was presented to Respondent in public comments (see, e.g., AR 93-94, response to comment) along with others noted but rejected without being developed, include real solutions that differ significantly from the chosen CAP. At least some, like the moratorium or growth limit, also address issues of GHG production from travel. While it is logical that some may be infeasible or incompatible with goals of growth, this is not alone, without explanation or support, a basis for not even considering those alternatives, or modified versions. For example, Respondent noted a moratorium on growth of wineries or housing "until the jobs-housing balance in the County is more equitable," but this does not even address the issues of Petitioner's proposed moratorium, it is arbitrarily limited, and it does not even seem to make much sense. There is no evidence or explanation for what it

would be or why Respondent could not consider a similar, but different one, such as Petitioner proposed. That is the purpose of actually developing and considering alternatives. Given that there are available alternatives that differ drastically from what Respondent has considered and given that Respondent has, in effect, considered only one other option that is perhaps only nominally an alternative, this analysis fails to consider a reasonable range of alternatives, or even any range at all.

The court Grants the petition on this issue.

F. RESPONSE TO PUBLIC COMMENTS

Petitioner next argues that Respondent's response to public comments was insufficient in violation of Guideline 15088(c).

The "evaluation and response to public comments is an essential part of the CEQA process." (Discussion following CEQA Guideline 15088.) The final EIR must include evaluation and responses to all comments received in the public-comment period. PRC section 21091(d)(2)(A). Guideline 15088 governs responses to comments and subdivision (c) governs the substance of such responses. It requires responses to address issues "in detail" and demonstrate "why specific comments and suggestions were not accepted." Most importantly, perhaps, the responses must explain the reasons for rejecting suggestions with a "good faith, reasoned analysis" and must not rely on "[c]onclusory statements unsupported by factual information." Guideline 15088(c).

1. Exhaustion of Administrative Remedies

Respondent first contends that Petitioner failed to exhaust administrative remedies on this issue. The court has found, above, that Petitioner exhausted its administrative remedies.

Petitioner's argument here is collateral and not persuasive. Although Petitioner points out that a few responses may not sufficiently resolve issues, that is of little importance in of itself. What matters are the fundamental defects that have not been cured as discussed above: failure to properly determine GHG inventory, or demonstrate that Respondent could not practically have done more or did not need to do more; ill-defined mitigation measures lacking enforceable criteria or parameters; and lack of reasonable range of alternatives.

The court denies the Petition with respect to the comments..

G. WHETHER RESPONDENTS' ERROR WAS PREJUDICIAL

Respondent contends that even if Petitioner demonstrated error, it was not prejudicial. As noted at the outset, in order for the court to issue a writ of mandate, it must find not only error, i.e., a violation of CEQA, but that error was prejudicial. (*Chaparral Greens v. City of Chula Vista* (1996) 50 Cal.App.4th 1134, 1143; *see* PRC 21168, 21168.5, *Laurel Heights I, supra* 47 Cal.3d 392, fn.5; Remy, et al., Guide to the California Environmental Quality Act (10th Ed.1999) Chapter XI(D), p.590.)

Respondent's failure to impose meaningful, effectively enforceable mitigation measures, when presenting compliance with the CAP as a way for future projects to avoid any other GHG analysis, is fundamentally and on its face, prejudicial. The failure to present a reasonable range of alternatives or to properly inventory GHG emissions as required are also on, their face, prejudicial because they prevent informed decision making or public review, the very bases of CEQA. (*Sierra Club v. State Bd. of Forestry* (1994) 7 Cal.4th 1215, 1228-1230, 1235-1237 (failure to put critical information in an environmental document was in of itself a prejudicial abuse of discretion partly because it "frustrated the purpose of the public comment provisions"); *Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059, at 1073 ("[a]n error is prejudicial when an agency fails to comply with a mandatory CEQA procedure or when a report omits information and thereby precludes informed decision making); *Lighthouse Field Beach Rescue v. City of Santa Cruz* (2005) 131 Cal.App.4th 1170, 1182,; *Schoen v. Dept. of Forestry & Fire Protection* (1997) 58 Cal.App.4th 556, 565 ("We cannot overlook a prejudicial error by surmising that the project would have gone forward anyway.").)

Based on the foregoing,

NOW, THEREFORE,

ORDER

1. The Petition for Mandamus is granted as stated above.

Dated: 7/20/17

By: _____
NANCY CASE SHAFFER
Judge of the Superior Court

END NOTES

[i] (a) "Tiering" refers to using the analysis of general matters contained in a broader EIR (such as one prepared for a general plan or policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project.
(b) Agencies are encouraged to tier the environmental analyses which they prepare for separate but related projects including general plans, zoning changes, and development projects. This approach can eliminate repetitive discussions of the same issues and focus the later EIR or negative declaration on the actual issues ripe for decision at each level of environmental review. Tiering is appropriate when the sequence of analysis is from an EIR prepared for a general plan, policy, or program to an EIR or negative declaration for another plan, policy, or program of lesser scope, or to a site-specific EIR or negative declaration. Tiering does not excuse the lead agency from adequately analyzing reasonably foreseeable significant environmental effects of the project and does not justify deferring such analysis to a later tier EIR or negative declaration. However, the level of detail contained in a first tier EIR need not be greater than that of the program, plan, policy, or ordinance being analyzed.
(c) Where a lead agency is using the tiering process in connection with an EIR for a large-scale planning approval, such as a general plan or component thereof (e.g., an area plan or community plan), the development of detailed, site-specific information may not be feasible but can be deferred, in many instances, until such time as the lead agency prepares a future environmental document in connection with a project of a more limited geographical scale, as long as deferral does not prevent adequate identification of significant effects of the planning approval at hand.
(d) Where an EIR has been prepared and certified for a program, plan, policy, or ordinance consistent with the requirements of this section, any lead agency for a later project pursuant to or consistent with the program, plan, policy, or ordinance should limit the EIR or negative declaration on the later project to effects which:
(1) Were not examined as significant effects on the environment in the prior EIR; or
(2) Are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means.
(e) Tiering under this section shall be limited to situations where the project is consistent with the general plan and zoning of the city or county in which the project is located, except that a project requiring a rezone to achieve or maintain conformity with a general plan may be subject to tiering.

(f) A later EIR shall be required when the initial study or other analysis finds that the later project may cause significant effects on the environment that were not adequately addressed in the prior EIR. A negative declaration shall be required when the provisions of Section 15070 are met.

(1) Where a lead agency determines that a cumulative effect has been adequately addressed in the prior EIR, that effect is not treated as significant for purposes of the later EIR or negative declaration, and need not be discussed in detail.

(2) When assessing whether there is a new significant cumulative effect, the lead agency shall consider whether the incremental effects of the project would be considerable when viewed in the context of past, present, and probable future projects. At this point, the question is not whether there is a significant cumulative impact, but whether the effects of the project are cumulatively considerable. For a discussion on how to assess whether project impacts are cumulatively considerable, see Section 15064(i).

(3) Significant environmental effects have been "adequately addressed" if the lead agency determines that:

(A) they have been mitigated or avoided as a result of the prior environmental impact report and findings adopted in connection with that prior environmental report; or

(B) they have been examined at a sufficient level of detail in the prior environmental impact report to enable those effects to be mitigated or avoided by site specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project.

(g) When tiering is used, the later EIRs or negative declarations shall refer to the prior EIR and state where a copy of the prior EIR may be examined. The later EIR or negative declaration should state that the lead agency is using the tiering concept and that it is being tiered with the earlier EIR.

(h) There are various types of EIRs that may be used in a tiering situation. These include, but are not limited to, the following:

(1) General plan EIR (Section 15166).

(2) Staged EIR (Section 15167).

(3) Program EIR (Section 15168).

(4) Master EIR (Section 15175).

(5) Multiple-family residential development/residential and commercial or retail mixed-use development (Section 15179.5).

(6) Redevelopment project (Section 15180).

(7) Projects consistent with community plan, general plan, or zoning (Section 15183).

One specific example of a first-tier EIR is a "program" EIR as set forth in Guideline 15168. This details the nature and requirements and uses of such a first-tier EIR, in a manner similar to that set forth in 15152, and gives another good picture of how they are to be used and what they must do to be so used in compliance with CEQA. It states, in full,

(a) General. A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

(1) Geographically,

(2) As logical parts in the chain of contemplated actions,

(3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or

(4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

(b) Advantages. Use of a program EIR can provide the following advantages. The program EIR can:

(1) Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action,

(2) Ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis,

(3) Avoid duplicative reconsideration of basic policy considerations,

(4) Allow the lead agency to consider broad policy alternatives and program wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts,

(5) Allow reduction in paperwork.

(c) Use With Later Activities. Subsequent activities in the program must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared.

(1) If a later activity would have effects that were not examined in the program EIR, a new initial study would need to be prepared leading to either an EIR or a negative declaration.

(2) If the agency finds that pursuant to Section 15162, no new effects could occur or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the program EIR, and no new environmental document would be required.

(3) An agency shall incorporate feasible mitigation measures and alternatives developed in the program EIR into subsequent actions in the program.

(4) Where the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR.

(5) A program EIR will be most helpful in dealing with subsequent activities if it deals with the effects of the program as specifically and comprehensively as possible. With a good and detailed analysis of the program, many subsequent activities could be found to be within the scope of the project described in the program EIR, and no further environmental documents would be required.

(d) Use With Subsequent EIRS and Negative Declarations. A program EIR can be used to simplify the task of preparing environmental documents on later parts of the program. The program EIR can:

(1) Provide the basis in an initial study for determining whether the later activity may have any significant effects.

(2) Be incorporated by reference to deal with regional influences, secondary effects, cumulative impacts, broad alternatives, and other factors that apply to the program as a whole.

(3) Focus an EIR on a subsequent project to permit discussion solely of new effects which had not been considered before.

(e) Notice With Later Activities. When a law other than CEQA requires public notice when the agency later proposes to carry out or approve an activity within the program and to

rely on the program EIR for CEQA compliance, the notice for the activity shall include a statement that:

(1) This activity is within the scope of the program approved earlier, and

(2) The program EIR adequately describes the activity for the purposes of CEQA.

[ii] (a) Lead agencies may analyze and mitigate the significant effects of greenhouse gas emissions at a programmatic level, such as in a general plan, a long range development plan, or a separate plan to reduce greenhouse gas emissions. Later project-specific environmental documents may tier from and/or incorporate by reference that existing programmatic review. Project-specific environmental documents may rely on an EIR containing a programmatic analysis of greenhouse gas emissions as provided in section 15152 (tiering), 15167 (staged EIRs) 15168 (program EIRs), 15175-15179.5 (Master EIRs), 15182 (EIRs Prepared for Specific Plans), and 15183 (EIRs Prepared for General Plans, Community Plans, or Zoning). (b) Plans for the Reduction of Greenhouse Gas Emissions. Public agencies may *choose to analyze and mitigate significant greenhouse gas emissions in a plan for the reduction of greenhouse gas emissions or similar document.* A plan to reduce greenhouse gas emissions may be used in a cumulative impacts analysis as set forth below. Pursuant to sections 15064(h)(3) and 15130(d), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan or mitigation program under specified circumstances.

(1) *Plan Elements. A plan for the reduction of greenhouse gas emissions should:*

(A) Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;

(B) Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable;

(C) Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area;

(D) Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;

(E) Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels;

(F) Be adopted in a public process following environmental review.

(2) Use with Later Activities. A plan for the reduction of greenhouse gas emissions, once adopted following certification of an EIR or adoption of an environmental document, may be used in the cumulative impacts analysis of later projects. An environmental document that relies on a greenhouse gas reduction plan for a cumulative impacts analysis must identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project. If there is substantial evidence that the effects of a particular project may be cumulatively considerable notwithstanding the project's compliance with the specified requirements in the plan for the reduction of greenhouse gas emissions, an EIR must be prepared for the project.

(c) Special Situations. As provided in Public Resources Code sections 21155.2 and 21159.28, environmental documents for certain residential and mixed use projects, and transit priority projects, as defined in section 21155, that are consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in an applicable sustainable communities strategy or alternative planning strategy need not analyze global warming impacts resulting from cars and light duty trucks.

A lead agency should consider whether such projects may result in greenhouse gas emissions resulting from other sources, however, consistent with these Guidelines.

SCV259242

PROOF OF SERVICE BY MAIL

I certify that I am an employee of the Superior Court of California, County of Sonoma, and that my business address is 600 Administration Drive, Room 107-J, Santa Rosa, California, 95403; that I am not a party to this case; that I am over the age of 18 years; that I am readily familiar with this office's practice for collection and processing of correspondence for mailing with the United States Postal Service; and that on the date shown below I placed a true copy of Order Granting Petition for Writ of Mandate in an envelope, sealed and addressed as shown below, for collection and mailing at Santa Rosa, California, first class, postage fully prepaid, following ordinary business practices.

Date: July 20, 2017

JOSÉ OCTAVIO GUILLÉN
Court Executive Officer

By: Missy Lemley
Missy Lemley, Deputy Clerk

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2.3.2.7 Letter O7: Center for Biological Diversity

This letter provides comments on the Revised Draft 2045 CAP as well as CEQA comments on the Recirculated Draft PEIR. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4, *Comments on the Revised Draft 2045 CAP*, in Chapter 1, *Introduction*. PEIR-focused comments are addressed below.

O7-1 The County has received and considered the comments provided. Responses to specific comments are provided below.

O7-2 CEQA Guidelines section 15088.5(f)(1) provides that "[w]hen an EIR is substantially revised and the entire document is recirculated, the lead agency may require reviewers to submit new comments and, in such cases, need not respond to those comments received during the earlier circulation period." As explained in Recirculated Draft PEIR Section ES.1 (p. ES-1) and Section 1.4.3 (p. 1-7), the "[r]ecirculated Draft PEIR wholly replaces the May 2022 Draft PEIR" And "[c]omments on the May 2022 Draft PEIR, though part of the administrative record, will not be responded to in the Final PEIR; new comments must be submitted on the Recirculated Draft PEIR." The County has also informed reviewers that new comments on the Recirculated Draft PEIR must be submitted and that the County would not respond to comments received during the original Draft PEIR public review period. In circumstances such as this, letters that predate the issuance of the Recirculated Draft PEIR do not address adequacy or accuracy of the analysis included in the Recirculated Draft PEIR, which post-dates the comments. To the extent the commenter believes its prior comments have continuing relevance, the burden is on the commenter to explain how with sufficient specificity to enable the County to provide a detailed response. The County does not have the duty to decipher what comments on the May 2022 DEIR the public believes to still be applicable or inapplicable from their previous comment letters, which is why the public has been given the opportunity to draft new comment letters on the Recirculated Draft PEIR.

O7-3 to O7-8 These comments on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on these issues pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O7-9 to O7-10 The County acknowledges the Center for Biological Diversity's concern that the Revised Draft 2045 CAP does not include any measure for reducing emissions from power and peaker plants within the County that are powered by fossil fuels, particularly since many are located in disadvantaged communities. The County does not have the authority to phase out power plants, whether in disadvantaged communities or elsewhere; the power generation sector is regulated by the CPUC,

CEC, CARB, and USEPA. The purpose of the Revised Draft 2045 CAP is to reduce GHG emissions resulting from activities occurring within unincorporated LA County. Specifically, the project objectives are to achieve the climate action policies of the General Plan and provide a road map for reducing GHG emissions to achieve the County's GHG emissions reduction targets (Recirculated Draft PEIR p. 2-9). The Revised Draft 2045 CAP is not an air pollution or health risk reduction plan, and it is therefore not the appropriate venue for the County to reduce air pollution burdens in environmental justice communities.

Despite the Revised Draft 2045 CAP being first and foremost a plan for reducing GHG emissions, the Revised Draft 2045 CAP is intended to be inclusive, accessible, and meaningful and prioritizes frontline communities, which are Black, Indigenous, and People of Color (BIPOC) and low-income households that have historically experienced a disproportionately high share of environmental impacts (Revised Draft 2045 CAP p. 1-14). In unincorporated Los Angeles County, frontline communities are in areas with the worst air and soil pollution and traffic congestion, with the least open space and smallest number of trees, and they are exposed to particulate matter from living near major freeways, ports, and industry. Because frontline communities also have fewer resources to prevent, adapt, or recover from climate disasters, the County prioritizes strategies that both invest in and support these communities.

The Revised Draft 2045 CAP includes indirect emissions associated with electricity consumed within unincorporated County areas and emission reduction measures and actions to reduce these emissions to zero through the use of 100 percent carbon-free electricity produced through sources such as solar, wind, and hydro (see Measure ES2). The Revised Draft 2045 CAP does not include emissions from large stationary sources (like power plants) that are covered by CARB's CAP & Trade regulations and regulated by other entities because these sources are 1) outside of the jurisdictional control of the County and 2) including these emissions would double-count electricity consumption emissions in the Revised Draft 2045 CAP. The Revised Draft 2045 CAP focuses reduction measures on where the County has jurisdictional influence or control (Revised Draft 2045 CAP p. 1-4 footnote 1). Measure ES2 calls for 100 percent zero-carbon electricity for all County accounts by 2025, and 96 percent zero-carbon electricity for the entire community by 2030 (4 percent opt-out rate assumption). In addition, Measure ES3 calls for substantial increases in local solar power installations (DER infrastructure) throughout the County for both new and existing buildings (municipal, residential, and commercial).

O7-11 to O7-13 The County acknowledges the Center for Biological Diversity's concern that there are gaps in the state and air district's regulation of the energy sector, such as the state's 100 percent zero carbon target (as mandated by SB 100) being focused on retail sales only, potentially allowing power generators to meet this target while still combusting fossil fuels for end uses outside of retail sales (e.g., to meet transmission and distribution losses from the grid). As explained in response to comments O7-9

and O7-10, the County does not have the authority to regulate power plants, which are covered by CARB's CAP & Trade regulations and regulated by other entities.

O7-14 In response to the comment's concern that the Revised Draft 2045 CAP does not include any measure addressing emissions from the power plant sector that may occur due to end uses beyond retail sales (such as meeting transmission and distribution needs), the County does not have the authority to regulate power plants, which are covered by CARB's CAP & Trade regulations and regulated by other entities, as explained in response to comments O7-9 and O7-10.

O7-15 to O7-20 These comments on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on these issues pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O7-21 to O7-22 In response to the comment's point about the benefits of distributed energy resources and its lesser environmental impacts, the Recirculated Draft PEIR analyzes the significant environmental impacts of the Revised Draft 2045 CAP as a whole within each environmental resource area of the Recirculated Draft PEIR, which includes aesthetic impacts. For a specific discussion regarding an alternative related to distributed energy generation, please see General Response 1. As explained in General Response 1, distributed generation and storage are not without adverse environmental impacts, which are introduced in Recirculated Draft PEIR Section 3.1.3.6 and are quantitatively analyzed throughout Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures* (p. 3.1-1 et seq.).

O7-23 Regarding the comment's concern regarding utility costs to ratepayers and its suggestion that distributed energy resources could offset a portion of those costs, the Recirculated Draft PEIR analyzes the physical environmental impacts of distributed energy resource-related development facilitated by the Revised Draft 2045 CAP measures and actions on a resource-by-resource basis. Utility costs are beyond the scope of this Recirculated Draft PEIR, which, consistent with CEQA, analyzes the impacts of the Revised Draft 2045 CAP on the physical environment. (See CEQA Guidelines, § 15131.) Public Resources Code section 21060.5 defines "environment" as "the *physical conditions* which exist within the area which will be affected by a proposed project." (Emphasis added.) Thus, by statute, an impact must be related to a change in the physical environment before it is subject to analysis under CEQA. Economic impacts alone are not changes in physical conditions and so are beyond the scope of CEQA review. See CEQA Guidelines section 15064 ("Economic and social changes resulting from a project shall not be treated as significant effects on the environment."); see also, and CEQA Guidelines section 15382 ("An economic or social change by itself shall not be considered a significant effect on the environment.").

O7-24 See Response O7-23, which explains that CEQA does not require consideration of economic effects. These comments on the Revised Draft 2045 CAP do not result in physical changes to the environment. (See CEQA Guidelines, § 15131.)

O7-25 See Response O7-23, which explains that ratepayer costs (including the potential for distributed energy resources to offset them) are beyond the scope of this CEQA review. CEQA does not require consideration of economic effects that do not result in physical changes to the environment. (See CEQA Guidelines, § 15131.)

O7-26 See Response O7-23, which explains that ratepayer costs are beyond the scope of this CEQA review, as CEQA does not require consideration of economic effects that do not result in physical changes to the environment. (See CEQA Guidelines, § 15131.) The County has reviewed the CPUC's May 2021 whitepaper entitled "Utility Costs and Affordability of the Grid of the Future: An Evaluation of Electric Costs, rates, and Equity Issues Pursuant to Public Utilities Code Section 913.1" (cited in footnote 15 of the comment letter) and has determined that the information provided does not affect the County's conclusion that ratepayer costs are beyond the scope of this CEQA review. CEQA does not require consideration of economic effects that do not result in physical changes to the environment. (See CEQA Guidelines, § 15131.)

Nonetheless, the cost of program-level mitigation measures to reduce potential impacts of projects facilitated by the Revised Draft 2045 CAP would be borne by project applicants and could be passed through to SCE ratepayers only if SCE was the project applicant. The wildfire-related impacts associated with the Project are described in Section 3.18*, Wildfire* (p. 3.18-1 et seq.). As described in detail in Section 3.18.2.3, *Project Impacts*, individual projects facilitated by Draft 2045 CAP measures and actions could require fuel breaks, emergency water sources, power lines, or other associated infrastructure that could exacerbate fire hazard risk or result in temporary or ongoing impacts on the environment. (Recirculated Draft PEIR, p. 3.18-22.) To reduce this impact, the County would implement Mitigation Measure 3.18-3, which would require project applicants for projects under the County's permitting authority to prepare a fire protection plan to ensure that wildland fire-related hazards would not be exacerbated by installation or maintenance of infrastructure associated with future projects facilitated by the Revised Draft 2045 CAP measures and actions that may exacerbate fire risk or may result in temporary or ongoing impacts on the environment. (See Recirculated Draft PEIR, Section 3.18.2.3, pp. 3.18-23, 3.18-24, 3.18-26). The County would also impose Mitigation Measure 3.15-1, which would require the implementation of a traffic control plan (Section 3.18.2.3, p. 3.18-18).

The County has reviewed the statement made about ratepayer savings cited in footnote 16 of the comment letter and finds that it does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O7-27 This comment on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on these issues pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O7-28 See Response O7-23, which explains that ratepayer costs are beyond the scope of this CEQA review, as CEQA does not require consideration of economic effects that do not result in physical changes to the environment. (See CEQA Guidelines, § 15131.) The County has reviewed the July 2021 report by Vibrant Clean Energy (cited in footnote 17 of the comment letter) and finds that the information contained does not raise environmental issues related to the Recirculated Draft PEIR and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). To the contrary, the County agrees with the suggestion that distributed generation has a role in supporting the County's efforts to meet its targets and advance toward its goal of carbon neutrality.

O7-29 See Response O7-23 which explain that ratepayer costs, including those that may be increased to address the cost to investor-owned utilities of implementing measures to address wildfire risk, are beyond the scope of this CEQA review, as CEQA does not require consideration of economic effects that do not result in physical changes to the environment. (See CEQA Guidelines, § 15131.) Also see Response O7-26, which explains how individual projects facilitated by Revised Draft 2045 CAP measures and actions would be required to implement Mitigation Measure 3.18-3 to reduce wildfire risk.

The County has reviewed Order Instituting Rulemaking to Revisit Net Energy Metering Tariffs Pursuant to Decision 16-01-044, and to Address Other Issues Related to Net Energy Metering (CPUC R.20-08-020, cited in footnote 18 of the comment letter). See, e.g., page 32 ("Much of the proposed $4 billion wildfire mitigation expenditures could be avoided by having all customers in the Tier 3 [High Fire-Threat District] HFTD add solar and battery storage, and authorizing the IOUs to conduct power shutoffs at their discretion."). The County finds that the information contained does not raise environmental issues related to the Recirculated Draft PEIR and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O7-30 to O7-33 These comments on the Revised Draft 2045 CAP does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O7-34 The performance goal for Measure ES2 that all unincorporated County accounts must participate in 100 percent renewable electricity service was revised to include other available 100 percent zero-carbon electricity service in addition to CPA's Green Power option and SCE's Green Rate option (Revised Draft 2045 CAP, pp. 3-20, B-

14). The County has already implemented this measure: since October 2022, all customers in unincorporated Los Angeles County are automatically enrolled in CPA's 100 percent renewable energy option and all residents and businesses in unincorporated Los Angeles County have been receiving 100 percent renewable energy—wind, solar, geothermal—from CPA (Revised Draft 2045 CAP, p. 3-17). The comment does not address the adequacy or accuracy of the Recirculated Draft PEIR or any environmental effects of the proposed Project such that no further response is required pursuant to CEQA Guidelines section 15088(a).

O7-35 As discussed on Revised Draft 2045 CAP p. 3-17, since October 2022, all customers in unincorporated Los Angeles County are automatically enrolled in CPA's 100 percent renewable energy option. CPA has capacity for all County customers. Thus, this measure is specific, enforceable, and feasible, contrary to the commenter's claims. Also see General Response 5, which explains the relationship between GHG emissions reduction measures in the Revised Draft 2045 CAP and CEQA mitigation measures and addresses how the quantitative analysis within the Revised Draft 2045 CAP is substantiated. Comment concerns are addressed in the following subsection: Qualified Revised Draft 2045 CAP Reduction Measures Compared to CEQA Mitigation Measures (2.2.5.1).

O7-36 Draft 2045 CAP Measure ES3, *Increase Renewable Energy Production*, calls for a substantial increase in the amount of rooftop solar installed throughout the County. Rooftop solar is a form of distributed energy resources (DER). For example, the performance goals for Measure ES3 include installing rooftop solar on 20 percent of all existing single-family residential homes and multifamily residential buildings and 80 percent of all new single-family residential homes and multifamily residential buildings by 2030, a huge undertaking. Measure ES3 also includes aggressive solar installation performance goals for later years, including 2035 and 2045, and for commercial buildings. This will enable a shift away from CPA's 100 percent renewable energy option. Because installing rooftop solar is resource intensive and time consuming to implement at scale, and because reducing GHG emissions as quickly as possible is a priority of the Revised Draft 2045 CAP, the County has already implemented Measure ES2 by enrolling all customers in CPA's 100 percent renewable energy option. Over time, the County's renewable energy supply will shift from CPA to DER with implementation of Measure ES3 and other similar measures.

O7-37 The commenter does not include suggested performance goals for Measure ES3 or provide evidence to support the claim that Measure ES2 is vague. Please see responses to comments O7-35 and O7-36 above. The comment does not address the adequacy or accuracy of the Recirculated Draft PEIR or any environmental effects of the proposed Project such that no further response is required pursuant to CEQA Guidelines section 15088(a).

O7-38 to O7-40 These comments on the Revised Draft 2045 CAP does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response

is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses generally comments received on the Revised Draft 2045 CAP.

O7-41 Responding to the comment's concern regarding deferring DER implementation, the Revised Draft 2045 CAP sets a goal under ES4 of increasing DER to achieve community electricity storage and generation equal to the community-wide 24-hour average usage by 2035/2045. Action ES4.3 calls for developing a publicly accessible community energy map that identifies opportunities for deploying distributed energy resources and microgrids to improve energy resiliency. In response to this comment, the County has changed the implementation timeline for the community energy map required by Action ES4.3 to the short term (2024–2030) timeline. DER takes time and careful planning to implement into the community and the County has set realistic targets for measure realization.

O7-42 Regarding the comment's concern regards utility-scale solutions, consistent with the challenges reported in the 2022 California Renewables Portfolio Standard Annual Report, "no single solution… will resolve the myriad of challenges impacting [California Renewables Portfolio Standard (RPS)] project development."[21] As described in the Recirculated Draft PEIR Section 3.7.1.3, *Regulatory Setting*, in Section 3.7, *Energy* (p. 3.7-6) SB 100 (de León, 2018) sets an RPS requirement to achieve 60 percent by 2030 and establishes a goal that renewable and zero-carbon resources supply 100 percent of electric retail sales to California end-use customers by 2045. SB 100 directed the California Energy Commission, CPUC, and the California Air Resources Board to collaborate on a joint agency report to evaluate challenges and opportunities for SB 100's implementation. The first SB 100 Joint Agency Report,[22] issued in March 2021, includes an initial evaluation of the additional energy resources and the resource building rates necessary to realize 100 percent clean electricity. It recognizes that microgrids have a role in supporting energy resilience as an important alternative to fossil fuel backup generators, but cautions that "clean energy microgrids have limitations, particularly in how long they can keep the power on and the associated relatively high cost." Ultimately, both utility-scale and distributed renewable energy generation will need to be deployed at increasing levels to achieve target set forth at the state level and in the Revised Draft 2045 CAP. Regarding the concern about environmental impacts from utility-scale solutions, the Recirculated Draft PEIR Section 3.1.3.6, *Future Projects Facilitated by the Draft 2045 CAP* (p. 3.1-13), expressly acknowledges that future projects facilitated by Draft 2045 CAP measures and actions, including utility-scale development may cause adverse environmental impacts. The Recirculated Draft PEIR provides two full pages (p. 3.1-

21 California Public Utilities Commission (CPUC), 2022. 2022 California Renewables Portfolio Standard Annual Report. November 2022. https://www.cpuc.ca.gov/-/media/cpuc-website/industries-and-topics/documents/energy/rps/2022-rps-annual-report-to-the-legislature.pdf. Accessed June 7, 2023.

22 Gill, Liz, Gutierrez, Aleecia, and Weeks, Terra. 2021. 2021 SB 100 Joint Agency Report, Achieving 100 Percent Clean Electricity in California: An Initial Assessment. Updated September 3, 2021. https://www.energy.ca.gov/publications/2021/2021-sb-100-joint-agency-report-achieving-100-percent-clean-electricity. Accessed June 7, 2023.

13 et seq.) discussing new utility-scale solar projects and why the County believes that renewable energy demand could be met in a variety of ways other than through new utility-scale solar projects, such as further development of rooftop solar.

O7-43 and O7-44 See Section 2.2.1, *General Response 1: CEQA Alternatives*, regarding the Recirculated Draft PEIR's analysis of utility-scale and other renewable energy projects, including battery storage, that would be facilitated by implementation of the Revised Draft 2045 CAP. Comments O7-43 and O7-44 do not identify any additional environmental impacts that were not considered or analyzed in the Recirculated Draft PEIR.

Comment O7-44 states that the Recirculated Draft PEIR should evaluate potential environmental impacts from utility-scale biofuel operations. However, no such projects are included as measures or implementing actions in the Revised Draft 2045 CAP, except for Action W2.3 which calls for working with waste and wastewater service providers to "utilize unused anaerobic digestion capacity of existing wastewater treatment plants and solid waste facilities to generate vehicle fuel." (Revised Draft 2045 CAP, p. 3-60). The use of these existing facilities for such purposes would not require additional CEQA review. Action T6.7 identifies the use of biomethane and biogas created from organic waste as a "bridge fuel to achieve 100 percent green hydrogen and electric vehicles (Revised Draft 2045 CAP, p. 3-39). Measure E1 identifies biomethane as a potential alternative to fossil natural gas for use in existing buildings for water heating, space heating, and cooking, but also states that existing opportunities for the widespread use of biomethane are currently limited (Revised Draft 2045 CAP, p. 3-48). Action E3.1 calls for working with utilities to incorporate increasing levels of biomethane into the natural gas mix (Revised Draft 2045 CAP, p. 3-53). Any utility-scale biomethane production facility would require project-level CEQA review before approval.

O7-45 The comment correctly states that poorly sited large-scale solar development can result in adverse impacts to the physical environment; however, no renewable energy projects of any scale are specifically proposed in the Revised Draft 2045 CAP. Recirculated Draft PEIR Section 3.1.3.6 (p. 3.1-13), expressly acknowledges that future projects facilitated by Draft 2045 CAP measures and actions may cause environmental impacts. Examples of such projects could include distributed generation via solar roofs, community solar, or microgrids; battery storage and electric vehicle charging stations; utility-scale solar photovoltaic (PV) development; and/or energy transmission and subtransmission facilities. Such impacts are analyzed on a resource-by-resource basis in Recirculated Draft PEIR Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*. See Section 2.2.1, *General Response 1: CEQA Alternatives*, which provides specific cross-references to such analyses.

O7-46 The comment correctly states that terrestrial wind projects may result in adverse impacts to avian species and other aspects of the physical environment. However, it does not question the adequacy or accuracy of the Recirculated Draft PEIR. The

Recirculated Draft PEIR analyzes the impacts of projects that would be facilitated by implementation of the Revised Draft 2045 CAP at a program level of detail. See Section 2.2.1, *General Response 1: CEQA Alternatives*, for examples of where the Recirculated Draft PEIR analyzes the impacts of renewable energy development. The County has reviewed the documents cited in footnotes 24 and 25 of the comment letter and has determined that the information provided does not bear on the adequacy or accuracy of the Recirculated Draft PEIR or the conclusions reached in the Recirculated Draft PEIR. Nonetheless, the information has been included in the administrative record where it will be considered as part of the decision-making process.

O7-47 While the comment correctly states that geothermal energy projects may result in adverse impacts the physical environment, it does not provide specific concerns regarding the adequacy or accuracy of the Recirculated Draft PEIR. The Recirculated Draft PEIR analyzes the impacts of projects that would be facilitated by implementation of the Revised Draft 2045 CAP at a program level of detail. See Section 2.2.1, *General Response 1: CEQA Alternatives*, for examples of where the Recirculated Draft PEIR analyzes the impacts of renewable energy development. The County has reviewed the document cited in footnote 26 of the comment letter and has determined that the information provided is generic, offers no opinion about impacts associated with the Revised Draft 2045 CAP, and does not bear on the adequacy or accuracy of the Recirculated Draft PEIR or the conclusions reached in the Recirculated Draft PEIR.

O7-48 While the comment correctly suggests that distributed energy generation projects such as rooftop solar projects can reduce impacts to the physical environment relative to ground-mounted, utility-scale projects, it does not provide specific concerns regarding the adequacy or accuracy of the Recirculated Draft PEIR. The Recirculated Draft PEIR analyzes the impacts of projects that would be facilitated by implementation of the Revised Draft 2045 CAP at a program level of detail; please refer to Section 2.2.1, *General Response 1: CEQA Alternatives*, for examples of where the Recirculated Draft PEIR analyzes the impacts of renewable energy development. The impacts of distributed energy generation projects are analyzed in the Recirculated Draft PEIR. See Response O7-45 for details. See also, for example, Section 3.2, *Aesthetics* (p. 3.2-9), Section 3.7, *Energy* (pp. 3.7-12, 3.12-13), Section 3.10, *Hazards and Hazardous Materials* (pp. 3.10-19, 3.10-22, 3.10-24), and Section 3.12, *Land Use and Planning* (p. 3.12-17). The County has reviewed the documents cited and determined that the information provided is generic, offers no opinion about impacts associated with the Revised Draft 2045 CAP, and does not bear on the adequacy or accuracy of the Recirculated Draft PEIR or the conclusions reached in the Recirculated Draft PEIR.

O7-49 The decision to implement small-scale solar development rather than utility-scale solar development relate to County policy decisions, which are not addressed or resolved in the Revised Draft 2045 CAP. The Revised Draft 2045 CAP instead considers the potential for a mix of new renewable energy sources to be developed as

facilitated by the Revised Draft 2045 CAP. The County has reviewed the document cited in footnote 27 of the comment letter and has determined that the information provided is generic, offers no opinion about impacts associated with the Revised Draft 2045 CAP, and does not bear on the adequacy or accuracy of the Recirculated Draft PEIR or the conclusions reached in the Recirculated Draft PEIR. Regarding impacts, please refer to *General Response 1: CEQA Alternatives*, for examples of where it will be considered as part of the decision-making process. The Recirculated Draft PEIR analyzes the impacts of renewable energy development.

O7-50 Regarding the comment's acknowledgment that the Recirculated Draft PEIR details impacts of the types of energy development that could occur, the comment provides insufficient information about the commenter's concern regarding the "degree" of impacts to allow the County to address this point in greater detail. Please refer to *General Response 1: CEQA Alternatives*, for examples of where the Recirculated Draft PEIR analyzes the impacts of renewable energy development and explains that CEQA does not require an EIR to consider alternatives to a component of a project, but rather recommends that alternatives focus on alternatives to the project as whole. (*California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957 [an EIR is required to describe alternatives to the proposed project as a whole, not to the various facets thereof].) Measure ES3, *Increase Renewable Energy Production* (Recirculated Draft PEIR Section 2.6.2.1, p. 2-22 et seq.), which includes Action ES3.6, and Measure ES4, *Increase Energy Resilience* (p. 2-23), are components of the Project rather than the entirety of the Project. Accordingly, the Recirculated Draft PEIR need not evaluate alternatives to specific measures and implementing actions for the Revised Draft 2045 CAP's renewable energy policies and to achieve its renewable energy targets. Also see generally Section 3.1.3.3, *Significance Conclusions* (Recirculated Draft PEIR, p. 3.1-11), which explains the distinctions among significance conclusions reached in the Recirculated Draft PEIR. Regarding the comment's statement related to the environmentally superior alternative, see Recirculated Draft PEIR, Section 4.6, p. 4-20 et seq. and General Response 1 regarding DER-focused alternatives.

O7-51 The Comment correctly notes that the Recirculated Draft PEIR does not detail the potential local impacts of biofuel and biomass processing facilities, specifically biomethane production and combustion. The Revised Draft 2045 includes anaerobic digestion and biomass conversion conceptually in the description of Strategy 8: Minimize Waste and Recover Energy and Materials from the Waste Stream (Revised Draft 2045 CAP, 3-57). However, there is just one action related to biomass conversion – Measure 2 (Increase Organic Diversion), Action W2.3 – which calls for working with waste and wastewater service providers to "utilize unused anaerobic digestion capacity of existing wastewater treatment plants and solid waste facilities to generate vehicle fuel." (Revised Draft 2045 CAP, p. 3-60). The use of these existing facilities for such purposes would not require additional CEQA review.

As discussed in response to comment O7-44 above, there are several measures and actions that identify biomethane as a potential renewable fuel source. This includes Action T6.7 (biomethane and biogas created from organic waste can be used as a "bridge fuel" to achieve 100 percent green hydrogen and electric vehicles), Measure E1 (biomethane as a potential alternative to fossil natural gas for use in existing buildings), and Action E3.1 (work with utilities to incorporate increasing levels of biomethane into the natural gas mix) (Revised Draft 2045 CAP, pp. 3-39, 3-48, and 3-53). Any utility-scale biomethane production facility would require project-level CEQA review before approval.

Further, as explained in Recirculated Draft PEIR Section 1.3, *Program-level Analysis and Tiering* (pp. 1-2 and 1-3), a program EIR is a type of EIR prepared pursuant to CEQA that is used to evaluate a plan or program that has multiple components or actions that are related either: geographically; as logical parts in the chain of contemplated actions; in connection with application of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental impacts which can be mitigated in similar ways. (Public Resources Code, §§ 21068.5 and 21093; CEQA Guidelines, § 15168(a).) Consistent with CEQA, the Recirculated Draft PEIR evaluates general impacts of the plan or program (i.e., the Revised Draft 2045 CAP), but does not examine the potential site-specific impacts of the many individual projects implementing Revised Draft 2045 CAP measures and actions that may be proposed in the future.

Environmental justice and its special focus on disadvantaged communities is beyond the scope of CEQA. See Public Resources Code section 21060.5, which defines “environment” as “the physical conditions that exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise, or objects of historic or aesthetic significance.” See also the Environmental Checklist provided in CEQA Guidelines Appendix G. Nonetheless, the Recirculated Draft PEIR does consider potential impacts of the Revised Draft 2045 CAP on the environmental resource areas that typically are considered in an environmental justice analysis. See, e.g., Section 3.4, *Air Quality* (p. 3.4-1 et seq.), Section 3.10, *Hazards and Hazardous Materials* (p. 3.10-1 et seq.), and Section 3.11, *Hydrology and Water Quality* (p. 3.11-1 et seq.).

Regarding the comment’s statement that biomethane represents a “false climate solution,” SB 100 does indeed consider biomethane a zero-carbon resource.[23] The 2022 Scoping Plan also identifies biomethane as a low-carbon fuel and a strategy for achieving the state’s GHG reduction targets.[24] The Revised Draft 2045 CAP intends

[23] California Energy Commission, 2017. *Renewables Portfolio Standard Eligibility*. January 2017. Available at file:///C:/Users/bschuster/Downloads/TN217317_20170427T142045_RPS_Eligibility_Guidebook_Ninth_Edition_Revised.pdf. Accessed September 2023.

[24] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* November 16, 2022. Pages 78, 88, 146, 190, 206-218. Available at https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents. Accessed August 2023

to align with state climate goals; this is Project Objective #2 (*Identify GHG emissions reduction targets tailored to the unincorporated County that closely align with state and County climate goals*). Because CARB and CEC accept biomethane as a zero-carbon resource, so does the Revised Draft 2045 CAP. The comment's note that proper accounting for the GHG emissions and climate impacts associated with biomethane production and combustion are acknowledged and agrees with the statement that experts who study the climate impacts biofuel feedstocks identify wide ranges of uncertainty. The County recognizes these concerns, and does not rely on the use of biofuels or biomethane to achieve the Revised Draft 2045 CAP's targets for 2030, 2035, or 2045.

Potential socio-economic impacts also are beyond the scope of CEQA analysis. As explained in the CEQA Guidelines, an EIR must analyze the "physical changes in the environment which may be caused by the project" and "[e]conomic or social effects of a project shall not be treated as significant effects on the environment." (CEQA Guidelines, §§ 15064(d), 15131.) The Recirculated Draft PEIR analyzed the Project's physical changes to the environment and impacts related to public health and the community. Here, no site-specific biofuel plants are proposed in the Revised Draft 2045 CAP. As explained in Recirculated Draft PEIR Section 3.1.3.6 (p. 3.1-13), "The Draft 2045 CAP is a policy document that does not propose any specific development or any other specific physical change to the environment" and "[f]uture developments will be subject to project-level environmental review where they are not exempt from CEQA." In this context, it would be speculative to assume that any biomass power plant facilitated by the implementation of Revised Draft 2045 CAP measures and actions would cause repeated air quality violations.

The County has reviewed the documents cited in footnotes 30 and 31 of the comment letter and has determined that the information provided is generic, offers no opinion about impacts associated with the Revised Draft 2045 CAP, and does not bear on the adequacy or accuracy of the Recirculated Draft PEIR or the conclusions reached in the Recirculated Draft PEIR. Nonetheless, the information has been included in the administrative record where it will be considered as part of the decision-making process.

O7-52 In response to this comment's concern regarding potential uncertainty attendant to properly accounting for the climate impacts of biomass and biomethane, this concern is beyond the scope of the Recirculated Draft PEIR because the Revised Draft 2045 CAP does not include such projects listed in the comment. The Revised Draft 2045 CAP does rely on related emissions reductions from biomass and biomethane controls to achieve 2045 CAP goals.

O7-53 Specific responses to this comment's concern regarding phase out of oil and gas operations are provided below in Responses to Comments O7-54 through O7-56.

O7-54 Measure ES1 (Develop a Sunset Strategy for All Oil and Gas Operations) identifies a performance objective to reduce oil and gas operations: 40 percent by 2030, 60 percent by 2035, and 80 percent by 2045. This represents the quantified GHG emission reductions contribution from this measure toward the total Revised Draft 2045 CAP GHG emission reduction targets. This does not restrict the County from exceeding the performance objective to achieve environmental justice goals.

O7-55 The Oil Well Ordinance adopted on January 24, 2023 applies to 473 of the 1,547 total oil wells in the unincorporated County. The remaining 1,074 oil wells are within the Baldwin Hills Community Standards District (855 oil wells), in an area designated as a specific plan (57 oil wells), or are operating under a valid discretionary permit (162 oil wells). These remaining oil wells will be addressed in pending and future County efforts. The performance objectives represent guideposts for successful implementation of measures and do not represent maximum achievements. Measures are able to exceed the performance objectives. See O7-56 for additional discussion.

O7-56 The performance objective associated with Measure ES1 reflects the quantified GHG emission reduction contribution from this measure toward the total Draft 2045 CAP GHG emission reduction targets. The introductory statement on page E-3 of the Revised Draft 2045 CAP Appendix E (Implementation Details) explains the purpose and intent of performance objectives. The performance objectives represent guideposts for the successful implementation of each measure and the Revised Draft 2045 CAP as a whole. However, they are not specific mandates. Successful implementation of the Revised Draft 2045 CAP ultimately translates to the County meeting its GHG reduction targets for 2030, 2035 and 2045. The Revised Draft 2045 CAP demonstrates how these targets can be met through a combination of measures, including an 80 percent reduction in emissions from oil and gas operations by 2045. The County recognizes that as the Revised Draft 2045 CAP is implemented and monitored, future amendments to CAP measures may be needed to address future federal and state regulations and as such, performance objectives may change in the future.

An amortization study is underway to determine the fastest possible phase-out timeline for all existing oil wells and production facilities. This study will consider the legal, environmental, political, and cost considerations of the phase out. The performance objective does not dictate the amortization rate; however, the amortization study may influence future adjustments to the performance objectives should the results determine that the performance objective is infeasible or should be accelerated. As such, the performance objective has been modified to include a note to adjust the performance objective to reflect the results from the amortization study. The note will read, "**The performance objective provided here serves as a general metric and may be refined upon completion of the Oil Well Amortization Study.*"

O7-57 and O7-58 The County acknowledges that results from the Oil Well Amortization Study will help inform the amortization speed and process and guide the strategy to phase

out oil and gas extractions and facilities. As such, Section 4.3.6 of the Recirculated Draft PEIR will be edited to strike out the following statement pending outcome of the amortization study:

> ~~*Achieving a complete phase-out by 2045 would be a daunting challenge*~~. (Recirculated Draft PEIR, Section 4.3.6, p. 4-9.)

O7-59 Section 4.3.6 of the Recirculated Draft PEIR discusses three primary reasons for not carrying forward the alternative for complete phase-out of oil and gas operations by 2030. The first is that the alternative would not clearly avoid or substantially lessen the potential impacts of the Project. It will be clarified however that the reference to an increase in localized construction-related air quality impacts from decommissioning oil and gas wells are for short-term construction impacts. As such, Section 4.3.6 will be revised as follows:

> *It is possible that this alternative could worsen or increase the Project's potential significant impacts, such as short-term localized construction-related air quality and health risk impacts from decommissioning of oil and gas wells and remediation activities at contaminated sites.* (Recirculated Draft PEIR, Section 4.3.6, p. 4-9.)

These revisions do not result in changes to environmental impact analyses or conclusions presented in the Recirculated Draft PEIR, and therefore do not constitute significant new information that would trigger recirculation under CEQA Guidelines section 15088.5.

Secondly, without a completed amortization study, the timeline for phase-out of oil and gas facilities is speculative for the 1,074 oil wells not covered by the Oil Well Ordinance and are within the Baldwin Hills Community Standards District, in an area designated as a specific plan, or are operating under a valid discretionary permit. Oil wells authorized through discretionary permits and with expiration dates beyond 2030 will need to be addressed in the amortization study.

Thirdly, the alternative addresses only one of the Revised Draft 2045 CAP measures, a Project component, rather than the Project as a whole. (See *California Oak Foundation v. Regents of University of California* (2010) 188 Cal.App.4th 227, 276-277.) See General Response 1 for more discussion.

O7-60 See Response O7-51, which addresses the comment associated with the examples provided in this footnote.

O7-61 The County acknowledges the County Code citation that references the process for review of requests for extension for nonconforming uses (County Code, Section 22.172.060). This comment does not raise significant environmental issues relating to the Recirculated Draft PEIR such that no response is required pursuant to CEQA Guidelines section 15088(a).

O7-62 Regarding the comment's concern regarding conservation of natural lands and wildfire risk, see Responses to Comments O7-63 through O7-65.

O7-63 The Revised Draft 2045 CAP emphasizes actions around the transportation and building energy sectors because they collectively contribute to 85% of County GHG emissions. Conservation of natural lands for carbon sequestration, biodiversity, and habitat resiliency is an important contribution to the aspirational goal of carbon neutrality; however, actions need to be initiated more immediately that can reduce more quickly tackle the GHG emission sources. The County will continue to seek opportunities to conserve habitats through concurrent efforts such as the Significant Ecological Areas Program which requires preservation of natural open space to offset impacts to biotic resources and the Santa Monica Mountains Local Coastal Program's Resource Conservation Program which consists of an expenditure of funds used for acquisition and permanent preservation of habitat.

O7-64 SB 379 (2015) mandated the County to update the Safety Element to incorporate climate adaptation and resiliency strategies. The updated Safety Element was adopted in July 2022 and includes clear linkages between land development and climate-induced hazards, particularly wildfire. All elements of the General Plan work in tandem with each other and as a cohesive framework to address the natural and built environment. Addressing the linkage between land development and climate-induced hazards is best suited for the Safety Element as directed by SB 379.

O7-65 SB 379 (2015) mandated the County to update the Safety Element to incorporate climate adaptation and resiliency strategies. The Safety Element was updated with an extended number of policies to address fire hazards that consider climate change as well as traditional, but also adapted, approaches for the forecasted wildfire changes. Such policies within the Safety Element include:

> *Policy S 4.3: Ensure that biological and natural resources are protected during rebuilding after a wildfire event.*
>
> *Policy S 4.10: Encourage the planting of native oaks in strategic locations and near existing oak woodlands, including those to be mapped in the Oak Woodlands Conservation Management Plan, to protect developments from wildfires, as well as to lessen fire risk associated with developments.*
>
> *Policy S 4.13: Encourage the siting of major landscape features, including but not limited to large water bodies, productive orchards, and community open space at the periphery of new subdivisions to provide strategic firefighting advantage and function as lasting firebreaks and buffers against wildfires, and the maintenance of such features by respective property owners.* (General Plan, Safety Element, p. S-18 – S-19)

Addressing the linkage between land development and climate-induced hazards is best suited for the Safety Element, as directed by SB 379.

O7-66 Responding to the comment's request for more clarity on the Checklist, please see General Response 3 for discussion regarding implementation of the Revised Draft 2045 CAP's measures and actions and the processes applicable to various project applicants.

O7-67 As noted by the commenter, the Checklist does include all project-level requirements for CEQA streamlining purposes. Please see General Response 3, which addresses project-level requirements for CEQA streamlining as identified in the Checklist, for additional discussion.

Responding regarding the adequacy of the Revised Draft 2045 CAP's measures, see enforceable General Response 5, which addresses the relationship between Revised Draft 2045 CAP measures and CEQA mitigation measures. The Revised Draft 2045 CAP and Recirculated Draft PEIR demonstrate with substantial evidence that the Revised Draft 2045 CAP meets the requirements of CEQA Guidelines section 15183.5(b), thereby allowing future projects to streamline their GHG impacts evaluation pursuant to CEQA Guidelines sections 15064.4 and 15183.5. (Revised Draft 2045 CAP pp. 1-4 to 1-5; Recirculated Draft PEIR pp. 2-9 to 2-12 and pp. 2-17 to 2-18.) Specifically, to meet the requirements of CEQA Guidelines section 15183.5(b), a CAP must only analyze GHG reductions "resulting from specific actions *or categories of actions anticipated* within the geographic area" (emphasis added). In addition, a CAP must "[s]pecify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level." (CEQA Guidelines, § 15183.5(b)(1)(D).) The Revised Draft 2045 CAP complies with this requirement by including specific performance standards for new development in the Checklist and explaining how these standards achieve the Revised Draft 2045 CAP's emission reduction targets. (Revised Draft 2045 CAP p. 1-4; Recirculated Draft PEIR p. 2-11.)

Regarding the specificity and enforceability of CAP measures, as discussed in the Recirculated Draft PEIR, the Revised Draft 2045 CAP includes a preponderance of mandatory (versus voluntary) measures and actions, measures that address the largest GHG emissions sources (such as building energy use and transportation), a focus on core measures that are likely to reduce large amounts of emissions, transparency in methods of quantification (see Appendix B of the Revised Draft 2045 CAP), and no reliance on voluntary carbon offsets (Recirculated Draft PEIR p. 2-11). Further, the previous comments dated April 30, 2020, pertain to a previous draft of the Revised Draft 2045 CAP and are not relevant to the Recirculated Draft PEIR, which wholly replaces the May 2022 Draft PEIR. (See CEQA Guidelines, § 15088.5(f)(1).)

Please also see General Response 3, which addresses the Revised Draft 2045 CAP's reliance on future ordinances or plans that have not yet been developed to achieve its GHG reduction targets.

O7-68 As explained in General Response 3, the Checklist is clear about what is required of projects that choose to streamline their CEQA GHG impact analysis (see Appendix F, p. F-5 et seq.). Regarding requirements for projects prior to adoption of future ordinances implementing Revised Draft 2045 CAP measures and actions, the Checklist is also clear on this front. The Checklist states that the project must either do X (such as include electric options for promoting active transportation) or comply with a future ordinance (such as a future EVCS ordinance) and readiness. If the ordinance is not in place when the Checklist is being completed, then the project need not comply with such future ordinance.

To the commenter's example regarding the County's future potential zero net energy (ZNE) ordinance, voluntary Tier 2 Checklist item #16 requires, for projects under construction after 2030, the project to be zero-net-energy and/or comply with the County's ZNE ordinance, unless the project meets specific exemptions identified in the ordinance.

To document the proposed change in use of the Checklist and provide further clarity regarding streaming requirements prior to adoption of future ordinances, the County has revised the Revised Draft 2045 CAP in the following way:

> *For projects under construction after 2030, the project must be zero-net-energy ~~and fully electric with no natural gas infrastructure or appliances~~ achieve zero GHG emissions for on-site energy use, ~~as specified in~~ and/or comply with the County's ZNE ordinance, unless the project meets specific exemptions identified in the ordinance.* (Revised Draft 2045 CAP, Appendix F, p. F-25.)

O7-69 Please see General Response 3, which addresses the Revised Draft 2045 CAP's validity as a CEQA streamlining tool, and General Response 5, which addresses the Revised Draft 2045 CAP's reliance on future ordinances or plans that have not yet been developed to achieve its GHG reduction targets. Also see response to comment O7-68 above.

O7-70 In response to the comment's statement regarding incorporating by reference all previous comments submitted by the commenter, CEQA Guidelines section 15088.5(f)(1) provides that "[w]hen an EIR is substantially revised and the entire document is recirculated, the lead agency may require reviewers to submit new comments and, in such cases, need not respond to those comments received during the earlier circulation period." As explained in Recirculated Draft PEIR Executive Summary Section ES.1 (p. ES-2), "[c]omments on the May 2022 Draft PEIR, though part of the administrative record, will not be responded to in the Final PEIR; new comments must be submitted on the Recirculated Draft PEIR." The County has also informed reviewers that new comments on the Recirculated Draft PEIR must be submitted and that the County would not respond to comments received during the original Draft PEIR public review period. The commenter's previous submittals predate the issuance of this Recirculated Draft PEIR, are inapplicable and are

presumed not to bear on the adequacy or accuracy of the Recirculated Draft PEIR. The Recirculated Draft PEIR wholly replaces the May 2022 Draft PEIR. To the extent the commenter believes its prior comments have continuing relevance, the burden is on the commenter to explain how with sufficient specificity to enable the County to provide a detailed response. The County does not have the duty to decipher what comments on the May 2022 Draft PEIR the public believes to still be applicable or inapplicable from their previous comment letters, which is why the public has been given the opportunity to draft new comment letters on the Recirculated Draft PEIR.

O7-71 CEQA Guidelines section 15088.5(f)(1) provides that "[w]hen an EIR is substantially revised and the entire document is recirculated, the lead agency may require reviewers to submit new comments and, in such cases, need not respond to those comments received during the earlier circulation period." As explained in Recirculated Draft PEIR Executive Summary Section ES.1 (p. ES-1), Section 1.2 (p. 1-2), Section 1.4.3 (p. 1-7), and Section 1.4.4 (p. 1-9) the "Recirculated Draft PEIR wholly replaces the May 2022 Draft PEIR." The Recirculated Draft PEIR specifically states, "Comments on the May 2022 Draft PEIR, though part of the administrative record, will not be responded to in the Final PEIR; new comments must be submitted on the Recirculated Draft PEIR." This also was noted in the Notice of Availability for the Recirculated Draft PEIR posted on the project website at https://planning.lacounty.gov/long-range-planning/climate-action-plan/documents/. It was also noted in the April 19, 2023, email sent to interested parties registered on the project email listserv.

The commenter's previous submittals predate the issuance of the Recirculated Draft PEIR, are inapplicable, and do not address adequacy or accuracy of the analysis included in the Recirculated Draft PEIR that post-dates the commenter's July 18, 2022, and February 1, 2022, comments on the Draft PEIR. The comment's general statement incorporating prior submittals by reference without some indication of their applicability or relevance does not provide the County with enough information to provide a detailed response in this Final PEIR or in the context of any further revisions to the Revised Draft 2045 CAP. To the extent the commenter believes their prior comments have continuing relevance, the burden was on the commenter to explain with sufficient specificity how they are relevant to the Recirculated Draft PEIR to enable the County to provide a detailed response. The County does not have the duty to decipher what comments on the May 2022 Draft PEIR the commenter believes to still be applicable from its previous comment letters, which is why the public has been given the opportunity to draft new comment letters on the Recirculated Draft PEIR.

COMMUNITIES FOR A BETTER ENVIRONMENT
established 1978

May 16, 2023

Attn: Thuy Hua,
Los Angeles County Regional Planning
320 W. Temple Street, 13th Floor Los Angeles, CA 90012

Sent via electronic mail

To the Los Angeles County Department of Regional Planning,

RE: Comments on the Draft 2045 Los Angeles County Action Plan

On behalf of Communities for a Better Environment (CBE) we are submitting this comment letter to share feedback on the Draft 2045 Los Angeles County Climate Action Plan (CAP). We commend the Los Angeles County Department of Regional Planning (DRP) for updating the CAP. While the CAP is an opportunity to reduce greenhouse gas emissions, CBE urges the County to continue engaging with frontline communities and meaningfully inventory the disproportionate climate impacts that hit Environmental Justice (EJ) communities hardest. O8-1

Energy Supply

In addition to the goals for phaseout of Oil & Gas extraction, the Oil Refinery phase down process will begin, as a measure in the State Scoping Plan. We urge the County to support the state Scoping Plan process to phase down Oil Refinery production of gasoline, diesel, and other products in line with reduction in demand for these fuels. It is important to plan the decommissioning and clean-up of refinery infrastructure, and a Just Transition for refinery workers as California uses less gasoline, diesel, and other refinery products. Refineries will not automatically disappear but continue to pollute local communities for short term profits as they export a greater and greater volume of climate warming fossil fuels abroad. O8-2

Oil & Gas

DRP recognizes that eliminating oil and gas drilling are core to the County's decarbonized future, but also that benefits of energy decarbonization do not always reach frontline communities. DRP should continue to accelerate its drilling phaseout timeline to close and remediate drill sites as soon as legally possible. While the County's plan to phase down oil and gas operations 80 percent by 2045 will benefit community health, the CAP can be, and should be more ambitious, targeting 100% phase out by the soonest possible date based on the County's amortization study. O8-3

- ES 1.1: CBE supports a sunset strategy which prioritizes disproportionately impacted communities for well abandonment and site remediation. In this process the county must place an emphasis on community involvement so that impacted residents can guide the phase down and trust in effective clean up and remediation practices. Addressing O8-4

breaches in community trust is one of many remedies a drilling phase out must include alongside stringent health protections and "polluter pays" measures.[1] O8-4 (cont.)

- ES 1.2: DRP's recognition of the fugitive emissions threat is an important component of drilling phase out. As abandonment of oil wells proceeds, DRP must establish a long-term well monitoring plan to ensure LA County's legacy of oil drilling does not morph into a legacy of brownfields and fugitive methane pollution. Fugitive methane emissions have proven notoriously difficult to monitor.[2] Drill site remediation should include a management plan to ensure plugging has been effective both in the short and long term. O8-5
- ES 1.3: DRP should be extraordinarily cautious in its plans for Carbon Capture and Storage (CCS) in the County. While safety rules and community protection measures should be continued wherever oil and gas infrastructure are present as those sites operate and wind down, CCS is not such a community health measure. Rather, CCS can extend the life of polluting operations in the County, take up large swaths of urban land, and is very energy intensive to operate. CCS can also introduce new hazards into communities already burdened by harmful oil and gas infrastructure.[3] O8-6

Solar & Energy Resilience

- ES 3.1, ES 3.2, and ES 3.5: CBE supports the installation of solar on buildings to increase access to renewable energy. It is imperative that the County set baseline protections that prevent landlords from simultaneously claiming County funds and passing costs on to tenants. Instead, DRP's solar incentives should incent affordable housing with upfront financial support for retrofits. O8-7
- ES 4.1: Community Resilience Hubs have the potential to provide a safe and comfortable space for community to gather during extreme climate events. A successful resilience hub must be co-designed and developed with community and directly address community concerns. CBE has been working with community members to support the development of two sites in Wilmington to serve as resilience hubs.[4] We encourage the County to directly partner with community-based organizations (CBOs) to ensure meaningful engagement with community members. Community leadership should identify trusted sites, the energy load, resources, services, and materials necessary at the resilience hub to address community needs. O8-8

[1] Liberty Hill Foundation, Drilling Down: The Community Consequences of Expanded Oil Development in Los Angeles, pp. 20, 23 (2015) https://libertyhill-assets-2.s3-us-west-2.amazonaws.com/media/documents/Drilling_Down_Report_-_Full.pdf.
[2] James Turitto, The IEA's Methane Tracker shows massive underestimation of methan emissions in national inventories, Clean Air Task Force (Apr. 8, 2022) https://www.catf.us/2022/04/ieas-methane-tracker-shows-massive-underestimation-methane-emissions-national-inventories/.
[3] Appendix A, CBE, CARB Draft Scoping Plan: AB32 Source Emissions Initial Modeling Results, pp. 4-10 (4 April 2022)
[4] Appendix B: Communities for a Better Environment: Resilience Hub Survey Results Infographic for Wilmington, CA. November 2022 (page 1) (page 2)

Transportation

Transportation is the largest contributor to County greenhouse gas emissions,[5] made up of mostly single-occupancy vehicles. DRP recognizes that lowering total vehicle miles traveled (VMT) and expanding access to zero-emission vehicles (ZEVs) is critical to reducing the County's total GHG emissions. For environmental and low-income communities, public transportation is a vital part of peoples' mobility and increased investment has the opportunity to improve the economic livelihood of communities.[6] Environmental justice communities need a transit system that is free, reliable, clean, adapted to climate conditions, equipped to support riders during extreme climate or industrial risks, and safe. Our lens of safety is embedded in community care and not over-policing. Additionally, investments into local transit systems should prioritize electric and zero-emission technologies. We expand our concerns, recommendations, and support below: O8-9

- T 4.6: CBE supports free transit to encourage the use of public transit as a viable alternative to single occupancy vehicles.
- T 4.8: CBE supports the establishment of temporary car-free areas. However, such areas must be identified in partnership with the local and surrounding community's leadership. Following community leadership will ensure that the car-free zones don't further gridlock, increase traffic, and are available during times when community is able to utilize the space. O8-10
- T 4.1: CBE has concerns regarding autonomous vehicles. One concern is that it could potentially displace workers from similar delivery jobs, harming low-income workers.[7] Additionally, there is concern regarding the potential personal data breach and over policing of communities. Such autonomous vehicles have been found to record their surroundings using a mounted camera, we are concerned that such recordings could be sold to private companies or local police.[8] This could be systematically dangerous to low-income, people of color who have historically been overpoliced. We also suggest the County directly partner with disability justice leaders and organizations to identify how to best support those living with different abilities who may benefit or be harmed by autonomous mobility. **CBE urge the County to reprioritize investment in mass electric public transit instead of autonomous mobility due to safety concerns and unintended impacts to low-income workers.** O8-11 O8-12 O8-13

[5] Revised Draft 2045 Climate Action Plan, available at: https://planning.lacounty.gov/wp-content/uploads/2023/03/LA_County_2045-CAP_Rev_Public_Draft_March_2023_Chapters.pdf
[6] Issuu., Driverless Jobs: Autonomous Vehicles & A Just Transition for Black Drivers, (pg 12), 1 Sept 2021. https://issuu.com/congressionalblackcaucusfoundation/docs/0821-cpar-driverless-jobs-02
[7] Issuu., Driverless Jobs: Autonomous Vehicles & A Just Transition for Black Drivers, (pg 4), 1 Sept 2021. https://issuu.com/congressionalblackcaucusfoundation/docs/0821-cpar-driverless-jobs-02
[8] SFist, Report: SFPD Already Using Surveillance Video from Self-Driving Cars, 12 May 2022

- T 4.10 and T 6.7: Public transportation should be zero emission. "Low emission", "Biomethane" and "Biogas" are not ambitious enough technologies to reach the CAP's target goals. Reather these technologies further exacerbate health impacts in environmental justice communities and air quality and delay the transition to an electric bus fleet. Though low emission could qualify green hydrogen fuel cell transit, many communities have solely and adamantly advocated for electric buses. **CBE urges the County to prioritize and commit to an electric transportation fleet at every opportunity.** Electrification is cleaner, more efficient, and more technologically advanced than hydrogen transit, and further supports existing electric vehicle infrastructure. O8-14

- T 9.2: All commercial equipment listed (i.e. forklifts, loaders, welders, saws, pumps, etc.) can be electrified. The Port of Long Beach has already been utilizing such equipment and the County should build on this success, reserving green hydrogen for sectors that cannot be electrified. O8-15

- T 8.2 and T 8.4: We encourage the county to prioritize electrification over alternative fuels. Low emission fueling sources, including hydrogen, biomethane, biogas, and natural gas could further delay electrification and potentially create health and environmental impacts for environmental justice communities. O8-16 Additionally, the streamlining of fueling infrastructure without proper and lengthy community engagement, health studies, and full CEQA analysis could lead to oversight of quality checks, assurances, safety requirements, and lack of proper training for contractors. O8-17

Building Decarbonization

The decarbonization of residential buildings is an opportunity to both decrease GHG emissions and reinvest in people's resilience. Low-income families and communities of color face a disproportionate energy burden by paying more than 30% of their income on energy bills.[9] Further electrification and energy efficiency in people's homes could alleviate financial and environmental burdens. However, it can also deeply impact peoples' livelihoods if the transition is not done equitably. Here, we encourage the County to set a baseline platform that prohibits the displacement of tenants, cost of retrofits to be passed on to tenants, exacerbate energy burden, and harassment against tenants. O8-18 We urge the County to prioritize upfront financial support to affordable housing in retrofits, support tenants with comfortable, local, and free housing during retrofits, mandate sufficient notice to tenants, and incorporate Indigenous land management and greening. The expansion of native landscapes can provide holistic GHG emissions reductions, energy efficiency and overall comfort to tenants. O8-19 **Additionally, CBE does not support the use of hydrogen in residential buildings.[10]** Direct electrification of homes and businesses is more efficient and safer than burning highly volatile, polluting hydrogen in enclosed buildings. We O8-20

[9] Climate Emergency Mobilization Office: Report on Equitable Building Decarbonization, 15 Sept 2022. https://www.climate4la.org/wp-content/uploads/2022/09/Report-on-Equitable-Building-Decarbonization-FINAL-September-15-2022.pdf

[10] Appendix C, Environmental justice and environmental principles regarding the buildout of hydrogen in California, p. 6, 23 March 2023.

urge the County to focus on the electrification of buildings to meet CAP goals rather than delay by exploring or considering the use of "other zero-emission fuel sources" for buildings. O8-20 (cont.)

- E 1.5: We support a comprehensive fund to support the decarbonization of new and existing affordable housing. This fund should provide energy efficiency improvements without increasing energy burdens on environmental and low-income communities who are systematically impacted by socio-economic factors. Additionally, this should be designed to leverage funding from state programs or local County funding opportunities. O8-21

- E 2.1: Technical and financial assistance can provide the support necessary for affordable housing entities to meet an ordinance requirement that all new buildings are electric. We encourage the County to directly partner with mission-based affordable housing developers in order to create a program that addresses their concerns and needs. O8-22

- E 4.3: The expansion of tree planting and green spaces directly supports local communities, curbs the urban heat island effect, and can lead to energy efficiency. As the County develops frameworks for decarbonization, there is a need to couple it with the expansion of green spaces and increased tree canopy. Ultimately, this is also an opportunity to address environmental racism by prioritizing Indigenous land management practices and reinvesting in communities of color. O8-23

Green Spaces

Land management and expansion of green spaces supports GHG emissions reductions and overall health and environmental benefits. We strongly encourage the County to commit and prioritize Native greening efforts, rather than solely focus on technical and energy production methods. Natural landscapes can combat the urban heat island effect which could result in lowered energy consumption and encourage the use of public transportation. This combination could curb emissions from the top two higher GHG emitting sectors, transportation, and stationary sources. As such, we encourage the County to promote Strategy 9 as a core strategy. As the County progresses on building electrification, and expands green spaces, there is significant potential in GHG emissions reductions and support for environmental justice communities. O8-24

- A3: CBE supports the commitment to expand the County's tree canopy and green spaces. We encourage the County prioritize Native trees, plants, and flowers that heal the soil, build connections to Indigenous communities, and support overall biodiversity and community health. As such, any trees removed must be replaced with Native trees. O8-25

CEQA Exemption

CBE is also concerned that the CAP would expediate future CEQA discretionary projects as long as the project can demonstrate consistency with the CAP. In fact, projects consistent with the O8-26

CAP would not be required additional greenhouse gas emission analysis or mitigation under CEQA, provided that a project's EIR identifies the CAP requirements that are applicable to the project and adopt those requirements as mitigation measures. (p. 4-10) As such, we ask that the County revise the CAP to provide additional information on the types of discretionary projects that could potentially demonstrate consistency with the CAP.

O8-26 (cont.)

We believe that CEQA provides the public, and especially environmental justice communities, the opportunity to monitor and provide input on projects proposed in their communities. In fact, CBE strongly opposed the use of CEQA exemptions in the County's Green Zones Ordinance because such exemptions could potentially contravene the Ordinance's purpose of protecting already-overburdened communities from harmful projects.

Given the high rates of government reinvestment into environmental justice communities and the historic placement of energy production and storage facilities and refineries, we believe that a complete analysis of greenhouse gas emissions is necessary for all proposed projects in environmental justice communities. While in isolation a project may seem to minimally increase greenhouse gas emissions, a series of projects that could be consistent with the CAP could potentially create hotspots of higher greenhouse gas emissions.

O8-27

Conclusion

CBE appreciates the opportunity to provide feedback and comments on the 2045 Draft Climate Action Plan. Overall, we urge the County to prioritize electrification, expand access to solar and storage, increase electric public transit, recommit to Indigenous land management, and explore holistic community-led strategies that address climate impacts. We look forward to working with the County to ensure that strategies are reaching climate goals and supporting low-income communities of color.

O8-28

Thank you,

Darryl Molina-Sarmiento

Executive Director

Laura Gracia

Climate Adaptation and Resilience Enhancement (CARE) Coordinator

APPENDICES

Appendix A, CARB Draft Scoping Plan: AB32 Source Emissions Initial Modeling Results

Appendix B, Communities for a Better Environment: Resilience Hub Survey Results Infographic for Wilmington, CA. November 2022

Appendix C, Environmental justice and environmental principles regarding the buildout of hydrogen in California

Appendix A

April 4, 2022

California Air Resources Board
1001 "I" Street
Sacramento, CA 95814

Energy + Environmental Economics (E3)
44 Montgomery Street, Suite 1500
San Francisco, California 94104

COMMUNITIES FOR A BETTER ENVIRONMENT
established 1978

Submitted through CARB Portal

Re: CARB Draft Scoping Plan: AB32 Source Emissions Initial Modeling Results

To CARB and E3 Representatives:

Communities for a Better Environment ("CBE") submits the following comments on the CARB Draft Scoping Plan: AB32 Source Emissions Initial Modeling Results ("Initial Modeling Results") presented by E3 at the California Air Resources Board ("CARB") Public Workshop on the 2022 Scoping Plan Update – Initial Modeling Results Workshop on March 15, 2022. The comments focus on the Petroleum Refining and associated Hydrogen Production sector.[1] (Note that we are separately commenting about the electricity sector.) We request the publication of the detailed input assumptions used in the modeling soon as possible, even if only available in draft form.

CBE is a statewide environmental justice ("EJ") organization with a strong focus on addressing the fossil fuel energy sources that heavily pollute the California communities of Wilmington, Southeast Los Angeles, East Oakland, Richmond, and surrounding areas where we organize, live, and work. Climate change, smog, and toxic emissions severely and disproportionately impact our communities, including oil refineries, oil wells and drilling, power plants, transportation and other sources.

Despite our appreciation for the modeling work and presentation from E3, we are disturbed by the glaring omission of detailed written information explaining critical underlying input assumptions of the PATHWAYS modeling results. During the Q&A portion of the March 15 workshop, CARB indicated it does not intend to correct this serious flaw in the public process and plans to release that information alongside the draft Scoping Plan. At best, failing to disclose such critical assumptions creates fertile ground for extremely unrealistic concepts that skews public discourse and creates a bias for poor decision-making. Without this information, the public is left to speculate. Furthermore, it is essential that CARB disclose and ultimately revise its assumptions for the refinery sector. A recent OEHHA analysis indicated that communities living around refineries and hydrogen plants have seen an increase in GHG and PM2.5 toxic emissions during the period of the Cap and Trade program.[2] Four of the top five entities

[1] SP22-MODEL-RESULTS-E3-PPT.PDF, available at: https://ww2.arb.ca.gov/resources/documents/2022-scoping-plan-update-initial-modeling-results-workshop.

[2] Office of Environmental Health Hazard Assessment (OEHHA), Impacts of Greenhouse Gas Limits Within Disadvantaged Communities: Progress Toward Reducing Inequities, Feb. 2022, Table 2. Direction of Emission Changes at Facilities Near High-Scoring CES Communities Varies by Pollutant and Sector (2018 Compared to 2012 Emissions), p. 38

that use the most offsets own petroleum refineries.[3] The 2022 Scoping Plan must use the best available evidence to provide a clear path forward for the refining sector and refinery communities.

In the case of the Petroleum Refinery sector, the lack of real-world technical evidence to support the assumptions risks premature, or worse, predetermined policy decision-making. The comments below ask questions regarding the reasoning and inputs behind several key results and figures. **These include:**

- the assumed carbon capture rates on individual pieces of equipment and across a whole refinery,
- the lack of evidence of operational and comparable carbon capture and sequestration ("CCS") systems at existing refineries,
- hypothetical CCS-driven emission reduction timelines which inexplicably start immediately,
- non-CCS versus CCS starting points,
- assessment of major physical constraints for siting CCS equipment at California refineries,
- and accompanying safety implications, for starters.

I. Present capture rate assumptions and emissions reductions results for petroleum refining GHGs indicate alarming need for disclosure of additional assumptions and rigorous review of corresponding evidence base.

A. REQUEST FOR RESPONSE: Please clarify the "90% CCS capture" percentage assumption in the context of a whole refinery's emissions.

1. Please detail the total percentage of the overall refinery that is assumed to be covered by CCS,

2. Please detail which parts of the refinery are assumed covered by CCS, including oil refinery hydrogen plants.

3. Please also refer to Table 2-1 of the South Coast 1109.1 report, later excerpted, which lists hundreds of different major refinery combustion equipment (heaters, boilers, incinerators, turbines, FCCUs, calciners, flares, etc.). Did the modeling consider the feasibility of applying CCS to such a complex set of equipment at California refineries, when determining the percentage of emissions covered by CCS? Please detail which specific types of the listed equipment are assumed covered.

4. Please explain whether or how much capture may occur over combustion sources, and whether the percentage is only for carbon dioxide or additionally methane fugitive emissions and other pollutants. Please provide the detailed accompanying spreadsheets used for the relevant portions of the GHG inventory.

[3] Id. at 8

5. Please provide citations on the basis of the assumption that 90% of emissions are captured, where CCS is applied within a refinery, and also identify all existing and operational refinery CCS systems in place in the U.S. and in California that can help assess the validity of the modeling assumptions.

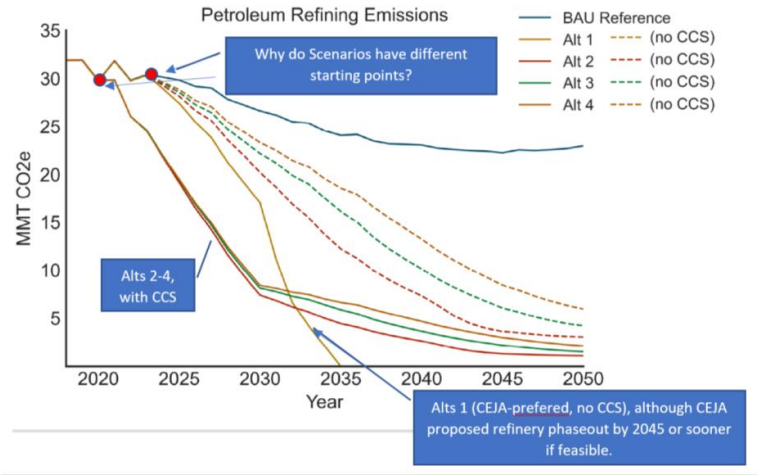
During an Environmental Justice Advisory Committee (EJAC) Fossil Fuel Transportation Working Group, CARB staff indicated the Quest carbon capture and storage project in Alberta provided CARB with a basis for understanding CCS on refineries. We highly discourage CARB from relying on the existence of this project to validate the idea of investing in CCS on refineries generally. The project cost $1.35B (of which $865 Million came from the Canadian government[4]) and only captured a third of the upgrader's emissions. And despite initially claiming that its project Polaris would capture more than 90% of emissions,[5] Shell now states that it is only expected to capture up to 40% from the refinery as a whole and up to 30% from the chemicals plant.[6] We request an explanation for the capture assumption that addresses which part of the Quest project data CARB has considered, if at all.

B. REQUEST FOR RESPONSE: Please explain the reasoning behind the starting time and levels of emission reductions results in scenarios with CCS.

To assist comments on the oil refining sector, below is an annotated version of the graph on refining emissions as presented on Slide 10 at the workshop on March 15, 2022. This graph includes projected emissions in the four Alternatives ("Alt") scenarios 1-4, plus BAU ("Business As Usual").

We interpret this graph to mean, as recommended by the Environmental Justice Advisory Committee ("EJAC"), Alt 1 for refineries does not include CCS. As a result, there is only one Alt 1 line shown, whereas Alts 2-4 are shown both with and without CCS. The three closely grouped solid lines which fall quickly prior to 2030 are Alts 2-4 *with* CCS. The dotted lines are Alts 2-4 *without* CCS.

[4] https://sequestration.mit.edu/tools/projects/quest.html
[5] See: https://www.cnbc.com/2022/01/24/shell-ccs-facility-in-canada-emits-more-than-it-captures-study-says.html "The hydrogen projects we're planning – like Polaris – will use a new technology that captures more than 90% of emissions."
[6] See: https://www.shell.ca/en_ca/media/news-and-media-releases/news-releases-2021/shell-proposes-large-scale-ccs-facility-in-alberta.html



Given that **no CCS units currently exist at California oil refineries**, and for reasons further detailed below, this sharp decline indicates magical thinking around the current state of California refineries and refinery carbon capture technology.

6. Please provide any underlying evidence base for the assumption that results in all three scenarios with CCS (Alternatives 2-4, shown as three tightly-grouped solid lines above) rapidly declining through 2030, *starting immediately.*

7. Please explain why non-CCS scenarios and CCS scenarios use different starting points of emissions. Why do CCS scenarios begin earlier at a lower level of refinery emissions (which might reflect low refinery production and emissions during the pandemic), yet all the non-CCS scenarios start at the higher level, apparently after refinery production and emissions increased again. Or is there another reason for the spike in emissions after 2021?

II. Carbon capture of high percentages of refinery carbon emissions is unlikely at refineries due to their complexity, and the infeasibility of adding controls to hundreds of massive combustion units and thousands of fugitive sources.

Setting any assumptions for a new technology for refineries must be, at least in part, informed by the immensely complex and large physical scale of oil refinery emissions sources and controls. Just last fall 2021, the South Coast Air Quality Management District (SCAQMD) adopted Regulation 1109.1 to address high emissions of Nitrogen Oxides (NOx) at oil refineries after years of rule development, and also after decades of failure of the NOx pollution trading program in the South Coast called RECLAIM.

This is relevant to the Scoping Plan analysis and modeling, because NOx is another combustion pollutant emitted with CO2 when hydrocarbon fuels are burned or otherwise used at oil refineries.[7] As a result, the data collected on these combustion sources, and the engineering difficulties in siting emissions controls, is also at issue in the Scoping Plan process related to evaluations of Carbon Capture equipment.

The South Coast District performed an updated assessment of the numbers and types of individual combustion units at South Coast refineries. As the largest oil refining region in California, it serves as a ready example of statewide issues and source of critical insights. The next largest region is the Bay Area, with additional substantial refining activities in Bakersfield and Santa Maria.

The South Coast 1109.1 regulation staff report included the following graphics, charts, and tables identifying the large number of major refinery and refinery hydrogen plant sources at play in the South Coast alone. Figure 5 for instance identifies 9 petroleum refineries, 3 small refineries, and 4 related Hydrogen Plants and Sulfuric Acid Plants that are substantial emissions sources (p. 2-1):

Figure 5. PR 1109.1 Affected Facilities

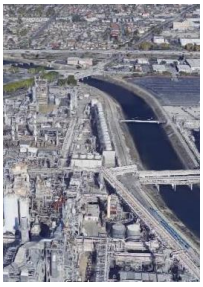
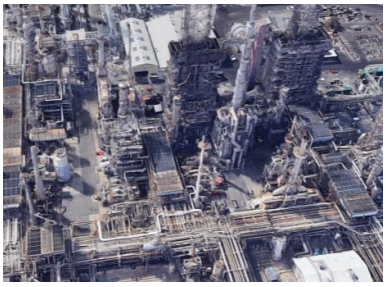
The SCAQMD report identified hundreds of major combustion sources within these facilities. Each one is massive - one refinery heater can combust as much fuel in an hour as four homes using natural gas burn in a year.[8] For a visual, the google map below shows two massive coker heaters at the Marathon (Tesoro) Wilmington refinery, out of the hundreds of combustion units at South Coast refineries and related operations. They dwarf the warehouses and container units seen across the channel and hide multiple burners inside. The NOx, CO2, and other pollutants emitted through the tall stacks are invisible.

[7] For example, SCAQMD Rule 1109.1 staff report, p. A-1 describes combustion reactions resulting on both NOx and CO2 emissions, such as Fuel NOx Formation (R-N + O2 → NO, NO2, **CO2,** H2O, trace species), or Prompt NOx Formation (R + O2 + N2 → NO, NO2, **CO2**, H2O, trace species).

[8] A million BTUs (British Thermal Units) of heat content is present in approximately 1000 cubic feet of natural gas (which varies a little in energy content). *"**In 2012, the average U.S. home consumed** 61,200 cubic feet of natural gas (or **62.7 million Btu**)."* (American Gas Association Playbook, 2015, p. 78) So a refinery heater rated at 250 million BTUs per hour can burn the same amount of fuel hourly as about 4 homes burn in an entire year. (250/62.7 =~4)

Google map of Marathon LA Refinery

For an idea of the complexity of refineries in the Wilmington / Carson / W. Long Beach area, here are a few refinery views from google maps:

Panning further out shows the extreme density of the area, with 5 oil refineries (two Marathon, two Phillips 66, and one Valero), numerous warehouses and other industrial facilities, thousands of homes, and numerous schools and sensitive receptors:

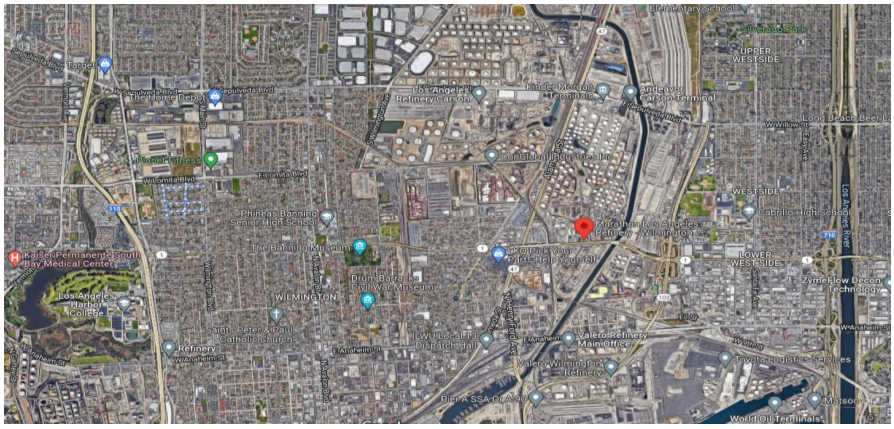


Table 2.1 from the South Coast staff report below identifies 228 Process and SMR[9] heaters and boilers in the South Coast, plus 56 other combustion units. (p. 2-3)

Table 2-1. PR 1109.1 Affected Equipment by Facility

	Process Heater/ SMR Heater/ Boiler	SRU/TG Incinerator	Vapor Incinerator	Gas Turbine	Start-Up Heater/ Boiler	FCCU	Coke Calciner	Flare
Tesoro-Carson	30	2	0	4	1	1	0	0
Tesoro-Wilmington	33	0	0	2	0	0	0	0
Tesoro-Sulfur Recovery Plant	0	2	0	0	0	0	0	0
Tesoro-Coke Calciner	0	0	0	0	0	0	1	0
Torrance	28	2	2	0	1	1	0	0
Chevron	37	4	5	4	1	1	0	0
P66-Carson	10	2	0	0	0	0	0	0
P66-Wilmington	34	2	0	1	2	1	0	0
Ultramar	19	1	0	1	1	1	0	0
AltAir	25	1	4	0	0	0	0	0
Lunday Thagard	5	0	2	0	0	0	0	0
Air Products-Carson	1	0	0	0	0	0	0	0
Air Products-Wilmington	1	0	0	0	0	0	0	0
Air Liquide	1	0	0	0	0	0	0	0
Eco-Services	0	0	0	0	2	0	0	1
Valero Asphalt Plant	4	0	0	0	0	0	0	0
Total	**228**	**16**	**13**	**12**	**8**	**5**	**1**	**1**

When faced with regulating the many combustion sources, oil refiners complained of the need for long timelines. The final rule includes implementation through 2035, fourteen years after adoption, in addition to a 3-year rulemaking process.

These issues illustrate the complexity of the detailed rulemaking process, engineering and design, and construction of complex oil refinery emissions controls. **These realities underline the absurdity of setting modeling assumptions (even if space could be found), that assume non-existent CCS technologies can be quickly constructed and implemented across broad parts of California oil refineries.** This is to say nothing of the high costs.

III. Carbon capture at scale is unrealistic at California refineries due to major limitations in physical space at oil refineries.

During many regulatory proceedings, oil refineries have successfully argued against adding pollution controls, based on physical space limitations. For example, SCAQMD relaxed the originally

[9] Steam Methane Reforming

proposed NOx standard under Regulation 1109.1 from the demonstrated achievable level of 2 ppm, up to 5ppm and higher. Refiners claimed it would require additional stages of Selective Catalytic Reduction (SCR) equipment to meet the 2ppm standard, without sufficient physical space available. The same combustion sources at refineries which emit NOx are also major emitters of GHGs – including hundreds of Boilers & Heaters identified in South Coast rulemaking.

The space issue was not a small or rare complaint. The Staff Report for SCAQMD Rule 1109.1 (Heaters and Boilers and Other Refinery Combustion Sources) identified widespread industry and Air District concerns about space constraints in extremely old facilities.[10] As reported in the Staff Report, the Fossil Energy Research Corporation Assessment (FERCo) conducted site visits to the five major refineries, Chevron, Marathon (Tesoro Refinery), Phillips 66, Torrance, and Valero, to evaluate and discuss facility constraints and challenges of implementing SCR on specific refinery systems. The main concern refinery stakeholders frequently raised to staff was the issue of space and the ability to install post-combustion control.[11] Based on the site visits, FERCo concluded that ***all the facilities exhibited space limitations to varying degrees.*** Not all open space that surrounds a unit is available for an SCR system, as ***open space may be necessary for maintenance work and thus, safety***.[12] As a result, advanced technology, engineering, and design for additional pollution controls are required specifically to address space constraints.[13] The cost for two facilities operating around 8 ppmv NOx to upgrade and meet 8 ppmv NOx was approximately $1 million to $3 million, but to completely replace the SCR or add new technology to meet 2 ppmv ***while addressing space constraints*** ranged from $75 million to $220 million.[14]

Another important example includes the South Coast Rule 1410 rulemaking process, which would have banned the use of deadly Hydrogen Fluoride or Modified Hydrogen Fluoride at two South Coast refineries. This regulation was killed by industry complaints, despite the County of LA's Health Dept. stating that the use of this chemical caused the risk of severe injury or death to a million people in the region. Despite the dire need for regulation, one reason given by the industry opposing the regulation was space constraints at the Valero Wilmington refinery: "Of particular note, available plot space adjacent to the existing HF alkylation unit was identified as a key criteria for success; ***as the District is well aware, such plot space does not exist at the Wilmington Refinery***."[15]

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[10] "The affected refineries were built 50 to over 100 years ago and while equipment has changed over the years, most of the equipment affected by the rule is old and **the spacing configuration of the sites are dense**. Thus, to install pollution control requires creative engineering and design to accommodate the space necessary and perform properly. Some projects currently taking place involve building vertically requiring deep earth pylons to support the structure housing the control technology or constructing complex ducting to house the SCR catalyst beds that stretch long distances horizontally away from the basic equipment", p. 2-19; "Replacing conventional burners with LNB or ULNB often requires special attention because of the flame dimensions and limited space within a refinery process heater," p. A-6; Refinery stakeholders immediately raised the concern that staff did not consider space availability and constraints for this type of design. Refineries cannot accommodate a second SCR reactor which makes the alternative pathway not technically feasible, p. B-20.

[11] p. 2-47.

[12] "Despite the space limitations, some facilities have devised several workarounds such as vertical SCR orientation, running ductwork over existing roadways, and replacement of air heaters with SCR reactors. In addition, FERCo also identified that the locations or sites for SCR installations may hold many unknowns such as electrical capacity for the SCR and uncertainties that can complicate foundation work such as underground pipes," p. 2-47.

[13] p. 2-36.

[14] p. 2-36.

[15] Valero letter to AQMD, Sept. 18, 2017 to Susan Nakamura, South Coast Air Quality Management District, In response to August 23 PR1410 Working Group Meeting, p. 2, available at: https://www.aqmd.gov/docs/default-

Especially after the adoption and planning of broad application of SCR (Selective Catalytic Reduction) controls for NOx, oil refinery real estate will be even more constrained. The record in these proceedings illustrates the foolishness of assuming that additional end of pipe emissions controls are a feasible choice even with regard to a well-established technology, unlike CCS, which does not exist at California refineries.

IV. Oil and chemical plant risk assessment literature states that increasing oil refinery density also increases dangers during fires and explosions.

Oil and chemical industry risk management literature also identifies the need to maintain adequate space for safety at oil refineries (which already regularly have major explosions and fires). For example, an analysis called *Oil and Chemical Plant Layout and Spacing* found:

> **Loss experience clearly shows that fires or explosions in congested areas of oil and chemical plants can result in extensive losses.** Wherever explosion or fire hazards exist, proper plant layout and adequate spacing between hazards are essential to loss prevention and control. Layout relates to the relative position of equipment or units within a given site. Spacing pertains to minimum distances between units or equipment. [16]

While this analysis identified many specific hazards, it recommended performing detailed site by site risk analysis, and identified general comments about access between process units. We have excerpted some recommendations to illustrate the complexity of the safety issues, but also request that CARB and modelers consider the entire document and its implications for realistic assessment of added CCS at oil refineries. Importantly, the final recommendation on this list, which was highlighted in bold by the authors, stated: "**Do not consider the clear area between units as a future area for process expansion."**

> Provide access roadways between blocks to allow each section of the plant to be accessible from at least two directions.
>
> > • Avoid dead end roads. • Size road widths and clearances to handle large moving equipment and emergency vehicles or to a minimum of 28 ft (8.5 m), whichever is greater.
> >
> > • Maintain sufficient overhead and lateral clearances for trucks and cranes to avoid hitting piping racks, pipe ways, tanks or hydrants.
> >
> > • Do not expose roads to fire from drainage ditches and pipeways.

source/rule-book/Proposed-Rules/1410/1410-comment-letters/valero-2017-09-18-working-group-meeting-5.pdf?sfvrsn=6

[16] Property Risk Consulting Guidelines, A Publication of AXA XL Risk Consulting, PRC.2.5.2, Copyright 2020, AXA XL Risk Consulting, available at: https://axaxl.com/prc-guidelines/-/media/axaxl/files/pdfs/prc-guidelines/prc-2/prc252oilandchemicalplantlayoutandspacingv1.pdf?sc_lang=en&hash=996EA28071174510C4DA5D35102A9222

> • Slightly elevate roads in areas subject to local flooding. • Locate hydrants and monitors along roads to allow easy hook-up of firefighting trucks.
>
> • Provide at least two entrances to the plant for emergency vehicles to prevent the possibility of vehicles being blocked during an incident, e.g., open bridge, railway.
>
> • Plan and implement a "Roadway Closure" permit system authorized and controlled by site Emergency Response personnel as part of the site impairment handling system.
>
> Provide spacing between units based upon the greater of either Table 1 or a hazard assessment. The space between battery limits of adjoining units should be kept clear and open.
>
> **Do not consider the clear area between units as a future area for process expansion.**

Thus, increases in hazards at oil refineries through broad application of CCS at the hundreds of combustion units at oil refineries represents a *new* safety hazard, increasing the risk for workers and neighbors.

V. CARB Should Request New Modeling to Reflect a 2045 Phasedown Target Without CCS to Support a Commitment to a Statewide Plan to Manage Refinery Phasedown.

Ultimately, we urge CARB to begin crafting new modeling assumptions for the refining sector. We support the EJAC recommendation to model a 2045 phaseout date *without* the use of CCS. Currently, the initial modeling results are rife with cognitive dissonance between phasing out fossil fuel transportation while allowing oil refineries to continue operating in disproportionately pollution burdened communities of color.

California must lead by choosing modeling inputs that reflect the values of environmental justice *and* which will succeed in truly addressing impending climate disaster. Fossil fuel corporations repeatedly and regularly state to investors their intentions to *expand export*s of transportation fuels produced at California oil refineries (including gasoline, diesel, etc.), to add emissions during a climate crisis. Exporting outside of California over the Pacific Rim, prolonging the life of otherwise stranded assets which carry multi-billion dollar clean up liabilities, leaves California environmental justice communities holding the bag of continued harmful toxic emissions and eventual remediation liabilities or workers' pension losses at the point of bankruptcy. For a just and equitable transition, CARB must sound the alarm on the need for a fossil fuel worker and community safety net and commit to develop a plan by 2024 to manage the decline and coordinate the phasedown of California oil refineries by 2045. As the EJAC recommendations discussed and the comments above reflect, the oil refineries are enormously complex and require thoughtful and rigorous planning now.

We appreciate the hard work involved in this modeling, including the many valid assumptions and results that do appear. However, the public, both community-based organizations and corporations alike, need transparent access to the assumptions used and to understand which parts are unchangeable technical matters and which are a matter of policy choice.

We look forward to the background documentation so we can more fully comment in the future.

Sincerely;

Julia May, Senior Scientist, CBE Connie Cho, Associate Attorney, CBE

Kiran Chawla, JD/PhD Candidate, ’24,
Stanford Environmental Law Pro Bono Project

Appendix B

Resilience Hubs

The CARE Program sees the climate crisis through an environmental justice lens. We support community-led organizing to develop community resilience and climate solutions such as resilience hubs. Resilience hubs provide year-round support and resources during climate events, emergency response, and create space for frontline residents to gather and practice self-determination. Through community surveying in Wilmington, we identified a few priorities necessary to create resilience hubs, described below:

COMMUNITIES FOR A BETTER ENVIRONMENT
established 1978

Solar panels absorb sunlight and create electricity. Connecting these panels to a solar battery charges the battery. During a power outage, the charged battery can power outlets for phone charging, lights, air filtration, refrigerators, and much more.

Air conditioning and air filtration helps save lives during extreme heat, wildfire season, or during poor air quality days.
Preference was expressed for expanded hours (8 am - 9 pm). Creating an overnight plan would allow the use of the center during an emergency.

Culturally conscious, multi-lingual, holistic health trained staff are vital to Resilience Hubs to provide support and materials like food, water, and emergency kits- which are necessary for daily life and emergency preparedness

A community garden can provide green space, increase access to local nutritional foods and build relationships.

The impacts from environmental injustice and climate change have disproportionately impacted communities living next to heavy industry. As we build healthy and resilient communities, we must uplift environmental justice and community-led solutions to deliver transformative solutions to respond to the climate crisis.

During our surveying, we asked Wilmington community members what they were most concerned about (see "Top 10 Concerns"). The following resources were requested by frontline residents to combat the worsening climate crisis:

Top 10 Concerns:

- Earthquakes
- Refinery Flaring
- Air Pollution
- Extreme Heat
- Wildfires
- Water + Food Insecurity
- Oil Drilling
- Drought
- Tsunami
- Power Outage

Counseling, Legal/Financial Resources & Support

Food, Water & Refrigeration

Emergency/First Aid Kits, Fire Prevention & Earthquake Response Materials

Phone Charging

Is there anything missing that you would like to see?

ENTER

Tutoring, Health & Youth Support Services

Hub Within Walking Distance, Complimentary Transportation & EV Charging Stations

Cultural, Art & Organizing Activities

Communities for a Better Environment (CBE) is a statewide environmental justice organization. Our mission is to build people's power in California's communities of color and low-income communities to achieve environmental health and justice by preventing and reducing pollution while building a Just Transition towards healthy neighborhoods.

Infographic provided by the Climate Adaptation and Resiliency Enhancement (CARE) Program

Get Involved!

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Appendix C

March 23, 2023

Governor Gavin Newsom
1021 O Street, Suite 9000
Sacramento, CA 95814

Senate President pro Tempore Toni Atkins
1021 O Street, Suite 8518
Sacramento, CA 95814

Speaker Anthony Rendon
1021 O Street, Suite 8330
Sacramento, CA 95814

Re: Environmental justice and environmental principles regarding the buildout of hydrogen in California

Dear Governor Newsom, Pro Tem Atkins, and Speaker Rendon,

On behalf of the undersigned organizations, we respectfully raise vital concerns, considerations, and principles on the buildout of hydrogen in California and its use as part of the state's pathway to decarbonization. Without proper guardrails, hydrogen production threatens to increase climate pollution and make it harder to reach California's ambitious climate goals. Hydrogen could have potential benefits in the fight against climate change, but it is critical to understand its limitations. Before California moves to rely heavily on hydrogen to meet its climate goals, it is essential to understand how and where hydrogen is produced, stored, delivered, and used. Even green hydrogen can itself have short-term climate warming impacts and cause harm to local communities if implemented poorly and without stringent safeguards.

We are diverse groups that agree on bedrock principles for the limited role of hydrogen in meeting California's climate and air quality goals; even this letter cannot capture each group's complete perspective on hydrogen policy. As California considers the role of hydrogen in our decarbonized future, we urge you to enact measures that will:

1. Ensure that any hydrogen used or produced in California is produced via electrolysis through clean and renewable sources and prohibit hydrogen produced with fossil fuels or other polluting feedstocks and processes;
2. Ensure robust monitoring, prevention, and enforcement against leaks in hydrogen infrastructure;
3. Discourage the use of hydrogen for end uses better served by electrification, such as light duty transportation and providing space and water heating in homes and businesses;
4. Avoid blending hydrogen into existing pipelines and minimize other forms of hydrogen transportation;
5. Ensure community engagement from design to completion of any hydrogen project.

1) Hydrogen produced with fossil fuels or other polluting feedstocks and processes is not a climate solution and cannot be used for hydrogen production in California.

Currently, California's supply of hydrogen comes almost entirely from fossil fuels and is produced through a process that emits health-harming pollution in the communities on the fencelines of the state's oil refineries. Hydrogen production by any means other than clean, renewable-powered electrolysis only entrenches the continued use of fossil fuels, plastics, and biogas, even when paired with carbon capture and sequestration (CCS) technology. Methane leakage from producing hydrogen using natural gas and CCS technologies is of significant concern; the climate effects of methane leakage are often underestimated in hydrogen assessments,[1] and methane is a powerful greenhouse gas with high global warming potential. The level of climate harm only increases if there is embedded carbon in the lifecycle analysis of

[1] Ilissa B. Ocko and Steven P. Hamburg, Climate consequences of hydrogen emissions, Atmospheric Chemistry and Physics (July 2022). https://acp.copernicus.org/articles/22/9349/2022/acp-22-9349-2022.pdf

hydrogen. Biogas feedstocks, including dairy biogas, must be excluded from all hydrogen production.

The exclusion of hydrogen produced through polluting industrial processes is also a public health imperative. Carbon dioxide is not the only important pollutant produced through the hydrogen generation process, especially when not produced with renewable energy. Currently, petrochemical companies rely on the steam reformation of fossil gas to produce nearly all of California's hydrogen supply. Steam methane reformation emits health-harming pollution such as nitrogen oxides, fine particulate matter, and carbon monoxide and these facilities are primarily located in disadvantaged communities on the fencelines of California's oil refineries. Policymakers must guard against a build-out of steam methane reformation infrastructure or other hydrogen production equipment that would exacerbate California's air quality crisis.

2) Any hydrogen project must consider the environmental impact of hydrogen including the climate warming impact of leaks and water resource demands.

Hydrogen is not inherently a net benefit for the climate – even when it is produced through electrolysis. Hydrogen itself is an indirect greenhouse gas.[2] While it doesn't trap heat, hydrogen, through a series of chemical reactions, increases the concentration of other greenhouse gases like methane that accelerate the rate of warming. This means that hydrogen itself has a short-lived but powerful impact on the climate, even when produced with renewable energy-powered electrolysis.

Hydrogen is also a very small and slippery molecule and leaks easily into the atmosphere.[3] Any rapid expansion of hydrogen infrastructure (pipelines, storage tanks, etc.) would increase the opportunity for hydrogen to leak.

Because of the inherent climate risk posed by hydrogen use, California's approach must include robust leak detection and monitoring to prevent or swiftly repair leaks of any size. There is emerging consensus among the scientific community on hydrogen's warming impact as a powerful short-lived indirect greenhouse gas; it is a highly potent gas given its indirect impacts as previously discussed. Its potency also changes over different time horizons; it is more powerful over a 20-year period than a 100-year period, but the short-term effects are not typically measured in assessments. When monitoring leakage, hydrogen's impact should be measured both in the short and long term. Minimizing or eliminating hydrogen leakage is absolutely critical to the success of hydrogen as part of the solution to climate change.

[2] D. Ehhalt and M. Prather, et al, Atmospheric Chemistry and Greenhouse Gases: Intergovernmental Panel on Climate Change (2018). https://www.ipcc.ch/site/assets/uploads/2018/03/TAR-04.pdf
[3] Shanti Menon, Everyone's excited about this new climate solution, but it could create a new climate problem, Environmental Defense Fund (July 2022). https://www.edf.org/article/we-need-talk-about-hydrogen

Furthermore, hydrogen projects must account for the full climate impact of upstream emissions as well as of the hydrogen itself as an indirect, short-lived greenhouse gas. To that end, hydrogen use must include a full lifecycle analysis of emissions associated with its production, transportation, storage, and use.

Production of hydrogen through electrolysis also requires water, though it is not as water-intensive as the steam methane reformation process that industry uses to produce hydrogen today.[4] As California grows its renewable hydrogen sector, consideration of water resource demands must be taken into consideration.

3) Hydrogen should only be used in limited, hard-to-electrify sectors; not sectors that could decarbonize more efficiently through electrification.

Given the risks of a rapid, large-scale buildout of hydrogen production, including its climate warming potential, California should only encourage the use of hydrogen, if at all, for hard-to-decarbonize sectors such as steel, plate glass, cement manufacturing, or as an alternative fuel for maritime shipping, aviation, and long-haul heavy-duty trucking.

Given its relative energy intensity, even green hydrogen risks squandering renewable energy if it is used in end uses that could more efficiently be directly electrified, like the vast majority of road-transportation, cargo-handling equipment, and residential and commercial space heating needs, as well as a large share of industrial heating needs. Moreover, it would be inappropriate to burn hydrogen in residential and commercial buildings or in industrial heating applications that have electric alternatives because hydrogen combustion emits lung-damaging pollution.[5] California should avoid promoting hydrogen use of any kind in these end uses.

Hydrogen is not efficient or well-suited to all sectors, and should not be used as a catch-all decarbonization solution or to delay electrification. Analysis from the Environmental Defense Fund shows that using green hydrogen in passenger vehicles would require much greater quantities of renewable energy – perhaps as much as 2 to 5 times as much renewable energy – than direct electrification of light duty transportation.[6] An even more significant “energy penalty” emerges in the use of hydrogen for home heating; it is far more efficient to use renewable energy to electrify passenger vehicles and heat homes than to use renewable energy to produce hydrogen.

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[4] Andi Mehmeti et al, Life Cycle Assessment and Water Footprint of Hydrogen Production Methods: From Conventional to Emerging Technologies, Environments (February 2018). https://www.mdpi.com/2076-3298/5/2/24

[5] Sara Baldwin, et al, Assessing the Viability of Hydrogen Proposals: Considerations for State Utility Regulators and Policymakers, Energy Innovation (March 2022) pg 9, https://energyinnovation.org/wp-content/uploads/2022/03/Assessing-the-Viability-of-Hydrogen-Proposals.pdf.

[6] Eriko Shrestha and Tianyi Sun, Rule #1 of deploying hydrogen: electrify first, Environmental Defense Fund (January 2023). https://blogs.edf.org/energyexchange/2023/01/30/rule-1-of-deploying-hydrogen-electrify-first/

A widespread transition to electrification is also necessary to address California's air quality crisis, whereas using equipment that burns hydrogen could worsen air quality. In some hard-to-decarbonize sectors such as steel manufacturing or maritime shipping, renewables-based hydrogen could play a valuable role in decarbonization. But in many other sectors, direct electrification is a much safer and more energy efficient route. Therefore, hydrogen should be considered a last resort, not a silver bullet. Furthermore, as is discussed in more detail in following sections, transportation of hydrogen and proposed blending of hydrogen in existing pipelines pose significant leakage risks, further limiting hydrogen's potential use for sectors beyond those mentioned here.

4) California should only use hydrogen produced via electrolysis through renewable sources.

Within the specific sectors that are best suited for hydrogen use, it is crucial that the only hydrogen used is produced via renewable-powered electrolysis. Strict standards for hydrogen production are essential because emissions-intensive hydrogen production technologies could worsen the climate crisis and harm public health in California's most vulnerable communities. Hydrogen is not an inherently 'climate-neutral' source of energy; its effects on the climate, positive or negative, depend on where and how it is produced.

Renewable electrolytic hydrogen production must meet certain standards to ensure it actually delivers climate and public health benefits. First, any renewable hydrogen developed must simultaneously build out renewable sources in tandem to support them. This is necessary to prevent the problem of "resource shuffling," in which the increased demand on renewable energy resources results in pushing demand back to fossil fuel resources.[7] By building out renewable energy sources in tandem with renewable hydrogen projects, California can ensure that its renewable energy generation capacity is expanded and that the renewable hydrogen industry is supported with a stable and renewable power supply.

The threat of increased pollution is particularly acute when hydrogen producers use electricity from the grid. A hydrogen producer that relies on grid electricity cannot meaningfully claim to use renewable power unless it meets the following conditions: (1) it must support additional renewable electricity on the grid (i.e., renewable electricity that would not have existed on the grid but for the electrolyzer's demand), (2) the renewable electricity must be deliverable to the same balancing authority where the electrolyzer is located, (3) the producer must use the renewable electricity in the same hour that it's delivered onto the grid, and (4) it retires all renewable energy credits (RECs) associated with this electricity. Without all of these guardrails, fossil-fuel power generators will likely ramp up and spew more health-harming pollution into neighboring communities to serve hydrogen producers. About half of the state's gas-fired power plants are located in CalEnviroScreen defined disadvantaged communities. Furthermore,

[7] Sasan Saadat and Sara Gersen, Reclaiming Hydrogen for a Renewable Future: Distinguishing Oil & Gas Industry Spin from Zero-Emissions Solutions, Earthjustice (August 2021). https://earthjustice.org/wp-content/uploads/hydrogen_earthjustice_2021.pdf

hydrogen produced from average grid electricity is even more carbon intensive than both incumbent gray hydrogen and fossil fuels like diesel.[8]

5) Hydrogen should not be blended in existing natural gas pipelines and co-location of production and end use should be prioritized.

Because hydrogen leaks easily, one key strategy to avoid any amount of leakage is to move it around as little as possible. Transporting hydrogen increases leakage risk whether by rail, truck, or pipeline. To the extent possible, hydrogen should be produced near the few appropriate end uses to minimize leakage.

Blending hydrogen into existing natural gas pipelines presents significant safety concerns and requires a massive investment in infrastructure to ensure compatibility and integrity. Studies have shown that hydrogen blends up to 20% offer only marginal climate benefits, even without considering the risk of leakage, and could potentially compromise the safety of pipelines made of steel or polymeric materials.[9] The Hydrogen Blending Impacts Study that the University of California, Riverside performed for the California Public Utilities Commission did not identify a level of hydrogen blending that would not jeopardize safety and reliability.[10] The compatibility of end-use appliances, such as cooktop burners and heating furnaces, is also a concern. Building infrastructure to support hydrogen blending would require a significant investment in retrofitting existing natural gas pipelines and ensuring their safety, making it a challenging and expensive proposition. Policymakers must focus on ending reliance on the gas distribution system through rapid and widespread electrification because rapid electrification will advance both climate and air quality goals, whereas injecting hydrogen into the gas distribution system threatens to increase health-harming air pollution.

6) Community engagement is imperative from the start of project development through to project completion.

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[8] According to data CARB has compiled for the Low Carbon Fuel Standard program, hydrogen produced through the electrolysis of California's grid-average electricity has a carbon intensity of 164.46 gCO2e/MJ, far higher than diesel's carbon intensity of 100.45 gCO2e/MJ. CARB, Table 7-1. Lookup Table for Gasoline and Diesel and Fuels that Substitute for Gasoline and Diesel, https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/ca-greet/lut.pdf?_ga=2.69927632.1369297514.1670526688-1354554675.1652381457.

[9] Jochen Bard, The Limitations of Hydrogen Blending in the European Gas Grid: A study on the use, limitations and cost of hydrogen blending in the European gas grid at the transport and distribution level, Fraunhofer Institute for Energy Economics and Energy System Technology (January 2022). https://www.iee.fraunhofer.de/content/dam/iee/energiesystemtechnik/en/documents/Studies-Reports/FINAL_FraunhoferIEE_ShortStudy_H2_Blending_EU_ECF_Jan22.pdf

[10] Arun SK Raju and Alfredo Martinez-Morales, Hydrogen Blending Impacts Study, University of California at Riverside, (July 2022). https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M493/K760/493760600.PDF

Community engagement and consent are critical components of any process to build out clean energy, and any hydrogen buildout must prioritize early and robust local engagement with communities. We should not repeat the top-down model of decision making that has created environmental injustice, which unfortunately we are experiencing on the ground today with proposed hydrogen projects. Local needs and concerns such as the community selection for projects and the localized impacts of pipelines cannot be overlooked by companies working in this space.

Furthermore, California must ensure that the production of hydrogen does not replicate the extractive cycles of the fossil fuel industry by continuing to pollute Environmental Justice (EJ) communities. It is critical to acknowledge the disproportionate impacts of pollution and environmental harm on EJ communities, and any investment in the renewable hydrogen industry must ensure that these communities are not further burdened with pollution or negative health outcomes. California must prioritize equity and justice in its approach to the renewable hydrogen industry and ensure that it does not perpetuate environmental harm in already overburdened communities.

As the renewable hydrogen industry is in its infancy, California has an opportunity to ensure that the accelerating investment in hydrogen projects yields the climate benefits being sought in the near term, and thereby avoid needing to make major retrofits down the road or even abandon large capital investments that do not turn out to be climate solutions. Hydrogen must only be produced using renewable energy, and should only be applied for hard-to-decarbonize end uses while prioritizing the co-location of production and end use to minimize transportation.

Thank you for your consideration of these issues. We are happy to discuss these concerns further.

Sincerely,

Melissa Romero
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Senator Ben Allen
Senator Josh Becker
Senator Steven Bradford
Senator Lena Gonzalez
Senator Dave Min
Assembly Member Steve Bennett
Assembly Member Laura Friedman
Assembly Member Eduardo Garcia
Assembly Member Luz Rivas

2.3.2.8 Letter O8: Communities for a Better Environment

This letter provides input on the Revised Draft 2045 CAP as well as CEQA comments on the Recirculated Draft PEIR. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4, *Comments on the Revised Draft 2045 CAP*, in Chapter 1, *Introduction*. PEIR-focused comments are addressed below.

O8-1 The County intends to continue engaging with frontline communities to ensure equitable implementation and correction of environmental injustices. An equity approach is outlined in Figure 1-3 which starts with frontline communities. (Revised Draft 2045 CAP, p. 1-16.) An equitable implementation process is further expanded upon in Chapter 4 of the Revised Draft 2045 CAP. (Revised Draft 2045 CAP, p. 4-2.) To address implementation of the Revised Draft 2045 CAP strategies, measures, and actions in an equitable manner, the County identified applicable guiding principles from the Los Angeles County Draft Racial Equity Strategic Plan to assist with the equitable distribution of benefits and resources across all segments of a community. (Revised Draft 2045 CAP, Appendix H, p. H-17.)

O8-2 The County's Office of Oil and Gas will continue to partner with the state on local oil well phase out. The Just Transition Task Force issued a report in December 2022 containing 19 specific strategies that create a pathway for workers in oil drilling to find new employment as the County and City of Los Angeles phase out oil extraction in Los Angeles.

O8-3 An amortization study is underway to determine the fastest possible phase-out timeline for all existing oil wells and production facilities. This study will consider the legal, environmental, political, and cost considerations of the phase out. The performance objective does not dictate the amortization rate; however, the amortization study may influence future adjustments to the performance objectives, such as whether the performance objective should be accelerated, as suggested by the comment. As such, the performance objective has been modified to include a note to adjust the performance objective to reflect the results from the amortization study. The note reads, "**The performance objective provided here serves as a general metric and may be refined upon completion of the Oil Well Amortization Study.*" (Revised Draft 2045 CAP, p. 3-19.)

O8-4 The Oil Well Ordinance outlines specific decommissioning steps and timeframes for those actions. A schedule for compliance will be required and allows for enforcement action to be taken should compliance not be met. The amortization study will further inform the phase out process.

O8-5 All oil wells will need to be plugged, abandoned, and the site restored consistent with the California Geologic Energy Management Division requirements.

O8-6 Carbon capture and sequestration are discussed in the Revised Draft 2045 CAP as a potential strategy to offset all remaining residual emissions that would exist in 2045 to meet the aspirational goal of carbon neutrality if the residual emissions cannot be eliminated through new regulations or technologies. SB 905 requires CARB to create the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate carbon capture, utilization, or storage, and CO_2 removal projects and technology. Results from SB 905 will inform any future County efforts, which could support the County's aspirations to achieve carbon neutrality. The Revised Draft 2045 CAP Action ES1.3 dictates the County would develop a carbon removal strategy, including direct air capture and carbon capture and sequestration. (Revised Draft 2045 CAP, p. 3-19.) Any future projects related to Action ES1.3 would be subject to CEQA review, including impact analysis and mitigation measures to reduce any significant impacts.

O8-7 Regarding the comment's concern about the potential for costs associated with energy retrofits completed by landlords to be passed onto tenants, Chapter 1 of the Revised Draft 2045 CAP discusses the equity approach to confront the barriers that frontline communities encounter in terms of traditional public investment and support pathways toward equitable and transformative implementation of climate strategies. (Revised Draft 2045 CAP, p. 4-2.) The Revised Draft 2045 CAP discusses the challenges frontline communities face accessing incentives for energy retrofit initiatives and the County's priority to provide a grant program in place of the traditional rebate programs for frontline communities. (Revised Draft 2045 CAP, p. 1-19.) A grant program to fund energy retrofits will allow frontline communities to take advantage of the benefits from the beginning of the process. The grant program can also include services, labor, and supplies provided by the County. The goal is to support bringing the benefits of decarbonization to frontline communities without burdening vulnerable people with upfront costs. Further, the County is working to strengthen rent stabilization ordinances to limit the annual rent increases for covered units and address gaps in tenant protections for non-rent-stabilized units, enforcement of anti-harassment provisions, relocation assistance, and other emerging issues. Housing affordability remains in the forefront of the transition to a decarbonized built environment and as such the County will assess anti-displacement measures such as the rent stabilization ordinance where public funds are utilized for decarbonization retrofits.

O8-8 Partnerships with community-based organizations have been effective in engaging many communities and the County will continue to pursue these partnerships to address community needs.

O8-9 to O8-13 These comments on the Revised Draft 2045 CAP does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O8-14 The County endeavors to transition all forms of public transportation to zero-emission technologies and will be working with LA Metro and other transportation providers to achieve this goal. Revised Draft 2045 CAP Action T4.10 includes collaborating with Metro to ensure that all new forms of public transportation (e.g., new bus lines, new light rail service) are low- or zero-emission, as the commenter states.

LA Metro already has plans to electrify its entire bus fleet by 2030.[25] In addition, CARB's Innovative Clean Transit program requires that all public transit agencies must gradually transition to a 100 percent zero-emission bus fleet by 2040. By 2026, 50 percent of large and 25 percent of small transit agencies' new bus purchases must be zero-emission buses. By 2029, 100 percent of large and small transit agencies' new bus purchases must be zero-emission buses.[26] All of this will contribute to the zero-emission public transit future that the commenter strives for.

Regarding the use of alternative fuels such as green hydrogen, biomethane, and biogas, Measure T6.7 aims to increase the use of green hydrogen vehicles and use biomethane and biogas created from organic waste as a "bridge fuel" to achieve 100 percent green hydrogen and electric vehicles. This is an interim step to reduce GHG emissions as much as possible before the entire public transit fleet can fully electrify. Electrification is the Revised Draft 2045 CAP's ultimate goal, but the County acknowledges the technological, practical, and financial limitations of an immediate shift to all-electric heavy-duty vehicles.

Measure T7, Electrify County Fleet Vehicles, aims to electrify the County bus and shuttle vehicle fleets by 2035 and increase the fleetwide percentage of light-duty vehicles in the County-owned fleet that are ZEVs to 35 percent by 2030, 60 percent by 2035, and 100 percent by 2045. The County agrees with the commenter and has already started implementation of converting the County's fleet including bus and shuttles to electric vehicles.

Regarding the comment's claim that the use of low-emission, biomethane, and biogas technologies are not ambitious enough technologies to reach the Revised Draft 2045 CAP's target goals, as explained in Revised Draft 2045 CAP Chapter 3, the Revised Draft 2045 CAP's GHG emission reduction targets for 2030, 2035, and 2045 are indeed achieved through the quantified measures, including those in the transportation sector such as Measure T4 (Broaden Options for Transit, Active Transportation, and Alternative Modes of Transportation), T6 (Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales), and T7 (Electrify County Fleet Vehicles), contrary to the commenter's claims (Revised Draft 2045 CAP p. 3-4).

[25] LA Metro, 2023. Moving Beyond Sustainability. November 2022. https://www.metro.net/about/plans/moving-beyond-sustainability/. Accessed July 2023.

[26] California Air Resources Board, 2022. Innovative Clean Transit – About. https://ww2.arb.ca.gov/our-work/programs/innovative-clean-transit/about. Accessed July 2023.

The comment also claims that the use of low-emission, biomethane, and biogas technologies would exacerbate health impacts in environmental justice communities and delay the transition to an electric bus fleet, but provides no evidence to support this claim. Biomethane and biogas have a similar emissions profile to compressed natural gas (CNG), which has far fewer tailpipe emissions of criteria air pollutants and toxic air contaminants than gasoline and diesel fuel vehicles.[27, 28] In addition, the potential air quality health risk impacts associated with projects facilitated by Revised Draft 2045 CAP measures and actions are comprehensively evaluated in the Recirculated Draft PEIR (see Recirculated Draft PEIR Chapter 3.4, *Air Quality*).

O8-15 Revised Draft 2045 CAP Action T9.2 would identify types of ZEV equipment and green hydrogen equipment that are commercially available (e.g., forklifts, loaders, welders, saws, pumps, fixed cranes, air compressors, sweepers, aerial lifts, pressure washers) and require the use of these types of equipment on all new projects through an ordinance or conditions of approval. The commenter is correct that all or most of this equipment is commercially available as electric equipment. The County appreciates the commenter's reference to the Port of Long Beach, which has already been using such electric equipment. The County endeavors to follow a similar approach and prioritize electrification over the use of green hydrogen and other alternative fuels, reserving green hydrogen for sectors that cannot be electrified, following the commenter's recommendation. The County will be developing an ordinance to require the use of electric equipment like those listed in Action T9.2 for all new discretionary projects seeking County approval.

O8-16 The County appreciates the commenter's recommendation to prioritize electrification over alternative fuels and agrees that fueling sources such as including hydrogen, biomethane, biogas, and natural gas could delay electrification, and as such has prioritized electrification and included the use of such fuels only as a "bridge" to electrification (for example, see Revised Draft 2045 CAP Action T6.7 and response to comment O8-14 above). Actions T8.2 and T8.4 are intended to support the transition to zero-emission goods movement medium- and heavy-duty vehicles by encouraging such alternative fuels as bridge fuels.

The commenter also states that the use of such alternative fuels could potentially create health and environmental impacts for environmental justice communities but does not provide evidence to support this claim. As mentioned above in response to comment O8-15, biomethane and biogas have a similar emissions profile to CNG, which has far fewer tailpipe emissions of criteria air pollutants and toxic air contaminants than gasoline and diesel fuel vehicles. In addition, the potential air quality health risk impacts associated with future projects facilitated by Revised Draft

27 U.S. Department of Energy, 2023. Natural Gas Vehicle Emissions. https://afdc.energy.gov/vehicles/natural_gas_emissions.html/. Accessed July 2023.

28 California Air Resources Board, 2023. Alternative Fuels: Compressed Natural Gas (CNG). https://ww2.arb.ca.gov/our-work/programs/alternative-fuels/alternative-fuels-compressed-natural-gas-cng. Accessed July 2023.

2045 CAP measures and actions are comprehensively evaluated in the Recirculated Draft PEIR (see Recirculated Draft PEIR Chapter 3.4, *Air Quality*).

O8-17 In implementing Actions T8.2 and T8.4, as for other similar actions in the Revised Draft 2045 CAP, the County will perform all required due diligence, feasibility studies, public outreach, and CEQA review as required by County policy and state law. The County will take all the commenter's concerns about quality assurance, safety, training, and health impacts considerations into account before developing any permit streamlining options or ordinances.

O8-18 to O8-19 See Response O8-7 regarding the comment's concern about the potential for costs associated with energy retrofits completed by landlords to be passed onto tenants. Where landscaping is required as a part of a development project, native plants are required to be used. The forthcoming Urban Forest Management Plan identified in Measure A3 will focus on native plants as an opportunity to reduce GHG emissions along with reducing extreme heat conditions.

O8-20 Responding to the comment's opposition to the use of hydrogen in residential buildings, the Revised Draft 2045 CAP does not include any measure or action supporting the use of hydrogen in residential buildings. As stated by the comment, electrification of homes and buildings is the County's preferred approach. The County will be developing building decarbonization ordinances pursuant to Revised Draft 2045 CAP Measure E1 (Decarbonize Existing Buildings) and E2 (Decarbonize New Development).

To clarify this goal of the Revised Draft 2045 CAP and the intent of Measure E1, the County has revised sections of the Revised Draft 2045 CAP as follows:

> ***~~Transition~~ Decarbonize Existing Buildings ~~to All-Electric~~****: As the carbon intensity of grid-supplied energy decreases, decarbonization of the electrical grid must be combined with building ~~electrification~~ decarbonization, shifting the energy load from fossil ~~natural gas~~ fuels to ~~cleaner~~ carbon-free sources while taking into consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face. This measure aims to ~~electrify~~ decarbonize applicable existing buildings. A primary alternative to fossil natural gas is renewable electricity supplied by CPA. Biomethane is another preferred alternative to fossil natural gas; however, existing opportunities for widespread use of biomethane are currently limited. The use of other zero-emission fuel sources for buildings ~~should~~ will also be considered* (Revised Draft 2045 CAP, Chapter 3, p. 3-47)

These revisions do not result in changes to environmental impact analyses or conclusions presented in the Recirculated Draft PEIR, and therefore do not constitute significant new information that would trigger recirculation under CEQA Guidelines section 15088.5.

In response to the comment's claim that burning hydrogen in buildings would be "polluting," hydrogen is a clean-burning fuel with no criteria pollutant or toxic air contaminant emissions associated with combustion.[29, 30] The commenter does not provide support for the claim that burning hydrogen would cause air quality or health risk problems.

O8-21 The County will consider the comment's comprehensive fund recommendation should the County administer a program with County funding.

O8-22 The County will consider the comment's recommendation for technical and financial assistance to affordable housing entities should the County administer a program with County funding.

O8-23 Measure A3 addresses the commenter's concern. Measure A3 will focus tree planting on frontline communities with insufficient tree cover and green spaces, which would directly support such local communities, curb the urban heat island effect, and lead to energy efficiency. The Urban Forest Management Plan is currently under development and implements Action 3.1 to create and implement an equitable Urban Forest Management Plan that prioritizes: 1) tree- and parks-poor communities; 2) climate- and watershed-appropriate and drought/pest-resistant vegetation; 3) appropriate watering, maintenance, and disposal practices; 4) provision of shade; and 5) biodiversity. The Urban Forest Management Plan will help inform tree planting locations and prioritize tree- and parks-poor communities.

O8-24 The identification of core measures was based upon quantification of measures that addressed the highest GHG emitting sectors. This resulted in measures that target transportation, stationary energy, and waste. The County agrees with the comment that conserving and restoring forests, chaparral shrublands, and wetlands would have beneficial environmental effects, but does not choose to promote Strategy 9 as a core strategy. However, Strategy 9 is an important strategy to ensure the County remains on a path toward the 2045 aspirational goal of carbon neutrality.

O8-25 The County prioritizes native plants in new developments and will ensure the priority is carried into the Urban Forest Management Plan.

O8-26 Regarding the comment's opposition to the use of CEQA exemptions in the County's Green Zones Ordinance, the Revised Draft 2045 CAP meets the requirements of CEQA Guidelines section 15183.5(b), thereby allowing future projects to streamline their GHG impacts evaluation pursuant to CEQA Guidelines sections 15064.4 and 15183.5(b). This does not wholesale exempt discretionary projects from performing their own CEQA analysis but rather incentivizes projects to implement climate actions that have been analyzed to contribute to the County's GHG emission reductions,

[29] U.S. Department of Energy, 2022. Energy Efficiency and Renewable Energy, Alternative Fuels Data Center. Hydrogen Basics. https://www.energy.gov/eere/fuelcells/hydrogen-fuel-basics. Accessed July 2023.

[30] U.S. Environmental Protection Agency, 2023. A Glimpse into Hydrogen & Transportation. Last Updated February. https://www.epa.gov/greenvehicles/glimpse-hydrogen-transportation. Accessed July 2023.

thereby reducing the time and expense needed for individual environmental clearances for a project's GHG analysis. Please see General Response 3, which addresses the Revised Draft 2045 CAP processes applicable to various project applicants.

O8-27 See General Response 3, which addresses project-level requirements for CEQA streamlining as identified in the Checklist. See General Response 5, which addresses the obligation of the Revised Draft 2045 CAP to quantify GHG emission reductions for strategies, measures, and actions.

The County's Green Zone Program seeks to enhance public health and land use compatibility in communities that bear a disproportionate pollution burden. An environmental justice screening method tool was developed to identify stationary sources of pollution and analyze cumulative environmental impacts based on expert recommendations and information gathered from ground truthing activities. This tool is a foundation and resource to support analysis of cumulative effects from new uses that may include energy production and storage facilities and refineries.

O8-28 The County acknowledges the recommended prioritization of specified actions and believes the Revised Draft 2045 CAP generally aligns with these recommendations.

ENDANGERED HABITATS LEAGUE
DEDICATED TO ECOSYSTEM PROTECTION AND SUSTAINABLE LAND USE

April 11, 2023

Thuy Hua, Supervising Regional Planner
Los Angeles County Department of Regional Planning
320 West Temple Street, 13th Floor
Los Angeles, CA 90012
climate@planning.lacounty.gov

RE: Revised Draft 2045 Climate Action Plan (CAP)

Dear Ms. Hua:

Endangered Habitats League (EHL) appreciates the opportunity to comment on selected portion of the Revised Draft 2045 CAP.

Transportation strategies (p. 3-26)

A major component is Strategy 3: Reduce Single-Occupancy Vehicle Trips. However, isn't total VMT a better metric for carbon emissions? While some measures would be the same for both options, single-occupancy trips does not address trip length, long commutes, and sprawling land use patterns. One the other hand, total VMT does so. O9-1

Reducing driving distances by reducing remote new development – in addition to increasing housing opportunities near transit – should be added as a measure. This is important as our local transit system is declining in use, and locating housing nearby will not overcome the many barriers. To help implement this measure, project GHG emissions from automotive sources should require full mitigation. O9-2

In view of the declining use of traditional bus and rail transit, T4.1 is particularly important, and should be stressed for early implementation. O9-3

> T4.1—Expand and improve the frequency of service of unincorporated Los Angeles County shuttles and explore new mobility services, such as micro transit, autonomous delivery vehicles, micro mobility, and on-demand autonomous shuttles.

Strategy 9: Conserve and Connect Wildlands and Working Lands O9-4

• Measure A1: Conserve Forests, Woodlands, Shrublands, Grasslands, Desert, and Other Carbon-Sequestering Wildlands and Working Lands

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We appreciate the revised draft's greater targets for conservation of natural lands, which has many co-benefits to society. But unless these conserved lands are *newly* protected from development, they do not accomplish much beyond baseline. Suggest the following: O9-4 (cont.)

> New a~~A~~cres of wildland managed for wildfire risk reduction and carbon stock savings:
> • 10,000 acres by 2030
> • 20,000 acres by 2035
> • 50,000 acres by 2045

We continue to recommend further reductions in conversion of natural lands, whose protection now facilitated by the County's fire safety policies. O9-5

> Reduce the amount of natural land converted for urbanized uses:
> □ ~~25~~ 50% percent by 2030
> □ ~~50~~ 75% percent by 2035
> □ ~~75~~ 90% percent by 2045

MEASURE ES5: Establish GHG Requirements for New Development O9-6

Using the 2045 Climate Action Plan for CEQA Streamlining

Consistency Review Checklist (Appendix F)

EHL has *not* technically reviewed the adequacy of the Consistency Review Checklist (Appendix F) for General Plan-consistent projects to reduce GHG emissions in accord with 2045 targets. We do, however, object to use of 110 ADT as a threshold for screening out projects, as it does not account for trip length. Although recommended by CARB, particularly in unincorporated areas, more remote development will have significant emissions even if technically under 110 ADT.

Due to the well-documented problems, we again *concur* with the Checklist provision that, "Carbon offset credits are not permitted to be used as alternative project emissions reduction measures."

We also agree that an Offsite GHG Reduction Program (Offsite Program, ES5.4) that involves *local* emissions reductions would be appropriate if, as described in the Checklist, it meets various strict criteria (enforceability, additionality, etc.). However, there is a lack of clarity that a precondition for use of the Offsite Program is that *on-site* Checklist measures or *on-site* alternative/additional measures (Alternative Project Emissions Reduction Measures and Additional GHG Reductions) are *both* infeasible. The language in the draft – "in tandem" – is imprecise on these relationships ("This program O9-7

would be used in tandem with the 2045 CAP Consistency Checklist for projects that propose GHG emissions reduction measures as alternatives to those identified in Table F-1 of the 2045 CAP Consistency Checklist, or that propose to include additional GHG emissions reduction measures beyond those described in Table F-1."). Clarification of the sequencing involved would be helpful, so that Checklist and Alternative and Additional measures are exhausted prior to turning to the Offsite Program.

O9-7 (cont.)

There is also a proposed Carbon Offsets/Credits Feasibility Study, to prepare for the contingency of not meeting 2045 targets. While this is a reasonable precaution, remote carbon offsets are problematic for many reasons. There should be early identification of incipient target failure through monitoring. If called for, the *first steps* should be adjustment of, and additions to, the 2045 CAP measures.

O9-8

We have questions and concerns over how General Plan amendments (GPAs) relate to the Checklist and over *ES5.3—Evaluate a program for reducing GHG emissions for new developments that require General Plan amendments*. Theoretically, GPA proposals could be beneficial for GHG emissions, or, like leapfrog sprawl development, could be very harmful. But in order to enact the best *overall* planning, the General Plan should be amended *comprehensively*, as part of a County-wide or Community Plan update process. *Piecemeal GPAs should be discouraged.*

O9-9

The CEQA streamlining offered by Checklist compliance should remain as an incentive to build out the existing General Plan. While there is always a right to propose a GPA, the applicant cannot not rely on Checklist compliance for its GHG analysis. According to Appendix F, GPAs are by definition outside the scope of the Checklist:

> The growth projections outlined in the General Plan's Land Use Element were used in the 2045 CAP to estimate unincorporated Los Angeles County's future emissions. Therefore, projects can use the 2045 CAP Checklist if they are consistent with the Land Use Element.

Proposed GPAs must undertake *de novo* GHG impact analyses in Environmental Impact Reports.

O9-10

There is, however, ambiguity in the document as to the use of the Checklist. Besides for General Plan-consistent projects, there is a second use, that is, "for projects required or electing to prepare project-specific CEQA GHG analyses, to demonstrate that all feasible applicable checklist measures or alternative project emissions reduction measures have nevertheless been implemented, either as project features or as GHG mitigation measures." Does this second use of the Checklist apply *solely* to General Plan-consistent projects which, for one reason or another, are doing project-specific CEQA review, or is it *also* for use by GPAs in project-specific CEQA GHG analyses? If the latter, what is the purpose of ES5.3?

Thank you for your commitment to climate action and for considering our comments.

O9-10
(cont.)

Yours truly,

Dan Silver
Executive Director

June 30, 2023

Thuy Hua, Supervising Regional Planner
Los Angeles County Department of Regional Planning
320 West Temple Street, 13th Floor
Los Angeles, CA 90012
climate@planning.lacounty.gov

RE: Revised Draft 2045 Climate Action Plan (CAP) - *Corrected*

Dear Ms. Hua:

Endangered Habitats League (EHL) appreciates the opportunity to comment on selected portion of the Revised Draft 2045 CAP. *In the record for this project, please replace our original comment letter of April 11, 2023 with this corrected version.*

O9-11

Transportation strategies (p. 3-26)

A major component is Strategy 3: Reduce Single-Occupancy Vehicle Trips. However, isn't total VMT a better metric for carbon emissions? While some measures would be the same for both options, single-occupancy trips does not address trip length, long commutes, and sprawling land use patterns. One the other hand, total VMT does so.

Reducing driving distances by reducing remote new development – in addition to increasing housing opportunities near transit – should be added as a measure. This is important as our local transit system is declining in use, and locating housing nearby will not overcome the many barriers. To help implement this measure, project GHG emissions from automotive sources should require full mitigation.

In view of the declining use of traditional bus and rail transit, T4.1 is particularly important, and should be stressed for early implementation.

> T4.1—Expand and improve the frequency of service of unincorporated Los Angeles County shuttles and explore new mobility services, such as micro transit, autonomous delivery vehicles, micro mobility, and on-demand autonomous shuttles.

Strategy 9: Conserve and Connect Wildlands and Working Lands

• Measure A1: Conserve Forests, Woodlands, Shrublands, Grasslands, Desert, and Other Carbon-Sequestering Wildlands and Working Lands

We appreciate the revised draft's greater targets for conservation of natural lands, which has many co-benefits to society. But unless these conserved lands are *newly* protected from development, they do not accomplish much beyond baseline. Suggest the following:

> New a~~A~~cres of wildland managed for wildfire risk reduction and carbon stock savings:
> • 10,000 acres by 2030
> • 20,000 acres by 2035
> • 50,000 acres by 2045

We continue to recommend further reductions in conversion of natural lands, whose protection now facilitated by the County's fire safety policies.

> Reduce the amount of natural land converted for urbanized uses:
> □ ~~25~~ 50% percent by 2030
> □ ~~50~~ 75% percent by 2035
> □ ~~75~~ 90% percent by 2045

O9-11 (cont.)

MEASURE ES5: Establish GHG Requirements for New Development

Using the 2045 Climate Action Plan for CEQA Streamlining

Consistency Review Checklist (Appendix F)

EHL has *not* technically reviewed the adequacy of the Consistency Review Checklist (Appendix F) for General Plan-consistent projects to reduce GHG emissions in accord with 2045 targets. We do, however, object to use of 110 ADT as a threshold for screening out projects, as it does not account for trip length. Although recommended by CARB, particularly in unincorporated areas, more remote development will have significant emissions even if technically under 110 ADT.

Due to the well-documented problems, we again *concur* with the Checklist provision that, "Carbon offset credits are not permitted to be used as alternative project emissions reduction measures."

We also agree that an Offsite GHG Reduction Program (Offsite Program, ES5.4) that involves *local* emissions reductions would be appropriate if, as described in the Checklist, it meets various strict criteria (enforceability, additionality, etc.). However, there is a lack of clarity that a precondition for use of the Offsite Program is that *on-site* Checklist measures or *on-site* alternative/additional measures (Alternative Project Emissions Reduction Measures and Additional GHG Reductions) are *both* infeasible. The language in the draft – "in tandem" – is imprecise on these relationships ("This program would be used in tandem with the 2045 CAP Consistency Checklist for projects that propose GHG emissions reduction measures as alternatives to those identified in Table F-1 of the 2045 CAP Consistency Checklist, or that

propose to include additional GHG emissions reduction measures beyond those described in Table F-1."). Clarification of the sequencing involved would be helpful, so that Checklist and Alternative and Additional measures are exhausted prior to turning to the Offsite Program.

There is also a proposed Carbon Offsets/Credits Feasibility Study, to prepare for the contingency of not meeting 2045 targets. While this is a reasonable precaution, remote carbon offsets are problematic for many reasons. There should be early identification of incipient target failure through monitoring. If called for, the *first steps* should be adjustment of, and additions to, the 2045 CAP measures.

We have questions and concerns over how General Plan amendments (GPAs) relate to the Checklist and over ES5.3—*Evaluate a program for reducing GHG emissions for new developments that require General Plan amendments*. Theoretically, GPA proposals could be beneficial for GHG emissions, or, like leapfrog sprawl development, could be very harmful. But in order to enact the best *overall* planning, the General Plan should be amended *comprehensively*, as part of a County-wide or Community Plan update process. *Piecemeal GPAs should be discouraged.*

The CEQA streamlining offered by Checklist compliance should remain as an incentive to build out the existing General Plan. While there is always a right to propose a GPA, the applicant cannot not rely on Checklist compliance for its GHG analysis. According to Appendix F, GPAs are by definition outside the scope of the Checklist:

O9-11 (cont.)

> The growth projections outlined in the General Plan's Land Use Element were used in the 2045 CAP to estimate unincorporated Los Angeles County's future emissions. Therefore, projects can use the 2045 CAP Checklist if they are consistent with the Land Use Element.

Proposed GPAs must undertake *de novo* GHG impact analyses in Environmental Impact Reports.

There is, however, ambiguity in the document as to the use of the Checklist. Besides for General Plan-consistent projects, there is a second use, that is, "for projects required or electing to prepare project-specific CEQA GHG analyses, to demonstrate that all feasible applicable checklist measures or alternative project emissions reduction measures have nevertheless been implemented, either as project features or as GHG mitigation measures." Does this second use of the Checklist apply *solely* to General Plan-consistent projects which, for one reason or another, are doing project-specific CEQA review, or is it *also* for use by GPAs in project-specific CEQA GHG analyses? If the latter, what is the purpose of ES5.3?

In regard to the above, please note that as a signatory to the "Tejon Ranch Conservation and Land Use Agreement," EHL does not oppose development of Tejon Ranch's Centennial Community project in Los Angeles County or its approvals. Additionally, in light of its site-specific measures, EHL is not advocating that the Climate Action Plan requires any changes to the Centennial project as currently approved by the relevant agencies.

Thank you for your commitment to climate action and for considering our comments.

O9-11
(cont.)

Yours truly,

Dan Silver
Executive Director

2.3.2.9 Letter O9: Endangered Habitats League

This letter provides input on the Revised Draft 2045 CAP as well as CEQA comments on the Recirculated Draft PEIR. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4, *Comments on the Revised Draft 2045 CAP*, in Chapter 1, *Introduction*. PEIR-focused comments are addressed below.

O9-1 through O9-5 These comments on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on these issues pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O9-6 Regarding the comment's opposition to utilizing the transportation screening threshold of 110 average daily trips (ADT), as listed in the Checklist because the criteria does not address trip lengths (Revised Draft 2045 CAP, Appendix F, p. F-9 and F-19), the 110 ADT threshold is from the Governor's Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA.[31] According to OPR, "projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact."

> *CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subI(e)(2).) Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.*

The basis for OPR's VMT thresholds, including the 110 ADT threshold, is compliance with California's GHG emission reduction targets. These include SB 32, which requires California to reduce GHG emissions 40 percent below 1990 levels by 2030, and Executive Order B- 16-12, which provides a target of 80 percent below 1990 emissions levels for the transportation sector by 2050. OPR's Technical Advisory states, "OPR recommends using quantitative VMT thresholds linked to

[31] Governor's Office of Planning and Research, 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December 2018. https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. Accessed July 2023.

GHG reduction targets when methods exist to do so."[32] Consequently, the 110 ADT criteria is a valid screening criteria for GHG emissions and potential GHG impacts.

The County appreciates the comment's support of the exclusion of carbon offset credits for use in the Checklist; please see General Response 4, which addresses the use of voluntary GHG offset credits in the Revised Draft 2045 CAP and as an alternative GHG reduction measure in the Checklist.

O9-7 Regarding the comment's concern of a lack of clarity in the Checklist surrounding the use of alternative GHG reduction measures and the offsite GHG reduction program, please refer to General Response 3, which addresses the alternative GHG reduction measure pathway in the Checklist, and General Response 6, which addresses concerns regarding the proposed Offsite GHG Emissions Reduction Program. To clarify the County's preference for on-site versus off-site GHG emission reductions for streamlining purposes via the Checklist, the County has revised sections of the Revised Draft 2045 CAP in the following ways, as shown in the example below:

> *Action ES5.4 of the 2045 CAP would establish an Offsite GHG Emissions Reduction Program (Offsite Program) for new development to use as a GHG reduction or mitigation pathway for 2045 CAP compliance and to fund programs for reducing GHG emissions in the built environment. This program would allow new development to fund decarbonization programs for existing development to accelerate 2045 CAP measures and actions or go beyond 2045 CAP measures and actions. ~~An Offsite GHG Emissions Reduction Program (Offsite Program) will be developed.~~ Future projects that cannot achieve net-zero GHG emissions or are unable to comply with all ~~required 2045 CAP Checklist items~~ CEQA streamlining requirements would have the option to participate in the Offsite Program. The Offsite GHG Reduction Program could be used for projects that propose alternative GHG emissions reduction measures to those identified in Table F-1, or that propose to include additional GHG emissions reduction measures beyond those described in Table F-1* (Revised Draft 2045 CAP, Appendix F, p. F-34).

These revisions do not result in changes to environmental impact analyses or conclusions presented in the Recirculated Draft PEIR, and therefore do not constitute significant new information that would trigger recirculation under CEQA Guidelines section 15088.5.

O9-8 The comment raises concerns regarding the use of "remote carbon offsets" for meeting the County's 2045 GHG reduction target; the County agrees that actual GHG reductions occurring within the unincorporated County are the highest priority in determining progress toward its GHG reduction targets, and that the Revised Draft 2045 CAP monitoring program should identify any course corrections that may be needed for the County to remain on track for meetings those targets, as described in

[32] Ibid.

Section 4.2 of the Revised Draft 2045 CAP. As stated on page 4-5 of the Revised Draft 2045 CAP, the County will be reporting on the implementation progress of the Revised Draft 2045 CAP as part of the General Plan Annual Progress Report, and within the first two years of implementation will identify where further efforts and additional resources may be needed to stay on track toward targets. Further, the Revised Draft 2045 CAP is a dynamic document that will be monitored and evaluated for its effectiveness on an ongoing basis to allow the County to make timely adjustments to implementing actions as technologies, federal and state programs, and circumstances change. Flexibility in implementation is necessary to allow the County to evolve its strategies and achieve its targets, including for 2045. The County will update the GHG emissions inventory and the Revised Draft 2045 CAP every five years.

The Revised Draft 2045 CAP's current measures and actions are sufficient; based on current assumptions, performance objectives, and modeling tools; for achieving the County's 2045 GHG emission reduction *target* of 83 percent below 2015 levels (Revised Draft 2045 CAP pp. 3-2 and 3-3). The Revised Draft 2045 CAP also includes an *aspirational goal* of achieving carbon neutrality by 2045; it is important to note that this is not a *target* of the Revised Draft 2045 CAP as stated in the comment. However, achieving carbon neutrality is an entirely different challenge, and the Revised Draft 2045 CAP does not show a quantitative pathway to carbon neutrality. Section 3.2 of the Revised Draft 2045 CAP discusses what is needed to achieve carbon neutrality and acknowledges the need for new and evolving technologies:

> *If the residual emissions, shown in Figure 3-1, cannot be eliminated through new regulations or technologies, the County will consider future implementation of carbon removal strategies (such as carbon capture and sequestration and direct air capture), along with future implementation of a carbon offsets/credits program, following completion of a feasibility study, to achieve carbon neutrality by 2045. Evolving state regulations, programs, and financial incentives will provide new opportunities for unincorporated Los Angeles County to counteract any residual emissions.* (Revised Draft 2045 CAP p. 3-12).

As stated in the comment, the Revised Draft 2045 CAP includes a carbon offsets/credits feasibility study. The purpose of using carbon offsets would be to enable the County to achieve its long-term aspirational goal of carbon neutrality by 2045 (Revised Draft 2045 CAP p. 4-12). This would be a "last resort" if in-County measures, actions, and projects are not sufficient to achieve carbon neutrality. It is worth noting that in the 2022 Scoping Plan, the state's roadmap for achieving carbon neutrality statewide by 2045 pursuant to AB 1279, there are over 100 million metric tons of CO2 equivalent emissions after full implementation of the scoping plan scenario in 2045. This means that carbon removal is an essential component of the State's strategy:

Even if anthropogenic emissions are reduced to at least 85 percent below 1990 levels by 2045 as called for by AB 1279, there will still be residual emissions in the AB 32 GHG Inventory sectors in 2045 that must be addressed in order to achieve the California's carbon neutrality target… To achieve carbon neutrality, mechanical CDR [carbon dioxide removal] will therefore need to be deployed. Because NWL [natural and working lands] management is not estimated to be a significant carbon removal path in the near term, additional CDR options will be needed.[33]

The comment also states that "remote carbon offsets are problematic for many reasons" but does not provide such reasons or evidence supporting this claim such that a specific response cannot be provided. This comment does not raise significant environmental issues relating to the Recirculated Draft PEIR warranting a response pursuant to CEQA Guidelines section 15088(a).

O9-9 As discussed in General Response 4, all future projects that would require a General Plan Amendment cannot use the Revised Draft 2045 CAP to streamline its GHG impact analysis under CEQA. Such projects would have to undergo their own project-level CEQA analyses of GHG impacts. The Revised Draft 2045 CAP has been revised to remove Measure ES5.3 (Evaluate a program for reducing GHG emissions for new developments that require General Plan Amendments). (Revised Draft 2045 CAP, p. 3-25.) All new development projects requiring a General Plan Amendment must prepare their own GHG impact analysis under CEQA. Project-specific amendments must be consistent with the General Plan's overall intent, goals and policies. These revisions do not result in changes to environmental impact analyses or conclusions presented in the Recirculated Draft PEIR, and therefore do not constitute significant new information that would trigger recirculation under CEQA Guidelines section 15088.5.

See General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan. Also see General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects.

O9-10 As discussed in General Response 4, all future projects that would require a General Plan Amendment cannot use the Revised Draft 2045 CAP to streamline its GHG impact analysis under CEQA. Such projects would have to undergo their own project-level CEQA analyses of GHG impacts. As discussed in response to comment O9-9, the Revised Draft 2045 CAP has been revised to remove Measure ES5.3 (Evaluate a program for reducing GHG emissions for new developments that require General Plan Amendments). Regarding the comment's concern regarding the use of the Checklist, as discussed in General Response 3, the County has revised the Checklist to clarify that the Checklist will be used only for projects that wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3),

33 California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* November 16, 2022. Pages 91-92. Available at https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents. Accessed August 2023.

15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis.

See General Response 3, which provides further information regarding how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects. Also see General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan.

O9-11 The County acknowledges the comment's statement that EHL does not oppose the Tejon Ranch Centennial Community project, and that the Revised Draft 2045 CAP need not be revised to require changes to that project. This comment does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

FIVEPOINT.

May 15, 2023

Thuy Hua, Supervising Regional Planner
Los Angeles County Department of Regional Planning
320 West Temple Street, 13th Floor
Los Angeles, CA 90012
Email: climate@planning.lacounty.gov

Re: Comments on the Revised Draft 2045 Climate Action Plan

Dear Ms. Hua:

The Newhall Land and Farming Company thanks you for the opportunity to provide comments on the Revised Draft Los Angeles County 2045 Climate Action Plan ("CAP"). As the proponent of California's first large-scale net-zero greenhouse gas ("GHG") mixed-use community, we appreciate the County's efforts to reduce GHG emissions while encouraging critical housing.

Innovative Net-Zero GHG Housing Project – In coordination with the County and State in 2017, Newhall developed a net-zero GHG program that implements a broad suite of innovative GHG reduction strategies to maximize onsite and local GHG reductions, such as installing thousands of EV charging stations throughout LA County and implementing a Building Retrofit Program in disadvantaged communities within the County.

- The California Air Resources Board evaluated Newhall's net-zero GHG program and determined that it "will not result in any net additional greenhouse gas emissions."[1]

- The California Department of Fish and Wildlife similarly concluded that "the Project represents an ***innovative*** demonstration of a mixed-use development project ***providing needed housing*** and commercial development in a manner consistent with California's GHG reduction goals… the Project will be one of the largest, if not the ***largest developments in California ever to achieve net zero GHG emissions***."[2]

O10-1

When the County Board of Supervisors reapproved Mission Village and Landmark Village, the Board found that Newhall's net-zero GHG program would feasibly achieve net-zero GHG emissions based on substantial evidence in the record:

- "The Board further finds that, based on substantial evidence in the record, potentially significant GHG impacts of the Mission Village Project are reduced to

[1] California Air Resources Board, Letter from Richard Corey, Executive Officer, to Chuck Bonham, Director, California Department of Fish and Wildlife, June 7, 2017.
[2] California Department of Fish and Wildlife, Final Actions and Supplemental Findings for Newhall Ranch RMDP/SCP, p. 40, June 14, 2017 (emphasis added).

less-than-significant levels with implementation of the following measures and that the Project will ***feasibly and reliably achieve net zero GHG emissions***."[3]

- "In addition, because the Project would result in ***no net increase of GHG emissions***, it would not conflict with any plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs."[4]

O10-1 (cont.)

The Board concluded: "The Project represents ***an innovative*** demonstration of a mixed-use development ***Project providing needed housing*** and commercial development in a ***manner consistent with California's GHG reduction goals***."[5]

Following the County's approval, Newhall utilized this program to settle with groups that had long opposed the project. The LA Times called this settlement a "historic truce."[6] The approvals and settlement facilitated the start of construction after multiple decades of litigation and delays, although two local groups continued to challenge the County's approvals and attempt to block these projects that will deliver badly needed housing to the region. Now, homeowners are moving into Mission Village, adding to the County's diversity of housing stock.

Newhall Satisfies CEQA GHG Compliance Pathway – The 2022 Scoping Plan expressly identifies multiple compliance pathways for evaluating a project's GHG impacts under the California Environmental Quality Act ("CEQA"), including for projects demonstrated to achieve "net-zero GHG emissions."[7] Indeed, the 2022 Scoping Plan specifically recognizes Newhall as an example net-zero GHG project that satisfies this CEQA compliance pathway.[8]

O10-2

The Draft CAP incorporates California GHG reduction goals as its own: "Consistency with the 2022 Scoping Plan, SB 32, and AB 1279 is an appropriate metric by which to determine the significance of the 2045 CAP's GHG emissions through 2045…"[9] Newhall already exceeds the Draft CAP's 2030 and 2035 reduction targets and satisfies the Draft CAP's aspirational target of carbon neutrality by 2045, twenty years early. Therefore, Newhall satisfies the Draft CAP's GHG reduction goals and the Scoping Plan's CEQA compliance pathway.

CARB-Approved Program Must Be Grandfathered Under the CAP to Avoid Impairing Innovative and Sustainable Housing and Jobs – As recognized by the Board, Newhall is an "an innovative…Project providing needed housing…consistent with California's GHG reduction goals." Newhall's net-zero GHG program is unique because it was previously approved by CARB *and* withstood extensive litigation challenges up to the California Supreme Court. Homes and commercial uses developed under Newhall's net-zero GHG program will disproportionately help the County achieve its climate goals with development that satisfies the CAP's aspirational target of carbon neutrality 20 years early. To avoid unintended consequences for this endeavor that aligns with the Scoping Plan's CEQA compliance strategy, it is imperative

O10-3

[3] Los Angeles County, Mission Village, Supplemental CEQA Findings and Statement of Overriding Considerations, July 2017, p. 15.
[4] *Id.*, p. 26 (emphasis added).
[5] *Id.*, p. 39 (emphasis added).
[6] Los Angeles Times, Newhall Ranch, September 25, 2017, available at, http://www.latimes.com/local/lanow/la-me-newhall-ranch-20170925-story.html.
[7] 2022 Scoping Plan Update, Appendix D (Local Actions).
[8] 2022 Scoping Plan Update, Appendix D (Local Actions), Section 3.2.2.
[9] Revised Draft CAP, p. 1-4.

that all development covered by Newhall's net-zero GHG program be grandfathered from the CAP's compliance requirements.[10] As such, we respectfully request that the County expressly grandfather development covered by net-zero GHG programs that were approved by CARB before the adoption of the CAP from the CAP's compliance elements (e.g., checklist in Draft CAP, Appendix F). Of course, we remain fully supportive of the County's overall climate goals and will continue to deliver climate neutral housing and jobs to advance such policies.

O10-3 (cont.)

We look forward to continuing to work with the County on these important sustainability initiatives.

Sincerely,

Matt Carpenter
Vice President, Environmental Resources
On behalf of The Newhall Land and Farming Company

[10] FivePoint has committed to implement the CARB-approved net-zero GHG program across all nine of its villages in Valencia, including the five Newhall Ranch Specific Plan villages (Mission Village, Landmark Village, Homestead North, Homestead South and Potrero Valley) and Entrada South, Entrada North, Valencia Commerce Center, and Legacy Village.

2.3.2.10 Letter O10: FivePoint Newhall Land and Farming Company

This letter provides input on the Revised Draft 2045 CAP as well as CEQA comments on the Recirculated Draft PEIR. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4*, Comments on the Revised Draft 2045 CAP*, in Chapter 1, *Introduction*. PEIR-focused comments are addressed below.

O10-1 to O10-3 The County acknowledges FivePoint's comment that the recently approved Newhall Ranch mixed-use project achieved CEQA compliance by demonstrating how the project would achieve net zero GHG emissions through a mix of local GHG reductions, the purchase of GHG offsets, and consistency with CARB's 2022 Scoping Plan, SB 32 and AB 1279. Responding to the comment's request that that all development covered by Newhall's net-zero programs be exempt from the Revised Draft 2045 CAP's requirements including its CEQA Streamlining Checklist, Newhall is a project that has already undergone CEQA review and thus, does not need to demonstrate consistency with the Revised Draft 2045 CAP through use of the Checklist or any other means. Further, future development projects, including future approvals of previously planned projects, are still permitted to undergo their own project-level CEQA analysis of GHG impacts independent of the Checklist; such projects may use voluntary GHG offset credits to mitigate GHG impacts if warranted. For a more detailed response concerning the use of the Checklist, please see *General Response 3: 2045 CAP CEQA Streamlining Checklist*. For a discussion regarding the technical basis for why the Checklist does not permit the use of voluntary GHG offset credits to demonstrate a less-than-significant GHG impact under CEQA, see *General Response 4: GHG Offsets*, which addresses the use of voluntary GHG offset credits in the Revised Draft 2045 CAP and as an alternative GHG reduction measure in the Checklist.

2.3.2.11 Letter O11:

This letter is intentionally omitted.

LEAGUE OF WOMEN VOTERS® OF LOS ANGELES COUNTY

Ms. Thuy Hua, Supervising Regional Planner
Los Angeles County Department of Regional Planning
320 West Temple Street, 13th Floor
Los Angeles, CA 90012

Sent via email to climate@planning.lacounty.gov

Dear Ms. Hua,

Comments on Revised Draft 2045 Climate Action Plan dated March 2023

The League of Women Voters (LWV) of Los Angeles County strongly supports Los Angeles County's Climate Action Plan (CAP) and encourages the County to adopt the plan and implement it. *It is imperative that the County implement measures to reduce greenhouse gas (GHG) emissions as quickly as possible*. The CAP outlines numerous measures to move electricity generation from fossil fuels to renewables, to electrify buildings and transportation, to encourage use of mass transit, to reduce energy use, and to reduce generation of GHG in the development of building materials and the decomposition of organic waste. The CAP is thorough and broad-ranging in its coverage. O12-1

The League's policies and values on Climate Change, Land Use, Housing and Homelessness, Transportation, and Meeting Basic Needs are in excellent alignment with those of the County. However, we differ in urgency to act, particularly regarding land use and transportation. O12-2

Transportation remains the largest emissions category in our county and postponing work to reduce car dependence will run through our carbon budget faster. The low supply of available electric vehicles (EV), their cost, and slow adoption by drivers who must travel the farthest to their jobs mean that a key leg of the CAP's decarbonization strategy will not meet the schedule. O12-3

Our County does not control the supply of EVs, but we do control the number of lane miles of bike lanes on major roads. O12-4

Priority bus lanes and bike lanes are statutorily exempt from CEQA so there is no need for delay to complete lengthy and expensive studies. Our county's money and staff time are better spent working on implementation. O12-5

The League "recognizes land as a resource as well as a commodity". For instance, the League opposes locking land near multi-billion dollar transit investments, major job centers, and colleges and universities with zoning for low-density uses. O12-6

There is no need to wait for a future rail line or EV, when people can simply walk or bike to work or school today if zoning and safe streets allow it. People who live walking or cycling distance to work or school do not suffer the stress of delayed or canceled buses and trains. O12-7

The League of Women Voters of Los Angeles County, a nonpartisan political organization, encourages informed and active participation in government, works to increase understanding of major public policy issues, and influences public policy through education and advocacy.

LEAGUE OF WOMEN VOTERS® OF LOS ANGELES COUNTY

Implementation of many CAP actions is dependent upon development and adoption of many detailed plans, policies, regulations and ordinances. The work is divided among many agencies and departments with full-time day-to-day responsibilities. The League is concerned that implementation be accomplished urgently and that it not slip into a bureaucratic quagmire. Appendix E lays out the details of implementation and monitoring and gives time frames. The early time frames extend out to 2030 and the later ones to 2045. There are no very near timeframes set out in the CAP for development and adoption of the plans, policies, regulations and ordinances. If these directives are not put in place promptly, the League is concerned that the implementation of the actual actions will lag. This must not happen. O12-8

Further, the League understands that measures in the CAP are restricted by other elements of the County's General Plan. The League recommends that future updates of General Plan elements be integrated with CAP needs. O12-9

For instance densifying high quality transit areas (HQTAs) is expected to lower GHG emissions and improve equity because residents can take transit to access jobs and services instead of driving. However, transit is only one low-carbon mobility option. Walking is the cheapest and lowest emitting option. O12-10

Unincorporated LA County land across the street from 8,000 jobs at or adjacent to Los Angeles Air Force Base is zoned for R-1. Similarly, students in community colleges are sleeping in their cars and county land across the street from El Camino College (22,000 students) is zoned R-1. O12-11

The League urges the Board of Supervisors and the management of the Los Angeles County government to prioritize climate action and to set, budget and monitor firm expectations for each upcoming year. O12-12

The League urges the County to be fully transparent with the public about successes and difficulties with carrying out the CAP. We appreciate the transparency of the Measure W: Safe Clean Water Program Portal. We hope to see something similar for the CAP with links to the General Plan, Public Works, Transportation and other departments as appropriate. O12-13

Sincerely,

Margo Reeg,

Margo A. Reeg

President
Los Angeles County League of Women Voters
margolwv@gmail.com

The League of Women Voters of Los Angeles County, a nonpartisan political organization, encourages informed and active participation in government, works to increase understanding of major public policy issues, and influences public policy through education and advocacy.

2.3.2.12 Letter O12: League of Women Voters

This letter provides input on the Revised Draft 2045 CAP as well as CEQA comments on the Recirculated Draft PEIR. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4, *Comments on the Revised Draft 2045 CAP*, in Chapter 1, *Introduction*. PEIR-focused comments are addressed below.

O12-1 The County acknowledges the support to adopt and implement the Revised Draft 2045 CAP.

O12-2 to O12-4 These comments on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on these issues pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O12-5 Regarding the comment's statement regarding priority bus and bike lane exemptions under CEQA, the Recirculated Draft PEIR is a programmatic level document and is intended to inform agency decision-makers and the public about environmental impacts of the Project at a program level. The document does not recommend approval or denial of specific projects under the Program. However, the Revised Draft 2045 CAP does include Strategies, Measures, and Actions aimed at reducing single-occupancy vehicle use including Measure T3, Measure T4, and Measure T5, which could be implemented on a project-level.

O12-6 to O12-8 These comments on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on these issues pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O12-9 Regarding the comment's request that future updates of General Plan elements be integrated with Revised Draft 2045 CAP needs, the Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan. General Plans, including updates to General Plans, are required to be internally consistent such that all elements and parts comprise an integrated, internally consistent and compatible statement of policies for the County.

O12-10 to O12-11 These comments on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on these issues pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses comments received on the Revised Draft 2045 CAP.

O12-12 The County prioritizes climate action and is committed to adapting its programs and services to reduce Countywide GHG emissions. In response to the comment's recommendation to budget and monitor expectations, Chapter 4 of the Revised Draft 2045 CAP discusses the monitoring and reporting the County will implement. In addition to annual reporting through the General Plan Annual Progress Report, the County intends to develop a dashboard as a part of the reporting to provide information through data and spatial displays. Adopting the Revised Draft 2045 CAP positions the County to pursue climate related grants and to start budgeting for the identified actions.

O12-13 The County intends to be transparent with the public about implementation of the Revised Draft 2045 CAP. Chapter 4 of the Revised Draft 2045 CAP discusses the monitoring and reporting the County will implement. In addition to annual reporting through the General Plan Annual Progress Report, the County intends to develop a dashboard as a part of the reporting to provide information through data and spatial displays.

From: SCOPE
To: Iris Chi
Subject: Re: Revised Draft 2045 Climate Action Plan
Date: Monday, May 15, 2023 3:36:07 PM
Attachments: image.png

CAUTION: External Email. Proceed Responsibly.

Due to many events these last two months we have not had time to focus on the revised and re-circulated CAP EIR. We request an additional two weeks to review these documents. O13-1

Some of our members did watch the posted link to your presentation. Our biggest concern is that you are using the 2015 year as a baseline. This seems inappropriate when the situation demands a return to 1990 levels as requested by the IPCC and other government agencies. O13-2 It is as though you are only going back to 2015 so that your figures will look good instead of really trying to comply with the changes that need to be made. O13-3 We believe that this baseline will not comply with State and County climate goals. O13-4 Changing the baseline to make it look as though the County is making headway will not address the underlying problem of the urgent need to reduce CO2 and Methane releases through reducing or eliminating their sources. O13-5

Lynne Plambeck

Santa CLarita Orgnization for Planning and the Environment.

scope.org

-----Original Message-----
From: Iris Chi <IChi@planning.lacounty.gov>
Sent: Apr 17, 2023 12:06 PM
To: SCOPE <exec-scope@earthlink.net>
Subject: Revised Draft 2045 Climate Action Plan

Good morning,

Thank you for your prior participation in the update to the County's climate action plan. We released the Revised Draft 2045 Climate Action Plan and Recirculated Draft Environmental Impact Report for public review. Comments on both documents are requested by 5:00 pm on May 15th. Both documents can be accessed on the project website: https://planning.lacounty.gov/long-range-planning/climate-action-plan/documents/

We will be convening an online meeting to discuss and answer questions from the environmental community on April 20, 2023 at 3:00 pm. A meeting invite will be

sent out shortly with the link to the Zoom meeting.

If you are unable to join this meeting, we invite you to sign up for an appointment to ask us your questions during lunchtime hours. Click here to sign up for an appointment.

Thank you,

Iris

IRIS CHI, AICP (she/her/hers)

PLANNER, Environmental Planning and Sustainability

Office: (213) 974-6461 • Direct: (213) 974-6460
Email: ichi@planning.lacounty.gov

Los Angeles County Department of Regional Planning
320 West Temple Street, 13th Floor, Los Angeles, CA 90012
planning.lacounty.gov

Our field offices are currently open to the public. Please visit planning.lacounty.gov for information about available services, public meeting schedules, and planning projects.

2.3.2.13 Letter O13: Santa Clarita Organization for Planning and the Environment

This letter provides input on the Revised Draft 2045 CAP as well as CEQA comments on the Recirculated Draft PEIR. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4, *Comments on the Revised Draft 2045 CAP*, in Chapter 1, *Introduction*. PEIR-focused comments are addressed below.

O13-1 Regarding the comment's request for an additional two weeks of public review, CEQA presumes the adequacy of a 45-day review period for a Draft PEIR (Pub. Resources Code, § 21091(a); CEQA Guidelines, § 15105) and explains that the public review period should not be longer than 60 days except in "unusual circumstances." There are no extenuating circumstances here and as such, the standard 45-day review period is sufficient. Additionally, during those 45 days, the County hosted seven open meeting hours advertised as lunchtime office hours, posted on the project website and distributed via email an informational video on the Project, and held meetings with responsive stakeholder groups to facilitate review and discussion. In order to provide stakeholders additional time to review and understand the Revised Draft 2045 CAP and Recirculated Draft PEIR, and since changes to the Recirculated Draft PEIR were predicated on changes to the Revised Draft 2045 CAP, the Revised Draft 2045 CAP was released prior to the Recirculated Draft PEIR to offer additional review time to read the changes driving the analysis in the Recirculated Draft PEIR. For these reasons, the County believes that the 60-day public review period provided for the Revised Draft 2045 CAP and the 45-day public review period provided for the Recirculated Draft PEIR were sufficient to allow informed public comment.

O13-2 In response to the comment regarding the appropriate baseline for climate action planning, the 2015 baseline is appropriate when considering the reduction goals of 40 percent below 2015 levels by 2030, 50 percent below 2015 levels by 2035, and 83 percent below 2015 levels by 2045. These targets are consistent with the state goals of 40 percent below 1990 levels by 2030, and 85 percent below 1990 levels by 2045. As stated in Chapter 2 of the Revised Draft 2045 CAP, total unincorporated Los Angeles County emissions in 1990 are estimated to be 6.4 million MTCO2e. Because the 2015 emissions of 5.5 million MTCO2e are 15 percent lower than the 1990 emissions, the 2030 target of a 40 percent reduction below 2015 levels is equivalent to a 48 percent reduction below 1990 levels. This exceeds the state target of 40 percent below 1990 levels by 2030. As such, the Revised Draft 2045 CAP's 2030 target is in line with (and more stringent than) the SB 32 target for the state. The 2045 target of 83 percent below 2015 levels (equivalent to 85 percent below 1990 levels) aligns with the State of California's 2045 target as codified in AB 1279 and evaluated in the Final 2022 Scoping Plan. In addition, the 2035 target of 50 percent below 2015 levels (equivalent to 57 percent below 1990 levels) puts unincorporated Los Angeles County

on the trajectory to achieve 85 percent below 1990 levels by 2045, consistent with state targets. Therefore, the Revised Draft 2045 CAP not only aligns with the State's GHG reduction targets, but it also exceeds them.

O13-3 Please refer to the response to comment O13-2, above.

O13-4 Please refer to the response to comment O13-2, above.

O13-5 Please refer to the response to comment O13-2, above.

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Mitchell M. Tsai
Attorney At Law

139 South Hudson Avenue
Suite 200
Pasadena, California 91101

VIA E-MAIL

May 12, 2023

Thuy Hua, AICP
Supervising Regional Planner
320 West Temple Street
Los Angeles, CA 90012
Ph: (213) 974-6461
Em: thua@planning.lacounty.gov
Em: climate@planning.lacounty.gov

RE: Southwest Mountain States Regional Council of Carpenters' Comments in Support of the County of Los Angeles' Draft 2045 Climate Action Plan.

Dear Thuy Hua:

On behalf of the Southwest Mountain States Regional Council of Carpenters ("**SWMSRCC**"), my Office is submitting these comments regarding the County of Los Angeles' ("**County**") Revised Draft Environmental Impact Report ("**RDEIR**") for the Draft 2045 Climate Action Plan ("**Draft 2045 CAP**" or "**Plan**").

SWMSRCC is a labor union representing over 63,000 union carpenters in 10 states, including California, and has a strong interest in well-ordered land use planning and in addressing the environmental impacts of development projects. Individual members of SWMSRCC live, work, and recreate in the unincorporates areas of the County and would be directly affected by the environmental and social impacts of future projects subject to the Plan.

SWMSRCC expressly reserves the right to supplement these comments at or prior to future hearings or proceedings related to the Plan. Gov. Code, § 65009, subd. (b); Pub. Res. Code, § 21177, subd. (a); see *Bakersfield Citizens for Local Control v. Bakersfield* (2004) 124 Cal.App.4th 1184, 1199-1203; accord *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal.App.4th 1109, 1121. O14-1

SWMSRCC incorporates by reference all comments raising issues regarding the Plan and its environmental review, including associated documents and reports. See O14-2

California Clean Energy Com. v. City of Woodland (2014) 225 Cal.App.4th 173, 191 (citing *Citizens for Open Government v. City of Lodi* (2006) 144 Cal.App.4th 865, 875) (any party who has objected to a project's environmental documentation may assert any issue timely raised by other parties); see also *Santa Teresa Citizen Action Group v. City of San Jose* (2003) 114 Cal.App.4th 689, 701 (citing Pub. Res. Code, § 21177, subds. (a), (b)) (in order to attack a decision that is subject to the California Environmental Quality Act (CEQA), the alleged grounds for noncompliance must have been presented to the public agency, and the party attacking the decision must have raised some objection during the administrative proceedings). O14-2 (cont.)

Moreover, SWMSRCC requests that the County provide notice for any and all actions referring or relating to the Project issued under CEQA (Pub. Res. Code, § 21000 et seq.), and the California Planning and Zoning Law (Gov. Code, §§ 65000–65010). California Public Resources Code, sections 21092.2 and 21167, subsection (f) and California Government Code, section 65092 require agencies to mail such notices to any party who has filed a written request for them with the clerk of the agency's governing body. O14-3

I. THE COUNTY SHOULD REQUIRE THE USE OF A LOCAL SKILLED AND TRAINED WORKFORCE TO BENEFIT ITS ECONOMIC DEVELOPMENT AND THE ENVIRONMENT.

The County has committed itself to meet the goals of the 2016 Paris Climate Agreement and achieving carbon neutrality for its unincorporated areas by adapting programs and services to essentially reduce GHG emissions. See Draft 2045 CAP, p. ES-1. The Plan "identifies strategies, measures, and actions to mitigate GHG emissions from community activities, which may include some municipal operations[.]" *Ibid.* Considering that transportation by on-road vehicles comprises 52% of the 5.2 million metric tons of carbon dioxide equivalent ($MTCO_2e$) that unincorporated L.A. County emitted in 2018 (the most recent inventory completed), and that "the largest decline in emissions will result from changes to the transportation" sector, it is vital that the Plan implement strategies, measures, and actions that effectively curb the amount of time individuals spend on the road. Draft 2045 CAP, p. ES-7. O14-4

Besides increasing densities and diversity of land uses near transit, reducing single-occupancy vehicle trips, and institutionalizing low-carbon transportation, the Plan should mandate additional measures and strategies. Draft 2045 CAP, p. ES-5. O14-5

To this aim, the County should require that all developers of future projects subject to the Plan utilize local workers who are registered apprentices in, have graduated from, or have at least as many hours of on-the-job experience in the applicable craft which would be required to graduate from, a Joint Labor-Management Apprenticeship Program approved by the State of California. O14-6

Community benefits such as local hire can also be helpful to reduce environmental impacts and improve the positive economic impacts of future projects subject to the Plan. Local hire provisions requiring that a certain percentage of workers reside within 10 miles or less of future project sites can reduce the length of vendor trips, reduce greenhouse gas (GHG) emissions, and provide localized economic benefits. As environmental consultants Matt Hagemann and Paul E. Rosenfeld note:

> [A]ny local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the reduction would vary based on the location and urbanization level of the project site. O14-7

March 8, 2021, SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling.

Workforce requirements promote the development of skilled trades that yield sustainable economic development. As the California Workforce Development Board and the University of California, Berkeley Center for Labor Research and Education concluded: O14-8

> [L]abor should be considered an investment rather than a cost—and investments in growing, diversifying, and upskilling California's workforce can positively affect returns on climate mitigation efforts. In other words, well-trained workers are key to delivering emissions reductions and moving California closer to its climate targets.[1]

Furthermore, workforce policies have significant environmental benefits given that they improve an area's jobs-housing balance, decreasing the amount and length of job O14-9

[1] California Workforce Development Board (2020) Putting California on the High Road: A Jobs and Climate Action Plan for 2030 at p. ii, *available at* https://laborcenter.berkeley.edu/wp-content/uploads/2020/09/ Putting-California-on-the- High-Road.pdf.

commutes and the associated GHG emissions. In fact, on May 7, 2021, the South Coast Air Quality Management District (South Coast AQMD) found that the use of a local state-certified apprenticeship program can result in air pollutant reductions.[2]

O14-9 (cont.)

The extent and significance on the environment of locating jobs closer to residential areas cannot be overstated. As the California Planning Roundtable has noted:

> People who live and work in the same jurisdiction would be more likely to take transit, walk, or bicycle to work than residents of less balanced communities and their vehicle trips would be shorter. Benefits would include potential reductions in both vehicle miles traveled and vehicle hours traveled.[3]

Moreover, local hire mandates and skill-training are critical facets of a strategy to reduce vehicle miles traveled (VMT). As planning experts Robert Cervero and Michael Duncan have noted, simply placing jobs near housing stock is insufficient to achieve VMT reductions given that the skill requirements of available local jobs must match those held by local residents.[4] Some municipalities have actually tied local hire and other workforce policies to local development permits to address transportation issues. Cervero and Duncan note that:

O14-10

> In nearly built-out Berkeley, CA, the approach to balancing jobs and housing is to create local jobs rather than to develop new housing. The city's First Source program encourages businesses to hire local residents, especially for entry- and intermediate-level jobs, and sponsors vocational training to ensure residents are employment-ready. While the program is voluntary, some 300 businesses have used it to date, placing more than

[2] South Coast Air Quality Management District (May 7, 2021) Certify Final Environmental Assessment and Adopt Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions Program, and Proposed Rule 316 – Fees for Rule 2305, Submit Rule 2305 for Inclusion Into the SIP, and Approve Supporting Budget Actions, *available at* http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-May7-027.pdf?sfvrsn=10.

[3] California Planning Roundtable (2008) Deconstructing Jobs-Housing Balance at p. 6, *available at* https://cproundtable.org/static/media/uploads/publications/cpr-jobs-housing.pdf.

[4] Cervero, Robert and Duncan, Michael (2006) Which Reduces Vehicle Travel More: Jobs-Housing Balance or Retail-Housing Mixing? Journal of the American Planning Association 72 (4), 475-490, 482, *available at* http://reconnectingamerica.org/assets/Uploads/UTCT-825.pdf.

3,000 city residents in local jobs since it was launched in 1986. When needed, these carrots are matched by sticks, since the city is not shy about negotiating corporate participation in First Source as a condition of approval for development permits.

O14-10 (cont.)

Recently, the State of California verified its commitment to developing its workforce through the Affordable Housing and High Road Jobs Act of 2022, otherwise known as Assembly Bill No. 2011 (AB2011). AB2011 amended the California Planning and Zoning Law to allow ministerial, by-right approval for projects being built alongside commercial corridors that meet certain affordability and labor requirements.

O14-11

The Plan focuses heavily on ensuring that the path to carbon neutrality is inclusive, accessible, equitable, and fair. Draft 2045 CAP, p. 1-13. It intends to effectuate its goals in a way that prioritizes frontline communities and low-income households that have historically experienced a disproportionately high share of environmental impacts. Many of these communities and households are comprised of or include laborers and carpenters. To ensure that this sector of the workforce is included in the Plan's definitive strategies and policies through a local hire mandate would not only further the County's goal of utilizing the Plan as a "policy document," but also further the Plan's commitment to create opportunities to "integrate equity in ways that help reverse the trends of discrimination and disinvestment." Draft 2045 CAP, p. 1-14.

O14-12

While the Plan's Climate Equity Guiding Principles may be adequate for prioritizing equity, more should be mandated. Implementing a local workforce requirement in all future applicable projects aligns with prioritizing frontline communities, promoting collaborative work, and achieving direct results.

O14-13

O14-14

The County should therefore consider mandating that all future projects in unincorporated L.A. County utilize local workforce policies and requirements to benefit the local area economically and to mitigate GHG emissions, improve air quality, and reduce transportation impacts.

O14-15

II. ALL FUTURE PROJECTS SHOULD BE CONSISTENT WITH THE 2045 CLIMATE ACTION PLAN APPROACH TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT.

O14-16

CEQA is a California statute designed to inform decision-makers and the public about the potential significant environmental effects of a project. CEQA Guidelines,

§ 15002, subd. (a)(1).[5] At its core, its purpose is to "inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made." *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564.

CEQA directs public agencies to avoid or reduce environmental damage, when possible, by requiring alternatives or mitigation measures. CEQA Guidelines, § 15002, subds. (a)(2)-(3); see also *Berkeley Keep Jets Over the Bay Com. v. Board of Port Comrs. of the City of Oakland* (2001) 91 Cal.App.4th 1344, 1354; *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 400. The Environmental Impact Report (EIR) serves to provide public agencies and the public in general with information about the effect that a proposed project is likely to have on the environment and to "identify ways that environmental damage can be avoided or significantly reduced." CEQA Guidelines, § 15002, subd. (a)(2). If the project has a significant effect on the environment, the agency may approve the project only upon finding that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns" specified in Public Resources Code section 21081. See CEQA Guidelines, §§ 15092, subds. (b)(2)(A)-(B).

O14-16 (cont.)

While the courts review an EIR using an 'abuse of discretion' standard, the reviewing court is not to *uncritically* rely on every study or analysis presented by a project proponent in support of its position. *Berkeley Keep Jets*, *supra*, 91 Cal.App.4th at p. 1355 (quoting *Laurel Heights, supra,* 47 Cal.3d at pp. 391, 409 fn. 12) (internal quotations omitted). A clearly inadequate or unsupported study is entitled to no judicial deference. *Id.* Drawing this line and determining whether the EIR complies with CEQA's information disclosure requirements presents a question of law subject to independent review by the courts. *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 515; *Madera Oversight Coalition, Inc. v. County of Madera* (2011) 199 Cal.App.4th 48, 102, 131. As the First District Court of Appeal has previously stated, prejudicial abuse of discretion occurs if the failure to include relevant information precludes informed decision-making and informed public participation, thereby thwarting the statutory

[5] The CEQA Guidelines, codified in Title 14 of the California Code of Regulations, section 15000 et seq., are regulatory guidelines promulgated by the state Natural Resources Agency for the implementation of CEQA. Pub. Res. Code, § 21083. The CEQA Guidelines are given "great weight in interpreting CEQA except when . . . clearly unauthorized or erroneous." *Center for Biological Diversity v. Dept. of Fish & Wildlife* (2015) 62 Cal.4th 204, 217.

goals of the EIR process. *Berkeley Keep Jets, supra*, 91 Cal.App.4th at p. 1355 (internal quotations omitted).

The preparation and circulation of an EIR is more than a set of technical hurdles for agencies and developers to overcome. *Communities for a Better Environment v. Richmond* (2010) 184 Cal.App.4th 70, 80 (quoting *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 449-450). The EIR's function is to ensure that government officials who decide to build or approve a project do so with a full understanding of the environmental consequences and, equally important, that the public is assured those consequences have been considered. *Id.* For the EIR to serve these goals it must present information so that the foreseeable impacts of pursuing the project can be understood and weighed, and the public must be given an adequate opportunity to comment on that presentation before the decision to go forward is made. *Id.*

O14-16 (cont.)

A strong presumption in favor of requiring preparation of an EIR is built into CEQA. This presumption is reflected in what is known as the "fair argument" standard under which an EIR must be prepared whenever substantial evidence in the record supports a fair argument that a project may have a significant effect on the environment. *Quail Botanical Gardens Found., Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1602; *Friends of "B" St. v. City of Hayward* (1980) 106 Cal.3d 988, 1002.

The fair argument test stems from the statutory mandate that an EIR be prepared for any project that "may have a significant effect on the environment." Pub. Res. Code, § 21151; see *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.App.3d 68, 75 (hereafter, "*No Oil*"); accord *Jensen v. City of Santa Rosa* (2018) 23 Cal.App.5th 877, 884 (hereafter, "*Jensen*"). Under this test, if a proposed project is not exempt and may cause a significant effect on the environment, the lead agency must prepare an EIR. Pub. Res. Code, §§ 21100, subd. (a), 21151; CEQA Guidelines, §§ 15064, subds. (a)(1), (f)(1). An EIR may be dispensed with only if the lead agency finds no substantial evidence in the initial study or elsewhere in the record that the project may have a significant effect on the environment. *Parker Shattuck Neighbors v. Berkeley City Council* (2013) 222 Cal.App.4th 768, 785. In such a situation, the lead agency *must* adopt a negative declaration. Pub. Res. Code, § 21080, subd. (c)(1); CEQA Guidelines, §§ 15063, subd. (b)(2), 15064, subd. (f)(3).

"Significant effect upon the environment" is defined as "a substantial or potentially substantial adverse change in the environment." Pub. Res. Code, § 21068; CEQA

Guidelines, § 15382. A project may have a significant effect on the environment if there is a reasonable probability that it will result in a significant impact. *No Oil, supra,* 13 Cal.App.3d at p. 83 fn. 16; see *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 309 (hereafter, "*Sundstrom*"). If any aspect of the project may result in a significant impact on the environment, an EIR must be prepared even if the overall effect of the project is beneficial. CEQA Guidelines, § 15063, subd. (b)(1); see *County Sanitation Dist. No. 2 v. County of Kern* (2005) 127 Cal.App.4th 1544, 1580.

O14-16 (cont.)

This standard sets a "low threshold" for preparation of an EIR. *Consolidated Irrigation Dist. v. City of Selma* (2012) 204 Cal.App.4th 187, 207; *Nelson v. County of Kern* (2010) 190 Cal.App.4th 252; *Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 928; *Bowman v. City of Berkeley* (2004) 122 Cal.App.4th 572, 580; *Citizen Action to Serve All Students v. Thornley* (1990) 222 Cal.App.3d 748, 754; *Sundstrom, supra,* 202 Cal.App.3d at p. 310. If substantial evidence in the record supports a fair argument that the project may have a significant environmental effect, the lead agency must prepare an EIR even if other substantial evidence before it indicates the project will have no significant effect. See *Jensen, supra*, 23 Cal.App.5th at p. 886; *Clews Land & Livestock v. City of San Diego* (2017) 19 Cal.App.5th 161, 183; *Stanislaus Audubon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150; *Brentwood Assn. for No Drilling, Inc. v. City of Los Angeles* (1982) 134 Cal.App.3d 491; *Friends of "B" St.*, 106 Cal.App.3d 988; CEQA Guidelines, § 15064, subd. (f)(1).

SWMSRCC supports the Plan's element to develop a new review consistency checklist to allow future projects to streamline GHG analyses pursuant to CEQA by allowing that General Plan-consistent projects that incorporate applicable 2045 CAP actions be excused from a separate quantitative GHG analysis. See Draft 2045 CAP, pp. ES-2, 1-4, 1-5.

O14-17

The CEQA Guidelines specify that CEQA review of a project's GHG emissions can be streamlined should the CAP do the following:

O14-18

- Quantifies GHG emissions, both existing and projected, from activities within a defined geographic area over a specified time period.
- Establishes a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable.
- Identifies and analyzes the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area.

- Specifies measures or a group of measures, including performance standards, that would collectively achieve the specified emissions level if implemented on a project-by-project basis, as demonstrated by substantial evidence.
- Establishes a mechanism for monitoring the plan's progress toward achieving the target, and requires an amendment if the plan is not achieving specified levels.
- Is adopted in a public process following environmental review.

O14-18 (cont.)

See Draft 2045 CAP, p. 1-4; CEQA Guidelines, § 15183.5.

Additionally, the Plan meets the requirements of CEQA Guidelines, section 15183.5 by:

- Quantifying all primary sectors of GHG emissions associated with all activities occurring within unincorporated Los Angeles County over which the County has some level of jurisdictional control or influence1 for 2015 through 2045;
- Establishing GHG emissions reduction targets for 2030, 2035, and 2045, below which GHG emissions would not be cumulatively considerable based on the substantial evidence that the 2045 CAP is consistent with the 2022 Scoping Plan, Senate Bill (SB) 32, and AB 1279,2 as well as an aspirational goal for 2045;
- Analyzing community emissions for unincorporated Los Angeles County as a whole and including predicted growth expected by 2045;
- Including specific mandatory and voluntary measures that quantitatively achieve the overall reduction targets for 2030, 2035, and 2045, and make progress toward the aspirational goal for 2045;
- Including an implementation and monitoring program that contains performance indicators and targets, details regarding funding and financing strategies, a list of available and expected funding sources, and a table for monitoring and reporting progress on the measures and their implementing actions; and,
- Being adopted through a public process in compliance with CEQ~~A~~.

Id.

Considering the magnitude of the emissions generated by on-road transportation in unincorporated L.A. County, coupled with the wide-reaching benefits of a reduction in VMT resulting from local hire requirements, SWMSRCC requests that the County

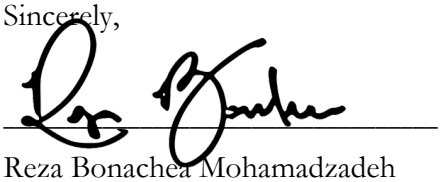
O14-19

include an additional provision into the Plan's CEQA streamlining procedures by mandating that a local hire measure be included in the checklist addressing all feasible applicable measures or alternative project emissions reduction measures as project features or as GHG mitigation measures for projects that are required or electing to prepare a project-specific GHG analysis. See Draft 2045 CAP, p. 1-5. O14-19 (cont.)

III. CONCLUSION

SWMSRCC respectfully requests that the County take into consideration the aforementioned concerns and incorporate the measures suggested into its implementation of the Plan. Doing so would address several of the Plan's strategy areas and further its overarching purpose, namely, to reduce the County's impact on climate change, to aid in its "obligation under CEQA . . . and various California Executive Orders to do its part to reduce GHG emissions within the state[,]" and to do so in ways that "support pathways toward equitable and transformative implementation of climate strategies." Draft 2045 CAP, p. 1-15. Should the County have any questions or concerns, it should feel free to contact my Office. O14-20

Sincerely,



Reza Bonachea Mohamadzadeh
Attorney for Southwest Mountain
States Regional Council of Carpenters

Attached:

March 8, 2021, SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling (Exhibit A);

Air Quality and GHG Expert Paul Rosenfeld CV (Exhibit B);

Air Quality and GHG Expert Matt Hagemann CV (Exhibit C).

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EXHIBIT A

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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March 8, 2021

Mitchell M. Tsai
155 South El Molino, Suite 104
Pasadena, CA 91101

Subject: Local Hire Requirements and Considerations for Greenhouse Gas Modeling

Dear Mr. Tsai,

Soil Water Air Protection Enterprise ("SWAPE") is pleased to provide the following draft technical report explaining the significance of worker trips required for construction of land use development projects with respect to the estimation of greenhouse gas ("GHG") emissions. The report will also discuss the potential for local hire requirements to reduce the length of worker trips, and consequently, reduced or mitigate the potential GHG impacts.

Worker Trips and Greenhouse Gas Calculations

The California Emissions Estimator Model ("CalEEMod") is a "statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects."[1] CalEEMod quantifies construction-related emissions associated with land use projects resulting from off-road construction equipment; on-road mobile equipment associated with workers, vendors, and hauling; fugitive dust associated with grading, demolition, truck loading, and on-road vehicles traveling along paved and unpaved roads; and architectural coating activities; and paving.[2]

The number, length, and vehicle class of worker trips are utilized by CalEEMod to calculate emissions associated with the on-road vehicle trips required to transport workers to and from the Project site during construction.[3]

[1] "California Emissions Estimator Model." CAPCOA, 2017, *available at:* http://www.aqmd.gov/caleemod/home.
[2] "California Emissions Estimator Model." CAPCOA, 2017, *available at:* http://www.aqmd.gov/caleemod/home.
[3] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.

Specifically, the number and length of vehicle trips is utilized to estimate the vehicle miles travelled ("VMT") associated with construction. Then, utilizing vehicle-class specific EMFAC 2014 emission factors, CalEEMod calculates the vehicle exhaust, evaporative, and dust emissions resulting from construction-related VMT, including personal vehicles for worker commuting.[4]

Specifically, in order to calculate VMT, CalEEMod multiplies the average daily trip rate by the average overall trip length (see excerpt below):

> "$VMT_d = \Sigma(\text{Average Daily Trip Rate}_i * \text{Average Overall Trip Length}_i)_n$
>
> Where:
>
> n = Number of land uses being modeled."[5]

Furthermore, to calculate the on-road emissions associated with worker trips, CalEEMod utilizes the following equation (see excerpt below):

> "$\text{Emissions}_{pollutant} = VMT * EF_{running,pollutant}$
>
> Where:
>
> $\text{Emissions}_{pollutant}$ = emissions from vehicle running for each pollutant
>
> VMT = vehicle miles traveled
>
> $EF_{running,pollutant}$ = emission factor for running emissions."[6]

Thus, there is a direct relationship between trip length and VMT, as well as a direct relationship between VMT and vehicle running emissions. In other words, when the trip length is increased, the VMT and vehicle running emissions increase as a result. Thus, vehicle running emissions can be reduced by decreasing the average overall trip length, by way of a local hire requirement or otherwise.

Default Worker Trip Parameters and Potential Local Hire Requirements

As previously discussed, the number, length, and vehicle class of worker trips are utilized by CalEEMod to calculate emissions associated with the on-road vehicle trips required to transport workers to and from the Project site during construction.[7] In order to understand how local hire requirements and associated worker trip length reductions impact GHG emissions calculations, it is important to consider the CalEEMod default worker trip parameters. CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act ("CEQA") requires that such changes be justified by substantial evidence.[8] The default number of construction-related worker trips is calculated by multiplying the

[4] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 14-15.
[5] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 23.
[6] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 15.
[7] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.
[8] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 1, 9.

number of pieces of equipment for all phases by 1.25, with the exception of worker trips required for the building construction and architectural coating phases.[9] Furthermore, the worker trip vehicle class is a 50/25/25 percent mix of light duty autos, light duty truck class 1 and light duty truck class 2, respectively."[10] Finally, the default worker trip length is consistent with the length of the operational home-to-work vehicle trips.[11] The operational home-to-work vehicle trip lengths are:

> "[B]ased on the *location* and *urbanization* selected on the project characteristic screen. These values were *supplied by the air districts or use a default average for the state*. Each district (or county) also assigns trip lengths for urban and rural settings" (emphasis added). [12]

Thus, the default worker trip length is based on the location and urbanization level selected by the User when modeling emissions. The below table shows the CalEEMod default rural and urban worker trip lengths by air basin (see excerpt below and Attachment A).[13]

Worker Trip Length by Air Basin		
Air Basin	**Rural (miles)**	**Urban (miles)**
Great Basin Valleys	16.8	10.8
Lake County	16.8	10.8
Lake Tahoe	16.8	10.8
Mojave Desert	16.8	10.8
Mountain Counties	16.8	10.8
North Central Coast	17.1	12.3
North Coast	16.8	10.8
Northeast Plateau	16.8	10.8
Sacramento Valley	16.8	10.8
Salton Sea	14.6	11
San Diego	16.8	10.8
San Francisco Bay Area	10.8	10.8
San Joaquin Valley	16.8	10.8
South Central Coast	16.8	10.8
South Coast	19.8	14.7
Average	**16.47**	**11.17**
Minimum	**10.80**	**10.80**
Maximum	**19.80**	**14.70**
Range	**9.00**	**3.90**

[9] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.
[10] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 15.
[11] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 14.
[12] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 21.
[13] "Appendix D Default Data Tables." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/05_appendix-d2016-3-2.pdf?sfvrsn=4, p. D-84 – D-86.

As demonstrated above, default rural worker trip lengths for air basins in California vary from 10.8- to 19.8-miles, with an average of 16.47 miles. Furthermore, default urban worker trip lengths vary from 10.8- to 14.7-miles, with an average of 11.17 miles. Thus, while default worker trip lengths vary by location, default urban worker trip lengths tend to be shorter in length. Based on these trends evident in the CalEEMod default worker trip lengths, we can reasonably assume that the efficacy of a local hire requirement is especially dependent upon the urbanization of the project site, as well as the project location.

Practical Application of a Local Hire Requirement and Associated Impact

To provide an example of the potential impact of a local hire provision on construction-related GHG emissions, we estimated the significance of a local hire provision for the Village South Specific Plan ("Project") located in the City of Claremont ("City"). The Project proposed to construct 1,000 residential units, 100,000-SF of retail space, 45,000-SF of office space, as well as a 50-room hotel, on the 24-acre site. The Project location is classified as Urban and lies within the Los Angeles-South Coast County. As a result, the Project has a default worker trip length of 14.7 miles.[14] In an effort to evaluate the potential for a local hire provision to reduce the Project's construction-related GHG emissions, we prepared an updated model, reducing all worker trip lengths to 10 miles (see Attachment B). Our analysis estimates that if a local hire provision with a 10-mile radius were to be implemented, the GHG emissions associated with Project construction would decrease by approximately 17% (see table below and Attachment C).

Local Hire Provision Net Change	
Without Local Hire Provision	
Total Construction GHG Emissions (MT CO_2e)	3,623
Amortized Construction GHG Emissions (MT CO_2e/year)	120.77
With Local Hire Provision	
Total Construction GHG Emissions (MT CO2e)	3,024
Amortized Construction GHG Emissions (MT CO_2e/year)	100.80
% Decrease in Construction-related GHG Emissions	***17%***

As demonstrated above, by implementing a local hire provision requiring 10 mile worker trip lengths, the Project could reduce potential GHG emissions associated with construction worker trips. More broadly, any local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the reduction would vary based on the location and urbanization level of the project site.

This serves as an example of the potential impacts of local hire requirements on estimated project-level GHG emissions, though it does not indicate that local hire requirements would result in reduced construction-related GHG emission for all projects. As previously described, the significance of a local hire requirement depends on the worker trip length enforced and the default worker trip length for the project's urbanization level and location.

[14] "Appendix D Default Data Tables." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/05_appendix-d2016-3-2.pdf?sfvrsn=4, p. D-85.

Disclaimer

SWAPE has received limited discovery. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,

Matt Hagemann, P.G., C.Hg.

Paul E. Rosenfeld, Ph.D.

Attachment A

Location Type	Location Name	Rural H-W (miles)	Urban H-W (miles)
Air Basin	Great Basin	16.8	10.8
Air Basin	Lake County	16.8	10.8
Air Basin	Lake Tahoe	16.8	10.8
Air Basin	Mojave Desert	16.8	10.8
Air Basin	Mountain	16.8	10.8
Air Basin	North Central	17.1	12.3
Air Basin	North Coast	16.8	10.8
Air Basin	Northeast	16.8	10.8
Air Basin	Sacramento	16.8	10.8
Air Basin	Salton Sea	14.6	11
Air Basin	San Diego	16.8	10.8
Air Basin	San Francisco	10.8	10.8
Air Basin	San Joaquin	16.8	10.8
Air Basin	South Central	16.8	10.8
Air Basin	South Coast	19.8	14.7
Air District	Amador County	16.8	10.8
Air District	Antelope Valley	16.8	10.8
Air District	Bay Area AQMD	10.8	10.8
Air District	Butte County	12.54	12.54
Air District	Calaveras	16.8	10.8
Air District	Colusa County	16.8	10.8
Air District	El Dorado	16.8	10.8
Air District	Feather River	16.8	10.8
Air District	Glenn County	16.8	10.8
Air District	Great Basin	16.8	10.8
Air District	Imperial County	10.2	7.3
Air District	Kern County	16.8	10.8
Air District	Lake County	16.8	10.8
Air District	Lassen County	16.8	10.8
Air District	Mariposa	16.8	10.8
Air District	Mendocino	16.8	10.8
Air District	Modoc County	16.8	10.8
Air District	Mojave Desert	16.8	10.8
Air District	Monterey Bay	16.8	10.8
Air District	North Coast	16.8	10.8
Air District	Northern Sierra	16.8	10.8
Air District	Northern	16.8	10.8
Air District	Placer County	16.8	10.8
Air District	Sacramento	15	10

Air District	San Diego	16.8	10.8
Air District	San Joaquin	16.8	10.8
Air District	San Luis Obispo	13	13
Air District	Santa Barbara	8.3	8.3
Air District	Shasta County	16.8	10.8
Air District	Siskiyou County	16.8	10.8
Air District	South Coast	19.8	14.7
Air District	Tehama County	16.8	10.8
Air District	Tuolumne	16.8	10.8
Air District	Ventura County	16.8	10.8
Air District	Yolo/Solano	15	10
County	Alameda	10.8	10.8
County	Alpine	16.8	10.8
County	Amador	16.8	10.8
County	Butte	12.54	12.54
County	Calaveras	16.8	10.8
County	Colusa	16.8	10.8
County	Contra Costa	10.8	10.8
County	Del Norte	16.8	10.8
County	El Dorado-Lake	16.8	10.8
County	El Dorado-	16.8	10.8
County	Fresno	16.8	10.8
County	Glenn	16.8	10.8
County	Humboldt	16.8	10.8
County	Imperial	10.2	7.3
County	Inyo	16.8	10.8
County	Kern-Mojave	16.8	10.8
County	Kern-San	16.8	10.8
County	Kings	16.8	10.8
County	Lake	16.8	10.8
County	Lassen	16.8	10.8
County	Los Angeles-	16.8	10.8
County	Los Angeles-	19.8	14.7
County	Madera	16.8	10.8
County	Marin	10.8	10.8
County	Mariposa	16.8	10.8
County	Mendocino-	16.8	10.8
County	Mendocino-	16.8	10.8
County	Mendocino-	16.8	10.8
County	Mendocino-	16.8	10.8
County	Merced	16.8	10.8
County	Modoc	16.8	10.8
County	Mono	16.8	10.8
County	Monterey	16.8	10.8
County	Napa	10.8	10.8

County	Nevada	16.8	10.8
County	Orange	19.8	14.7
County	Placer-Lake	16.8	10.8
County	Placer-Mountain	16.8	10.8
County	Placer-	16.8	10.8
County	Plumas	16.8	10.8
County	Riverside-	16.8	10.8
County	Riverside-	19.8	14.7
County	Riverside-Salton	14.6	11
County	Riverside-South	19.8	14.7
County	Sacramento	15	10
County	San Benito	16.8	10.8
County	San Bernardino-	16.8	10.8
County	San Bernardino-	19.8	14.7
County	San Diego	16.8	10.8
County	San Francisco	10.8	10.8
County	San Joaquin	16.8	10.8
County	San Luis Obispo	13	13
County	San Mateo	10.8	10.8
County	Santa Barbara-	8.3	8.3
County	Santa Barbara-	8.3	8.3
County	Santa Clara	10.8	10.8
County	Santa Cruz	16.8	10.8
County	Shasta	16.8	10.8
County	Sierra	16.8	10.8
County	Siskiyou	16.8	10.8
County	Solano-	15	10
County	Solano-San	16.8	10.8
County	Sonoma-North	16.8	10.8
County	Sonoma-San	10.8	10.8
County	Stanislaus	16.8	10.8
County	Sutter	16.8	10.8
County	Tehama	16.8	10.8
County	Trinity	16.8	10.8
County	Tulare	16.8	10.8
County	Tuolumne	16.8	10.8
County	Ventura	16.8	10.8
County	Yolo	15	10
County	Yuba	16.8	10.8
Statewide	Statewide	16.8	10.8

Worker Trip Length by Air Basin		
Air Basin	**Rural (miles)**	**Urban (miles)**
Great Basin Valleys	16.8	10.8
Lake County	16.8	10.8
Lake Tahoe	16.8	10.8
Mojave Desert	16.8	10.8
Mountain Counties	16.8	10.8
North Central Coast	17.1	12.3
North Coast	16.8	10.8
Northeast Plateau	16.8	10.8
Sacramento Valley	16.8	10.8
Salton Sea	14.6	11
San Diego	16.8	10.8
San Francisco Bay Area	10.8	10.8
San Joaquin Valley	16.8	10.8
South Central Coast	16.8	10.8
South Coast	19.8	14.7
Average	**16.47**	**11.17**
Mininum	**10.80**	**10.80**
Maximum	**19.80**	**14.70**
Range	**9.00**	**3.90**

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82
tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27

tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1713	1.8242	1.1662	2.4000e-003	0.4169	0.0817	0.4986	0.1795	0.0754	0.2549	0.0000	213.1969	213.1969	0.0601	0.0000	214.6993
2022	0.6904	4.1142	6.1625	0.0189	1.3058	0.1201	1.4259	0.3460	0.1128	0.4588	0.0000	1,721.6826	1,721.6826	0.1294	0.0000	1,724.9187
2023	0.6148	3.3649	5.6747	0.0178	1.1963	0.0996	1.2959	0.3203	0.0935	0.4138	0.0000	1,627.5295	1,627.5295	0.1185	0.0000	1,630.4925
2024	4.1619	0.1335	0.2810	5.9000e-004	0.0325	6.4700e-003	0.0390	8.6300e-003	6.0400e-003	0.0147	0.0000	52.9078	52.9078	8.0200e-003	0.0000	53.1082
Maximum	**4.1619**	**4.1142**	**6.1625**	**0.0189**	**1.3058**	**0.1201**	**1.4259**	**0.3460**	**0.1128**	**0.4588**	**0.0000**	**1,721.6826**	**1,721.6826**	**0.1294**	**0.0000**	**1,724.9187**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1713	1.8242	1.1662	2.4000e-003	0.4169	0.0817	0.4986	0.1795	0.0754	0.2549	0.0000	213.1967	213.1967	0.0601	0.0000	214.6991
2022	0.6904	4.1142	6.1625	0.0189	1.3058	0.1201	1.4259	0.3460	0.1128	0.4588	0.0000	1,721.6823	1,721.6823	0.1294	0.0000	1,724.9183
2023	0.6148	3.3648	5.6747	0.0178	1.1963	0.0996	1.2959	0.3203	0.0935	0.4138	0.0000	1,627.5291	1,627.5291	0.1185	0.0000	1,630.4921
2024	4.1619	0.1335	0.2810	5.9000e-004	0.0325	6.4700e-003	0.0390	8.6300e-003	6.0400e-003	0.0147	0.0000	52.9077	52.9077	8.0200e-003	0.0000	53.1082
Maximum	**4.1619**	**4.1142**	**6.1625**	**0.0189**	**1.3058**	**0.1201**	**1.4259**	**0.3460**	**0.1128**	**0.4588**	**0.0000**	**1,721.6823**	**1,721.6823**	**0.1294**	**0.0000**	**1,724.9183**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-1-2021**	**11-30-2021**	1.4103	1.4103
2	**12-1-2021**	**2-28-2022**	1.3613	1.3613
3	**3-1-2022**	**5-31-2022**	1.1985	1.1985
4	**6-1-2022**	**8-31-2022**	1.1921	1.1921
5	**9-1-2022**	**11-30-2022**	1.1918	1.1918
6	**12-1-2022**	**2-28-2023**	1.0774	1.0774
7	**3-1-2023**	**5-31-2023**	1.0320	1.0320
8	**6-1-2023**	**8-31-2023**	1.0260	1.0260

9	**9-1-2023**	**11-30-2023**	1.0265	1.0265
10	**12-1-2023**	**2-29-2024**	2.8857	2.8857
11	**3-1-2024**	**5-31-2024**	1.6207	1.6207
		Highest	2.8857	2.8857

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3,896.0732	3,896.0732	0.1303	0.0468	3,913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567
Total	**6.8692**	**9.5223**	**30.3407**	**0.0914**	**7.7979**	**0.2260**	**8.0240**	**2.0895**	**0.2219**	**2.3114**	**236.9712**	**12,294.1807**	**12,531.1519**	**15.7904**	**0.1260**	**12,963.4751**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3,896.0732	3,896.0732	0.1303	0.0468	3,913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567
Total	**6.8692**	**9.5223**	**30.3407**	**0.0914**	**7.7979**	**0.2260**	**8.0240**	**2.0895**	**0.2219**	**2.3114**	**236.9712**	**12,294.1807**	**12,531.1519**	**15.7904**	**0.1260**	**12,963.4751**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0012	51.0012	0.0144	0.0000	51.3601
Total	**0.0475**	**0.4716**	**0.3235**	**5.8000e-004**	**0.0496**	**0.0233**	**0.0729**	**7.5100e-003**	**0.0216**	**0.0291**	**0.0000**	**51.0012**	**51.0012**	**0.0144**	**0.0000**	**51.3601**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.7000e-004	7.5000e-004	8.5100e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4900e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.2251	2.2251	7.0000e-005	0.0000	2.2267
Total	**2.9000e-003**	**0.0641**	**0.0233**	**2.0000e-004**	**6.4100e-003**	**2.1000e-004**	**6.6200e-003**	**1.7300e-003**	**2.0000e-004**	**1.9300e-003**	**0.0000**	**19.6816**	**19.6816**	**1.2800e-003**	**0.0000**	**19.7136**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0011	51.0011	0.0144	0.0000	51.3600
Total	**0.0475**	**0.4716**	**0.3235**	**5.8000e-004**	**0.0496**	**0.0233**	**0.0729**	**7.5100e-003**	**0.0216**	**0.0291**	**0.0000**	**51.0011**	**51.0011**	**0.0144**	**0.0000**	**51.3600**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.7000e-004	7.5000e-004	8.5100e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4900e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.2251	2.2251	7.0000e-005	0.0000	2.2267
Total	**2.9000e-003**	**0.0641**	**0.0233**	**2.0000e-004**	**6.4100e-003**	**2.1000e-004**	**6.6200e-003**	**1.7300e-003**	**2.0000e-004**	**1.9300e-003**	**0.0000**	**19.6816**	**19.6816**	**1.2800e-003**	**0.0000**	**19.7136**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7061
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7061**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	6.0000e-004	6.8100e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7801	1.7801	5.0000e-005	0.0000	1.7814
Total	**7.7000e-004**	**6.0000e-004**	**6.8100e-003**	**2.0000e-005**	**1.9700e-003**	**2.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.7801**	**1.7801**	**5.0000e-005**	**0.0000**	**1.7814**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7060
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7060**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	6.0000e-004	6.8100e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7801	1.7801	5.0000e-005	0.0000	1.7814
Total	**7.7000e-004**	**6.0000e-004**	**6.8100e-003**	**2.0000e-005**	**1.9700e-003**	**2.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.7801**	**1.7801**	**5.0000e-005**	**0.0000**	**1.7814**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377		0.0347	0.0347	0.0000	103.5405	103.5405	0.0335	0.0000	104.3776
Total	**0.0796**	**0.8816**	**0.5867**	**1.1800e-003**	**0.1741**	**0.0377**	**0.2118**	**0.0693**	**0.0347**	**0.1040**	**0.0000**	**103.5405**	**103.5405**	**0.0335**	**0.0000**	**104.3776**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6400e-003	1.2700e-003	0.0144	4.0000e-005	4.1600e-003	3.0000e-005	4.2000e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.7579	3.7579	1.1000e-004	0.0000	3.7607
Total	**1.6400e-003**	**1.2700e-003**	**0.0144**	**4.0000e-005**	**4.1600e-003**	**3.0000e-005**	**4.2000e-003**	**1.1100e-003**	**3.0000e-005**	**1.1400e-003**	**0.0000**	**3.7579**	**3.7579**	**1.1000e-004**	**0.0000**	**3.7607**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377		0.0347	0.0347	0.0000	103.5403	103.5403	0.0335	0.0000	104.3775
Total	**0.0796**	**0.8816**	**0.5867**	**1.1800e-003**	**0.1741**	**0.0377**	**0.2118**	**0.0693**	**0.0347**	**0.1040**	**0.0000**	**103.5403**	**103.5403**	**0.0335**	**0.0000**	**104.3775**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6400e-003	1.2700e-003	0.0144	4.0000e-005	4.1600e-003	3.0000e-005	4.2000e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.7579	3.7579	1.1000e-004	0.0000	3.7607
Total	**1.6400e-003**	**1.2700e-003**	**0.0144**	**4.0000e-005**	**4.1600e-003**	**3.0000e-005**	**4.2000e-003**	**1.1100e-003**	**3.0000e-005**	**1.1400e-003**	**0.0000**	**3.7579**	**3.7579**	**1.1000e-004**	**0.0000**	**3.7607**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004		5.7200e-003	5.7200e-003		5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	**0.0127**	**0.1360**	**0.1017**	**2.2000e-004**	**0.0807**	**5.7200e-003**	**0.0865**	**0.0180**	**5.2600e-003**	**0.0233**	**0.0000**	**19.0871**	**19.0871**	**6.1700e-003**	**0.0000**	**19.2414**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.7000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.6679	0.6679	2.0000e-005	0.0000	0.6684
Total	**2.8000e-004**	**2.1000e-004**	**2.4400e-003**	**1.0000e-005**	**7.7000e-004**	**1.0000e-005**	**7.7000e-004**	**2.0000e-004**	**1.0000e-005**	**2.1000e-004**	**0.0000**	**0.6679**	**0.6679**	**2.0000e-005**	**0.0000**	**0.6684**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004		5.7200e-003	5.7200e-003		5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	**0.0127**	**0.1360**	**0.1017**	**2.2000e-004**	**0.0807**	**5.7200e-003**	**0.0865**	**0.0180**	**5.2600e-003**	**0.0233**	**0.0000**	**19.0871**	**19.0871**	**6.1700e-003**	**0.0000**	**19.2414**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.7000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.6679	0.6679	2.0000e-005	0.0000	0.6684
Total	**2.8000e-004**	**2.1000e-004**	**2.4400e-003**	**1.0000e-005**	**7.7000e-004**	**1.0000e-005**	**7.7000e-004**	**2.0000e-004**	**1.0000e-005**	**2.1000e-004**	**0.0000**	**0.6679**	**0.6679**	**2.0000e-005**	**0.0000**	**0.6684**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023		0.0963	0.0963	0.0000	293.1324	293.1324	0.0702	0.0000	294.8881
Total	**0.2158**	**1.9754**	**2.0700**	**3.4100e-003**		**0.1023**	**0.1023**		**0.0963**	**0.0963**	**0.0000**	**293.1324**	**293.1324**	**0.0702**	**0.0000**	**294.8881**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.4088	0.3066	3.5305	0.0107	1.1103	8.8700e-003	1.1192	0.2949	8.1700e-003	0.3031	0.0000	966.8117	966.8117	0.0266	0.0000	967.4773
Total	**0.4616**	**2.0027**	**3.9885**	**0.0152**	**1.2243**	**0.0121**	**1.2363**	**0.3278**	**0.0112**	**0.3390**	**0.0000**	**1,408.7952**	**1,408.7952**	**0.0530**	**0.0000**	**1,410.1208**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023		0.0963	0.0963	0.0000	293.1321	293.1321	0.0702	0.0000	294.8877
Total	**0.2158**	**1.9754**	**2.0700**	**3.4100e-003**		**0.1023**	**0.1023**		**0.0963**	**0.0963**	**0.0000**	**293.1321**	**293.1321**	**0.0702**	**0.0000**	**294.8877**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.4088	0.3066	3.5305	0.0107	1.1103	8.8700e-003	1.1192	0.2949	8.1700e-003	0.3031	0.0000	966.8117	966.8117	0.0266	0.0000	967.4773
Total	**0.4616**	**2.0027**	**3.9885**	**0.0152**	**1.2243**	**0.0121**	**1.2363**	**0.3278**	**0.0112**	**0.3390**	**0.0000**	**1,408.7952**	**1,408.7952**	**0.0530**	**0.0000**	**1,410.1208**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2789	286.2789	0.0681	0.0000	287.9814
Total	**0.1942**	**1.7765**	**2.0061**	**3.3300e-003**		**0.0864**	**0.0864**		**0.0813**	**0.0813**	**0.0000**	**286.2789**	**286.2789**	**0.0681**	**0.0000**	**287.9814**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.3753	0.2708	3.1696	0.0101	1.0840	8.4100e-003	1.0924	0.2879	7.7400e-003	0.2957	0.0000	909.3439	909.3439	0.0234	0.0000	909.9291
Total	**0.4135**	**1.5218**	**3.5707**	**0.0144**	**1.1953**	**9.8700e-003**	**1.2051**	**0.3200**	**9.1400e-003**	**0.3292**	**0.0000**	**1,327.3369**	**1,327.3369**	**0.0462**	**0.0000**	**1,328.4916**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2785	286.2785	0.0681	0.0000	287.9811
Total	**0.1942**	**1.7765**	**2.0061**	**3.3300e-003**		**0.0864**	**0.0864**		**0.0813**	**0.0813**	**0.0000**	**286.2785**	**286.2785**	**0.0681**	**0.0000**	**287.9811**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.3753	0.2708	3.1696	0.0101	1.0840	8.4100e-003	1.0924	0.2879	7.7400e-003	0.2957	0.0000	909.3439	909.3439	0.0234	0.0000	909.9291
Total	**0.4135**	**1.5218**	**3.5707**	**0.0144**	**1.1953**	**9.8700e-003**	**1.2051**	**0.3200**	**9.1400e-003**	**0.3292**	**0.0000**	**1,327.3369**	**1,327.3369**	**0.0462**	**0.0000**	**1,328.4916**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7100e-003**	**0.0663**	**0.0948**	**1.5000e-004**		**3.3200e-003**	**3.3200e-003**		**3.0500e-003**	**3.0500e-003**	**0.0000**	**13.0175**	**13.0175**	**4.2100e-003**	**0.0000**	**13.1227**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.7000e-004	3.1200e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.8963	0.8963	2.0000e-005	0.0000	0.8968
Total	**3.7000e-004**	**2.7000e-004**	**3.1200e-003**	**1.0000e-005**	**1.0700e-003**	**1.0000e-005**	**1.0800e-003**	**2.8000e-004**	**1.0000e-005**	**2.9000e-004**	**0.0000**	**0.8963**	**0.8963**	**2.0000e-005**	**0.0000**	**0.8968**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7100e-003**	**0.0663**	**0.0948**	**1.5000e-004**		**3.3200e-003**	**3.3200e-003**		**3.0500e-003**	**3.0500e-003**	**0.0000**	**13.0175**	**13.0175**	**4.2100e-003**	**0.0000**	**13.1227**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.7000e-004	3.1200e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.8963	0.8963	2.0000e-005	0.0000	0.8968
Total	**3.7000e-004**	**2.7000e-004**	**3.1200e-003**	**1.0000e-005**	**1.0700e-003**	**1.0000e-005**	**1.0800e-003**	**2.8000e-004**	**1.0000e-005**	**2.9000e-004**	**0.0000**	**0.8963**	**0.8963**	**2.0000e-005**	**0.0000**	**0.8968**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0109	0.1048	0.1609	2.5000e-004		5.1500e-003	5.1500e-003		4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0109**	**0.1048**	**0.1609**	**2.5000e-004**		**5.1500e-003**	**5.1500e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**22.0292**	**22.0292**	**7.1200e-003**	**0.0000**	**22.2073**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.1000e-004	4.9200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4697	1.4697	4.0000e-005	0.0000	1.4706
Total	**5.9000e-004**	**4.1000e-004**	**4.9200e-003**	**2.0000e-005**	**1.8100e-003**	**1.0000e-005**	**1.8200e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4697**	**1.4697**	**4.0000e-005**	**0.0000**	**1.4706**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0109	0.1048	0.1609	2.5000e-004		5.1500e-003	5.1500e-003		4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0109**	**0.1048**	**0.1609**	**2.5000e-004**		**5.1500e-003**	**5.1500e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**22.0292**	**22.0292**	**7.1200e-003**	**0.0000**	**22.2073**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.1000e-004	4.9200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4697	1.4697	4.0000e-005	0.0000	1.4706
Total	**5.9000e-004**	**4.1000e-004**	**4.9200e-003**	**2.0000e-005**	**1.8100e-003**	**1.0000e-005**	**1.8200e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4697**	**1.4697**	**4.0000e-005**	**0.0000**	**1.4706**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**4.1404**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0101	6.9900e-003	0.0835	2.8000e-004	0.0307	2.3000e-004	0.0309	8.1500e-003	2.2000e-004	8.3700e-003	0.0000	24.9407	24.9407	6.1000e-004	0.0000	24.9558
Total	**0.0101**	**6.9900e-003**	**0.0835**	**2.8000e-004**	**0.0307**	**2.3000e-004**	**0.0309**	**8.1500e-003**	**2.2000e-004**	**8.3700e-003**	**0.0000**	**24.9407**	**24.9407**	**6.1000e-004**	**0.0000**	**24.9558**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**4.1404**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0101	6.9900e-003	0.0835	2.8000e-004	0.0307	2.3000e-004	0.0309	8.1500e-003	2.2000e-004	8.3700e-003	0.0000	24.9407	24.9407	6.1000e-004	0.0000	24.9558
Total	**0.0101**	**6.9900e-003**	**0.0835**	**2.8000e-004**	**0.0307**	**2.3000e-004**	**0.0309**	**8.1500e-003**	**2.2000e-004**	**8.3700e-003**	**0.0000**	**24.9407**	**24.9407**	**6.1000e-004**	**0.0000**	**24.9558**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Unmitigated	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,512.6465	2,512.6465	0.1037	0.0215	2,521.6356
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,512.6465	2,512.6465	0.1037	0.0215	2,521.6356
NaturalGas Mitigated	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	1,383.4267	1,383.4267	0.0265	0.0254	1,391.6478
NaturalGas Unmitigated	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	1,383.4267	1,383.4267	0.0265	0.0254	1,391.6478

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003		0.0487	0.0487		0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003		0.0310	0.0310		0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004		6.4900e-003	6.4900e-003		6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004		6.8800e-003	6.8800e-003		6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301
Total		**0.1398**	**1.2312**	**0.7770**	**7.6200e-003**		**0.0966**	**0.0966**		**0.0966**	**0.0966**	**0.0000**	**1,383.4268**	**1,383.4268**	**0.0265**	**0.0254**	**1,391.6478**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003		0.0487	0.0487		0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003		0.0310	0.0310		0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004		6.4900e-003	6.4900e-003		6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004		6.8800e-003	6.8800e-003		6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301
Total		**0.1398**	**1.2312**	**0.7770**	**7.6200e-003**		**0.0966**	**0.0966**		**0.0966**	**0.0966**	**0.0000**	**1,383.4268**	**1,383.4268**	**0.0265**	**0.0254**	**1,391.6478**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartments Mid Rise	3.94697e+006	1,257.5879	0.0519	0.0107	1,262.0869
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		**2,512.6465**	**0.1037**	**0.0215**	**2,521.6356**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartments Mid Rise	3.94697e+006	1,257.5879	0.0519	0.0107	1,262.0869
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		**2,512.6465**	**0.1037**	**0.0215**	**2,521.6356**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Unmitigated	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003		0.0143	0.0143		0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004		0.0572	0.0572		0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	**5.1437**	**0.2950**	**10.3804**	**1.6600e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**	**0.0000**	**220.9670**	**220.9670**	**0.0201**	**3.7400e-003**	**222.5835**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003		0.0143	0.0143		0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004		0.0572	0.0572		0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	**5.1437**	**0.2950**	**10.3804**	**1.6600e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**	**0.0000**	**220.9670**	**220.9670**	**0.0201**	**3.7400e-003**	**222.5835**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	585.8052	3.0183	0.0755	683.7567
Unmitigated	585.8052	3.0183	0.0755	683.7567

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02688	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		**585.8052**	**3.0183**	**0.0755**	**683.7567**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02688	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		**585.8052**	**3.0183**	**0.0755**	**683.7567**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	207.8079	12.2811	0.0000	514.8354
Unmitigated	207.8079	12.2811	0.0000	514.8354

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430
Hotel	27.38	5.5579	0.3285	0.0000	13.7694
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706
Total		**207.8079**	**12.2811**	**0.0000**	**514.8354**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430
Hotel	27.38	5.5579	0.3285	0.0000	13.7694
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706
Total		**207.8079**	**12.2811**	**0.0000**	**514.8354**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82
tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27

tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2769	46.4588	31.6840	0.0643	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,234.7974	6,234.7974	1.9495	0.0000	6,283.5352
2022	5.3304	38.8967	49.5629	0.1517	9.8688	1.6366	10.7727	3.6558	1.5057	5.1615	0.0000	15,251.5674	15,251.5674	1.9503	0.0000	15,278.5288
2023	4.8957	26.3317	46.7567	0.1472	9.8688	0.7794	10.6482	2.6381	0.7322	3.3702	0.0000	14,807.5269	14,807.5269	1.0250	0.0000	14,833.1521
2024	237.1630	9.5575	15.1043	0.0244	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,361.3989	2,361.3989	0.7177	0.0000	2,379.3421
Maximum	**237.1630**	**46.4588**	**49.5629**	**0.1517**	**18.2675**	**2.0461**	**20.3135**	**9.9840**	**1.8824**	**11.8664**	**0.0000**	**15,251.5674**	**15,251.5674**	**1.9503**	**0.0000**	**15,278.5288**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2769	46.4588	31.6840	0.0643	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,234.7974	6,234.7974	1.9495	0.0000	6,283.5352
2022	5.3304	38.8967	49.5629	0.1517	9.8688	1.6366	10.7727	3.6558	1.5057	5.1615	0.0000	15,251.5674	15,251.5674	1.9503	0.0000	15,278.5288
2023	4.8957	26.3317	46.7567	0.1472	9.8688	0.7794	10.6482	2.6381	0.7322	3.3702	0.0000	14,807.5269	14,807.5269	1.0250	0.0000	14,833.1520
2024	237.1630	9.5575	15.1043	0.0244	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,361.3989	2,361.3989	0.7177	0.0000	2,379.3421
Maximum	**237.1630**	**46.4588**	**49.5629**	**0.1517**	**18.2675**	**2.0461**	**20.3135**	**9.9840**	**1.8824**	**11.8664**	**0.0000**	**15,251.5674**	**15,251.5674**	**1.9503**	**0.0000**	**15,278.5288**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Total	**41.1168**	**67.2262**	**207.5497**	**0.6278**	**45.9592**	**2.4626**	**48.4217**	**12.2950**	**2.4385**	**14.7336**	**0.0000**	**76,811.1816**	**76,811.1816**	**2.8282**	**0.4832**	**77,025.8786**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Total	**41.1168**	**67.2262**	**207.5497**	**0.6278**	**45.9592**	**2.4626**	**48.4217**	**12.2950**	**2.4385**	**14.7336**	**0.0000**	**76,811.1816**	**76,811.1816**	**2.8282**	**0.4832**	**77,025.8786**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1273	4.0952	0.9602	0.0119	0.2669	0.0126	0.2795	0.0732	0.0120	0.0852		1,292.2413	1,292.2413	0.0877		1,294.4337
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0643	0.0442	0.6042	1.7100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		170.8155	170.8155	5.0300e-003		170.9413
Total	**0.1916**	**4.1394**	**1.5644**	**0.0136**	**0.4346**	**0.0139**	**0.4485**	**0.1176**	**0.0133**	**0.1309**		**1,463.0568**	**1,463.0568**	**0.0927**		**1,465.3750**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1273	4.0952	0.9602	0.0119	0.2669	0.0126	0.2795	0.0732	0.0120	0.0852		1,292.2413	1,292.2413	0.0877		1,294.4337
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0643	0.0442	0.6042	1.7100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		170.8155	170.8155	5.0300e-003		170.9413
Total	**0.1916**	**4.1394**	**1.5644**	**0.0136**	**0.4346**	**0.0139**	**0.4485**	**0.1176**	**0.0133**	**0.1309**		**1,463.0568**	**1,463.0568**	**0.0927**		**1,465.3750**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0772	0.0530	0.7250	2.0600e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		204.9786	204.9786	6.0400e-003		205.1296
Total	**0.0772**	**0.0530**	**0.7250**	**2.0600e-003**	**0.2012**	**1.6300e-003**	**0.2028**	**0.0534**	**1.5000e-003**	**0.0549**		**204.9786**	**204.9786**	**6.0400e-003**		**205.1296**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0772	0.0530	0.7250	2.0600e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		204.9786	204.9786	6.0400e-003		205.1296
Total	**0.0772**	**0.0530**	**0.7250**	**2.0600e-003**	**0.2012**	**1.6300e-003**	**0.2028**	**0.0534**	**1.5000e-003**	**0.0549**		**204.9786**	**204.9786**	**6.0400e-003**		**205.1296**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		227.7540	227.7540	6.7100e-003		227.9217
Total	**0.0857**	**0.0589**	**0.8056**	**2.2900e-003**	**0.2236**	**1.8100e-003**	**0.2254**	**0.0593**	**1.6600e-003**	**0.0610**		**227.7540**	**227.7540**	**6.7100e-003**		**227.9217**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		227.7540	227.7540	6.7100e-003		227.9217
Total	**0.0857**	**0.0589**	**0.8056**	**2.2900e-003**	**0.2236**	**1.8100e-003**	**0.2254**	**0.0593**	**1.6600e-003**	**0.0610**		**227.7540**	**227.7540**	**6.7100e-003**		**227.9217**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		219.7425	219.7425	6.0600e-003		219.8941
Total	**0.0803**	**0.0532**	**0.7432**	**2.2100e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6100e-003**	**0.0609**		**219.7425**	**219.7425**	**6.0600e-003**		**219.8941**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		219.7425	219.7425	6.0600e-003		219.8941
Total	**0.0803**	**0.0532**	**0.7432**	**2.2100e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6100e-003**	**0.0609**		**219.7425**	**219.7425**	**6.0600e-003**		**219.8941**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4079	13.2032	3.4341	0.0364	0.9155	0.0248	0.9404	0.2636	0.0237	0.2873		3,896.5482	3,896.5482	0.2236		3,902.1384
Worker	3.2162	2.1318	29.7654	0.0883	8.9533	0.0701	9.0234	2.3745	0.0646	2.4390		8,800.6857	8,800.6857	0.2429		8,806.7582
Total	**3.6242**	**15.3350**	**33.1995**	**0.1247**	**9.8688**	**0.0949**	**9.9637**	**2.6381**	**0.0883**	**2.7263**		**12,697.2339**	**12,697.2339**	**0.4665**		**12,708.8966**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4079	13.2032	3.4341	0.0364	0.9155	0.0248	0.9404	0.2636	0.0237	0.2873		3,896.5482	3,896.5482	0.2236		3,902.1384
Worker	3.2162	2.1318	29.7654	0.0883	8.9533	0.0701	9.0234	2.3745	0.0646	2.4390		8,800.6857	8,800.6857	0.2429		8,806.7582
Total	**3.6242**	**15.3350**	**33.1995**	**0.1247**	**9.8688**	**0.0949**	**9.9637**	**2.6381**	**0.0883**	**2.7263**		**12,697.2339**	**12,697.2339**	**0.4665**		**12,708.8966**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3027	10.0181	3.1014	0.0352	0.9156	0.0116	0.9271	0.2636	0.0111	0.2747		3,773.8762	3,773.8762	0.1982		3,778.8300
Worker	3.0203	1.9287	27.4113	0.0851	8.9533	0.0681	9.0214	2.3745	0.0627	2.4372		8,478.4408	8,478.4408	0.2190		8,483.9160
Total	**3.3229**	**11.9468**	**30.5127**	**0.1203**	**9.8688**	**0.0797**	**9.9485**	**2.6381**	**0.0738**	**2.7118**		**12,252.3170**	**12,252.3170**	**0.4172**		**12,262.7460**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3027	10.0181	3.1014	0.0352	0.9156	0.0116	0.9271	0.2636	0.0111	0.2747		3,773.8762	3,773.8762	0.1982		3,778.8300
Worker	3.0203	1.9287	27.4113	0.0851	8.9533	0.0681	9.0214	2.3745	0.0627	2.4372		8,478.4408	8,478.4408	0.2190		8,483.9160
Total	**3.3229**	**11.9468**	**30.5127**	**0.1203**	**9.8688**	**0.0797**	**9.9485**	**2.6381**	**0.0738**	**2.7118**		**12,252.3170**	**12,252.3170**	**0.4172**		**12,262.7460**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		158.7723	158.7723	4.1000e-003		158.8748
Total	**0.0566**	**0.0361**	**0.5133**	**1.5900e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1700e-003**	**0.0456**		**158.7723**	**158.7723**	**4.1000e-003**		**158.8748**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		158.7723	158.7723	4.1000e-003		158.8748
Total	**0.0566**	**0.0361**	**0.5133**	**1.5900e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1700e-003**	**0.0456**		**158.7723**	**158.7723**	**4.1000e-003**		**158.8748**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0535	0.0329	0.4785	1.5400e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456		153.8517	153.8517	3.7600e-003		153.9458
Total	**0.0535**	**0.0329**	**0.4785**	**1.5400e-003**	**0.1677**	**1.2600e-003**	**0.1689**	**0.0445**	**1.1600e-003**	**0.0456**		**153.8517**	**153.8517**	**3.7600e-003**		**153.9458**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0535	0.0329	0.4785	1.5400e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456		153.8517	153.8517	3.7600e-003		153.9458
Total	**0.0535**	**0.0329**	**0.4785**	**1.5400e-003**	**0.1677**	**1.2600e-003**	**0.1689**	**0.0445**	**1.1600e-003**	**0.0456**		**153.8517**	**153.8517**	**3.7600e-003**		**153.9458**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5707	0.3513	5.1044	0.0165	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866		1,641.0852	1,641.0852	0.0401		1,642.0886
Total	**0.5707**	**0.3513**	**5.1044**	**0.0165**	**1.7884**	**0.0134**	**1.8018**	**0.4743**	**0.0123**	**0.4866**		**1,641.0852**	**1,641.0852**	**0.0401**		**1,642.0886**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5707	0.3513	5.1044	0.0165	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866		1,641.0852	1,641.0852	0.0401		1,642.0886
Total	**0.5707**	**0.3513**	**5.1044**	**0.0165**	**1.7884**	**0.0134**	**1.8018**	**0.4743**	**0.0123**	**0.4866**		**1,641.0852**	**1,641.0852**	**0.0401**		**1,642.0886**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Unmitigated	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
NaturalGas Unmitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1119.16	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35784.3	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1283.42	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22759.9	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4769.72	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5057.75	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	251.616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1.11916	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35.7843	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1.28342	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22.7599	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4.76972	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5.05775	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	0.251616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Unmitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82
tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27

tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2865	46.4651	31.6150	0.0642	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,221.4937	6,221.4937	1.9491	0.0000	6,270.2214
2022	5.7218	38.9024	47.3319	0.1455	9.8688	1.6366	10.7736	3.6558	1.5057	5.1615	0.0000	14,630.3099	14,630.3099	1.9499	0.0000	14,657.2663
2023	5.2705	26.4914	44.5936	0.1413	9.8688	0.7800	10.6488	2.6381	0.7328	3.3708	0.0000	14,210.3424	14,210.3424	1.0230	0.0000	14,235.9160
2024	237.2328	9.5610	15.0611	0.0243	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,352.4178	2,352.4178	0.7175	0.0000	2,370.3550
Maximum	**237.2328**	**46.4651**	**47.3319**	**0.1455**	**18.2675**	**2.0461**	**20.3135**	**9.9840**	**1.8824**	**11.8664**	**0.0000**	**14,630.3099**	**14,630.3099**	**1.9499**	**0.0000**	**14,657.2663**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2865	46.4651	31.6150	0.0642	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,221.4937	6,221.4937	1.9491	0.0000	6,270.2214
2022	5.7218	38.9024	47.3319	0.1455	9.8688	1.6366	10.7736	3.6558	1.5057	5.1615	0.0000	14,630.3099	14,630.3099	1.9499	0.0000	14,657.2663
2023	5.2705	26.4914	44.5936	0.1413	9.8688	0.7800	10.6488	2.6381	0.7328	3.3708	0.0000	14,210.3424	14,210.3424	1.0230	0.0000	14,235.9160
2024	237.2328	9.5610	15.0611	0.0243	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,352.4178	2,352.4178	0.7175	0.0000	2,370.3550
Maximum	**237.2328**	**46.4651**	**47.3319**	**0.1455**	**18.2675**	**2.0461**	**20.3135**	**9.9840**	**1.8824**	**11.8664**	**0.0000**	**14,630.3099**	**14,630.3099**	**1.9499**	**0.0000**	**14,657.2663**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Total	**40.7912**	**67.7872**	**202.7424**	**0.6043**	**45.9592**	**2.4640**	**48.4231**	**12.2950**	**2.4399**	**14.7349**	**0.0000**	**74,422.3787**	**74,422.3787**	**2.8429**	**0.4832**	**74,637.4417**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Total	**40.7912**	**67.7872**	**202.7424**	**0.6043**	**45.9592**	**2.4640**	**48.4231**	**12.2950**	**2.4399**	**14.7349**	**0.0000**	**74,422.3787**	**74,422.3787**	**2.8429**	**0.4832**	**74,637.4417**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1304	4.1454	1.0182	0.0117	0.2669	0.0128	0.2797	0.0732	0.0122	0.0854		1,269.8555	1,269.8555	0.0908		1,272.1252
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0715	0.0489	0.5524	1.6100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		160.8377	160.8377	4.7300e-003		160.9560
Total	**0.2019**	**4.1943**	**1.5706**	**0.0133**	**0.4346**	**0.0141**	**0.4487**	**0.1176**	**0.0135**	**0.1311**		**1,430.6932**	**1,430.6932**	**0.0955**		**1,433.0812**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1304	4.1454	1.0182	0.0117	0.2669	0.0128	0.2797	0.0732	0.0122	0.0854		1,269.8555	1,269.8555	0.0908		1,272.1252
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0715	0.0489	0.5524	1.6100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		160.8377	160.8377	4.7300e-003		160.9560
Total	**0.2019**	**4.1943**	**1.5706**	**0.0133**	**0.4346**	**0.0141**	**0.4487**	**0.1176**	**0.0135**	**0.1311**		**1,430.6932**	**1,430.6932**	**0.0955**		**1,433.0812**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0858	0.0587	0.6629	1.9400e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		193.0052	193.0052	5.6800e-003		193.1472
Total	**0.0858**	**0.0587**	**0.6629**	**1.9400e-003**	**0.2012**	**1.6300e-003**	**0.2028**	**0.0534**	**1.5000e-003**	**0.0549**		**193.0052**	**193.0052**	**5.6800e-003**		**193.1472**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0858	0.0587	0.6629	1.9400e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		193.0052	193.0052	5.6800e-003		193.1472
Total	**0.0858**	**0.0587**	**0.6629**	**1.9400e-003**	**0.2012**	**1.6300e-003**	**0.2028**	**0.0534**	**1.5000e-003**	**0.0549**		**193.0052**	**193.0052**	**5.6800e-003**		**193.1472**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.0954**	**0.0652**	**0.7365**	**2.1500e-003**	**0.2236**	**1.8100e-003**	**0.2254**	**0.0593**	**1.6600e-003**	**0.0610**		**214.4502**	**214.4502**	**6.3100e-003**		**214.6080**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.0954**	**0.0652**	**0.7365**	**2.1500e-003**	**0.2236**	**1.8100e-003**	**0.2254**	**0.0593**	**1.6600e-003**	**0.0610**		**214.4502**	**214.4502**	**6.3100e-003**		**214.6080**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		206.9139	206.9139	5.7000e-003		207.0563
Total	**0.0896**	**0.0589**	**0.6784**	**2.0800e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6100e-003**	**0.0609**		**206.9139**	**206.9139**	**5.7000e-003**		**207.0563**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		206.9139	206.9139	5.7000e-003		207.0563
Total	**0.0896**	**0.0589**	**0.6784**	**2.0800e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6100e-003**	**0.0609**		**206.9139**	**206.9139**	**5.7000e-003**		**207.0563**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4284	13.1673	3.8005	0.0354	0.9155	0.0256	0.9412	0.2636	0.0245	0.2881		3,789.0750	3,789.0750	0.2381		3,795.0283
Worker	3.5872	2.3593	27.1680	0.0832	8.9533	0.0701	9.0234	2.3745	0.0646	2.4390		8,286.9013	8,286.9013	0.2282		8,292.6058
Total	**4.0156**	**15.5266**	**30.9685**	**0.1186**	**9.8688**	**0.0957**	**9.9645**	**2.6381**	**0.0891**	**2.7271**		**12,075.9763**	**12,075.9763**	**0.4663**		**12,087.6341**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4284	13.1673	3.8005	0.0354	0.9155	0.0256	0.9412	0.2636	0.0245	0.2881		3,789.0750	3,789.0750	0.2381		3,795.0283
Worker	3.5872	2.3593	27.1680	0.0832	8.9533	0.0701	9.0234	2.3745	0.0646	2.4390		8,286.9013	8,286.9013	0.2282		8,292.6058
Total	**4.0156**	**15.5266**	**30.9685**	**0.1186**	**9.8688**	**0.0957**	**9.9645**	**2.6381**	**0.0891**	**2.7271**		**12,075.9763**	**12,075.9763**	**0.4663**		**12,087.6341**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3183	9.9726	3.3771	0.0343	0.9156	0.0122	0.9277	0.2636	0.0116	0.2752		3,671.4007	3,671.4007	0.2096		3,676.6417
Worker	3.3795	2.1338	24.9725	0.0801	8.9533	0.0681	9.0214	2.3745	0.0627	2.4372		7,983.7318	7,983.7318	0.2055		7,988.8683
Total	**3.6978**	**12.1065**	**28.3496**	**0.1144**	**9.8688**	**0.0803**	**9.9491**	**2.6381**	**0.0743**	**2.7124**		**11,655.1325**	**11,655.1325**	**0.4151**		**11,665.5099**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3183	9.9726	3.3771	0.0343	0.9156	0.0122	0.9277	0.2636	0.0116	0.2752		3,671.4007	3,671.4007	0.2096		3,676.6417
Worker	3.3795	2.1338	24.9725	0.0801	8.9533	0.0681	9.0214	2.3745	0.0627	2.4372		7,983.7318	7,983.7318	0.2055		7,988.8683
Total	**3.6978**	**12.1065**	**28.3496**	**0.1144**	**9.8688**	**0.0803**	**9.9491**	**2.6381**	**0.0743**	**2.7124**		**11,655.1325**	**11,655.1325**	**0.4151**		**11,665.5099**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		149.5081	149.5081	3.8500e-003		149.6043
Total	**0.0633**	**0.0400**	**0.4677**	**1.5000e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1700e-003**	**0.0456**		**149.5081**	**149.5081**	**3.8500e-003**		**149.6043**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		149.5081	149.5081	3.8500e-003		149.6043
Total	**0.0633**	**0.0400**	**0.4677**	**1.5000e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1700e-003**	**0.0456**		**149.5081**	**149.5081**	**3.8500e-003**		**149.6043**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0601	0.0364	0.4354	1.4500e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456		144.8706	144.8706	3.5300e-003		144.9587
Total	**0.0601**	**0.0364**	**0.4354**	**1.4500e-003**	**0.1677**	**1.2600e-003**	**0.1689**	**0.0445**	**1.1600e-003**	**0.0456**		**144.8706**	**144.8706**	**3.5300e-003**		**144.9587**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0601	0.0364	0.4354	1.4500e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456		144.8706	144.8706	3.5300e-003		144.9587
Total	**0.0601**	**0.0364**	**0.4354**	**1.4500e-003**	**0.1677**	**1.2600e-003**	**0.1689**	**0.0445**	**1.1600e-003**	**0.0456**		**144.8706**	**144.8706**	**3.5300e-003**		**144.9587**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6406	0.3886	4.6439	0.0155	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866		1,545.2860	1,545.2860	0.0376		1,546.2262
Total	**0.6406**	**0.3886**	**4.6439**	**0.0155**	**1.7884**	**0.0134**	**1.8018**	**0.4743**	**0.0123**	**0.4866**		**1,545.2860**	**1,545.2860**	**0.0376**		**1,546.2262**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6406	0.3886	4.6439	0.0155	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866		1,545.2860	1,545.2860	0.0376		1,546.2262
Total	**0.6406**	**0.3886**	**4.6439**	**0.0155**	**1.7884**	**0.0134**	**1.8018**	**0.4743**	**0.0123**	**0.4866**		**1,545.2860**	**1,545.2860**	**0.0376**		**1,546.2262**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Unmitigated	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
NaturalGas Unmitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1119.16	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35784.3	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1283.42	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22759.9	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4769.72	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5057.75	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	251.616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1.11916	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35.7843	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1.28342	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22.7599	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4.76972	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5.05775	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	0.251616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Unmitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Trips and VMT - Local hire provision

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82

tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27
tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1704	1.8234	1.1577	2.3800e-003	0.4141	0.0817	0.4958	0.1788	0.0754	0.2542	0.0000	210.7654	210.7654	0.0600	0.0000	212.2661
2022	0.5865	4.0240	5.1546	0.0155	0.9509	0.1175	1.0683	0.2518	0.1103	0.3621	0.0000	1,418.6554	1,418.6554	0.1215	0.0000	1,421.6925
2023	0.5190	3.2850	4.7678	0.0147	0.8497	0.0971	0.9468	0.2283	0.0912	0.3195	0.0000	1,342.4412	1,342.4412	0.1115	0.0000	1,345.2291
2024	4.1592	0.1313	0.2557	5.0000e-004	0.0221	6.3900e-003	0.0285	5.8700e-003	5.9700e-003	0.0118	0.0000	44.6355	44.6355	7.8300e-003	0.0000	44.8311
Maximum	**4.1592**	**4.0240**	**5.1546**	**0.0155**	**0.9509**	**0.1175**	**1.0683**	**0.2518**	**0.1103**	**0.3621**	**0.0000**	**1,418.6554**	**1,418.6554**	**0.1215**	**0.0000**	**1,421.6925**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1704	1.8234	1.1577	2.3800e-003	0.4141	0.0817	0.4958	0.1788	0.0754	0.2542	0.0000	210.7651	210.7651	0.0600	0.0000	212.2658
2022	0.5865	4.0240	5.1546	0.0155	0.9509	0.1175	1.0683	0.2518	0.1103	0.3621	0.0000	1,418.6550	1,418.6550	0.1215	0.0000	1,421.6921
2023	0.5190	3.2850	4.7678	0.0147	0.8497	0.0971	0.9468	0.2283	0.0912	0.3195	0.0000	1,342.4409	1,342.4409	0.1115	0.0000	1,345.2287
2024	4.1592	0.1313	0.2557	5.0000e-004	0.0221	6.3900e-003	0.0285	5.8700e-003	5.9700e-003	0.0118	0.0000	44.6354	44.6354	7.8300e-003	0.0000	44.8311
Maximum	**4.1592**	**4.0240**	**5.1546**	**0.0155**	**0.9509**	**0.1175**	**1.0683**	**0.2518**	**0.1103**	**0.3621**	**0.0000**	**1,418.6550**	**1,418.6550**	**0.1215**	**0.0000**	**1,421.6921**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-1-2021**	**11-30-2021**	1.4091	1.4091
2	**12-1-2021**	**2-28-2022**	1.3329	1.3329
3	**3-1-2022**	**5-31-2022**	1.1499	1.1499
4	**6-1-2022**	**8-31-2022**	1.1457	1.1457
5	**9-1-2022**	**11-30-2022**	1.1415	1.1415
6	**12-1-2022**	**2-28-2023**	1.0278	1.0278
7	**3-1-2023**	**5-31-2023**	0.9868	0.9868
8	**6-1-2023**	**8-31-2023**	0.9831	0.9831

9	**9-1-2023**	**11-30-2023**	0.9798	0.9798
10	**12-1-2023**	**2-29-2024**	2.8757	2.8757
11	**3-1-2024**	**5-31-2024**	1.6188	1.6188
		Highest	2.8757	2.8757

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3,896.0732	3,896.0732	0.1303	0.0468	3,913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567
Total	**6.8692**	**9.5223**	**30.3407**	**0.0914**	**7.7979**	**0.2260**	**8.0240**	**2.0895**	**0.2219**	**2.3114**	**236.9712**	**12,294.1807**	**12,531.1519**	**15.7904**	**0.1260**	**12,963.4751**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3,896.0732	3,896.0732	0.1303	0.0468	3,913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567
Total	**6.8692**	**9.5223**	**30.3407**	**0.0914**	**7.7979**	**0.2260**	**8.0240**	**2.0895**	**0.2219**	**2.3114**	**236.9712**	**12,294.1807**	**12,531.1519**	**15.7904**	**0.1260**	**12,963.4751**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0012	51.0012	0.0144	0.0000	51.3601
Total	**0.0475**	**0.4716**	**0.3235**	**5.8000e-004**	**0.0496**	**0.0233**	**0.0729**	**7.5100e-003**	**0.0216**	**0.0291**	**0.0000**	**51.0012**	**51.0012**	**0.0144**	**0.0000**	**51.3601**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.3000e-004	6.0900e-003	2.0000e-005	1.6800e-003	1.0000e-005	1.6900e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.5281	1.5281	5.0000e-005	0.0000	1.5293
Total	**2.6500e-003**	**0.0639**	**0.0209**	**2.0000e-004**	**5.6200e-003**	**2.0000e-004**	**5.8200e-003**	**1.5300e-003**	**1.9000e-004**	**1.7200e-003**	**0.0000**	**18.9847**	**18.9847**	**1.2600e-003**	**0.0000**	**19.0161**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0011	51.0011	0.0144	0.0000	51.3600
Total	**0.0475**	**0.4716**	**0.3235**	**5.8000e-004**	**0.0496**	**0.0233**	**0.0729**	**7.5100e-003**	**0.0216**	**0.0291**	**0.0000**	**51.0011**	**51.0011**	**0.0144**	**0.0000**	**51.3600**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.3000e-004	6.0900e-003	2.0000e-005	1.6800e-003	1.0000e-005	1.6900e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.5281	1.5281	5.0000e-005	0.0000	1.5293
Total	**2.6500e-003**	**0.0639**	**0.0209**	**2.0000e-004**	**5.6200e-003**	**2.0000e-004**	**5.8200e-003**	**1.5300e-003**	**1.9000e-004**	**1.7200e-003**	**0.0000**	**18.9847**	**18.9847**	**1.2600e-003**	**0.0000**	**19.0161**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7061
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7061**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	4.3000e-004	4.8700e-003	1.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.2225	1.2225	4.0000e-005	0.0000	1.2234
Total	**5.8000e-004**	**4.3000e-004**	**4.8700e-003**	**1.0000e-005**	**1.3400e-003**	**1.0000e-005**	**1.3500e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**	**0.0000**	**1.2225**	**1.2225**	**4.0000e-005**	**0.0000**	**1.2234**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7060
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7060**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	4.3000e-004	4.8700e-003	1.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.2225	1.2225	4.0000e-005	0.0000	1.2234
Total	**5.8000e-004**	**4.3000e-004**	**4.8700e-003**	**1.0000e-005**	**1.3400e-003**	**1.0000e-005**	**1.3500e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**	**0.0000**	**1.2225**	**1.2225**	**4.0000e-005**	**0.0000**	**1.2234**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377		0.0347	0.0347	0.0000	103.5405	103.5405	0.0335	0.0000	104.3776
Total	**0.0796**	**0.8816**	**0.5867**	**1.1800e-003**	**0.1741**	**0.0377**	**0.2118**	**0.0693**	**0.0347**	**0.1040**	**0.0000**	**103.5405**	**103.5405**	**0.0335**	**0.0000**	**104.3776**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2200e-003	9.0000e-004	0.0103	3.0000e-005	2.8300e-003	2.0000e-005	2.8600e-003	7.5000e-004	2.0000e-005	7.8000e-004	0.0000	2.5808	2.5808	8.0000e-005	0.0000	2.5828
Total	**1.2200e-003**	**9.0000e-004**	**0.0103**	**3.0000e-005**	**2.8300e-003**	**2.0000e-005**	**2.8600e-003**	**7.5000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.5808**	**2.5808**	**8.0000e-005**	**0.0000**	**2.5828**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377		0.0347	0.0347	0.0000	103.5403	103.5403	0.0335	0.0000	104.3775
Total	**0.0796**	**0.8816**	**0.5867**	**1.1800e-003**	**0.1741**	**0.0377**	**0.2118**	**0.0693**	**0.0347**	**0.1040**	**0.0000**	**103.5403**	**103.5403**	**0.0335**	**0.0000**	**104.3775**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2200e-003	9.0000e-004	0.0103	3.0000e-005	2.8300e-003	2.0000e-005	2.8600e-003	7.5000e-004	2.0000e-005	7.8000e-004	0.0000	2.5808	2.5808	8.0000e-005	0.0000	2.5828
Total	**1.2200e-003**	**9.0000e-004**	**0.0103**	**3.0000e-005**	**2.8300e-003**	**2.0000e-005**	**2.8600e-003**	**7.5000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.5808**	**2.5808**	**8.0000e-005**	**0.0000**	**2.5828**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004		5.7200e-003	5.7200e-003		5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	**0.0127**	**0.1360**	**0.1017**	**2.2000e-004**	**0.0807**	**5.7200e-003**	**0.0865**	**0.0180**	**5.2600e-003**	**0.0233**	**0.0000**	**19.0871**	**19.0871**	**6.1700e-003**	**0.0000**	**19.2414**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.5000e-004	1.7400e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4587	0.4587	1.0000e-005	0.0000	0.4590
Total	**2.1000e-004**	**1.5000e-004**	**1.7400e-003**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**5.3000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4587**	**0.4587**	**1.0000e-005**	**0.0000**	**0.4590**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004		5.7200e-003	5.7200e-003		5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	**0.0127**	**0.1360**	**0.1017**	**2.2000e-004**	**0.0807**	**5.7200e-003**	**0.0865**	**0.0180**	**5.2600e-003**	**0.0233**	**0.0000**	**19.0871**	**19.0871**	**6.1700e-003**	**0.0000**	**19.2414**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.5000e-004	1.7400e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4587	0.4587	1.0000e-005	0.0000	0.4590
Total	**2.1000e-004**	**1.5000e-004**	**1.7400e-003**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**5.3000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4587**	**0.4587**	**1.0000e-005**	**0.0000**	**0.4590**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023		0.0963	0.0963	0.0000	293.1324	293.1324	0.0702	0.0000	294.8881
Total	**0.2158**	**1.9754**	**2.0700**	**3.4100e-003**		**0.1023**	**0.1023**		**0.0963**	**0.0963**	**0.0000**	**293.1324**	**293.1324**	**0.0702**	**0.0000**	**294.8881**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.3051	0.2164	2.5233	7.3500e-003	0.7557	6.2300e-003	0.7619	0.2007	5.7400e-003	0.2065	0.0000	663.9936	663.9936	0.0187	0.0000	664.4604
Total	**0.3578**	**1.9125**	**2.9812**	**0.0119**	**0.8696**	**9.4100e-003**	**0.8790**	**0.2336**	**8.7800e-003**	**0.2424**	**0.0000**	**1,105.9771**	**1,105.9771**	**0.0451**	**0.0000**	**1,107.1039**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023		0.0963	0.0963	0.0000	293.1321	293.1321	0.0702	0.0000	294.8877
Total	**0.2158**	**1.9754**	**2.0700**	**3.4100e-003**		**0.1023**	**0.1023**		**0.0963**	**0.0963**	**0.0000**	**293.1321**	**293.1321**	**0.0702**	**0.0000**	**294.8877**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.3051	0.2164	2.5233	7.3500e-003	0.7557	6.2300e-003	0.7619	0.2007	5.7400e-003	0.2065	0.0000	663.9936	663.9936	0.0187	0.0000	664.4604
Total	**0.3578**	**1.9125**	**2.9812**	**0.0119**	**0.8696**	**9.4100e-003**	**0.8790**	**0.2336**	**8.7800e-003**	**0.2424**	**0.0000**	**1,105.9771**	**1,105.9771**	**0.0451**	**0.0000**	**1,107.1039**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2789	286.2789	0.0681	0.0000	287.9814
Total	**0.1942**	**1.7765**	**2.0061**	**3.3300e-003**		**0.0864**	**0.0864**		**0.0813**	**0.0813**	**0.0000**	**286.2789**	**286.2789**	**0.0681**	**0.0000**	**287.9814**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.2795	0.1910	2.2635	6.9100e-003	0.7377	5.9100e-003	0.7436	0.1960	5.4500e-003	0.2014	0.0000	624.5363	624.5363	0.0164	0.0000	624.9466
Total	**0.3177**	**1.4420**	**2.6646**	**0.0112**	**0.8490**	**7.3700e-003**	**0.8564**	**0.2281**	**6.8500e-003**	**0.2349**	**0.0000**	**1,042.5294**	**1,042.5294**	**0.0392**	**0.0000**	**1,043.5090**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2785	286.2785	0.0681	0.0000	287.9811
Total	**0.1942**	**1.7765**	**2.0061**	**3.3300e-003**		**0.0864**	**0.0864**		**0.0813**	**0.0813**	**0.0000**	**286.2785**	**286.2785**	**0.0681**	**0.0000**	**287.9811**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.2795	0.1910	2.2635	6.9100e-003	0.7377	5.9100e-003	0.7436	0.1960	5.4500e-003	0.2014	0.0000	624.5363	624.5363	0.0164	0.0000	624.9466
Total	**0.3177**	**1.4420**	**2.6646**	**0.0112**	**0.8490**	**7.3700e-003**	**0.8564**	**0.2281**	**6.8500e-003**	**0.2349**	**0.0000**	**1,042.5294**	**1,042.5294**	**0.0392**	**0.0000**	**1,043.5090**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7100e-003**	**0.0663**	**0.0948**	**1.5000e-004**		**3.3200e-003**	**3.3200e-003**		**3.0500e-003**	**3.0500e-003**	**0.0000**	**13.0175**	**13.0175**	**4.2100e-003**	**0.0000**	**13.1227**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.9000e-004	2.2300e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.6156	0.6156	2.0000e-005	0.0000	0.6160
Total	**2.8000e-004**	**1.9000e-004**	**2.2300e-003**	**1.0000e-005**	**7.3000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.6156**	**0.6156**	**2.0000e-005**	**0.0000**	**0.6160**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7100e-003**	**0.0663**	**0.0948**	**1.5000e-004**		**3.3200e-003**	**3.3200e-003**		**3.0500e-003**	**3.0500e-003**	**0.0000**	**13.0175**	**13.0175**	**4.2100e-003**	**0.0000**	**13.1227**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.9000e-004	2.2300e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.6156	0.6156	2.0000e-005	0.0000	0.6160
Total	**2.8000e-004**	**1.9000e-004**	**2.2300e-003**	**1.0000e-005**	**7.3000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.6156**	**0.6156**	**2.0000e-005**	**0.0000**	**0.6160**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0109	0.1048	0.1609	2.5000e-004		5.1500e-003	5.1500e-003		4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0109**	**0.1048**	**0.1609**	**2.5000e-004**		**5.1500e-003**	**5.1500e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**22.0292**	**22.0292**	**7.1200e-003**	**0.0000**	**22.2073**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	2.9000e-004	3.5100e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.0094	1.0094	3.0000e-005	0.0000	1.0100
Total	**4.4000e-004**	**2.9000e-004**	**3.5100e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.0094**	**1.0094**	**3.0000e-005**	**0.0000**	**1.0100**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0109	0.1048	0.1609	2.5000e-004		5.1500e-003	5.1500e-003		4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0109**	**0.1048**	**0.1609**	**2.5000e-004**		**5.1500e-003**	**5.1500e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**22.0292**	**22.0292**	**7.1200e-003**	**0.0000**	**22.2073**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	2.9000e-004	3.5100e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.0094	1.0094	3.0000e-005	0.0000	1.0100
Total	**4.4000e-004**	**2.9000e-004**	**3.5100e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.0094**	**1.0094**	**3.0000e-005**	**0.0000**	**1.0100**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**4.1404**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4800e-003	4.9300e-003	0.0596	1.9000e-004	0.0209	1.6000e-004	0.0211	5.5500e-003	1.5000e-004	5.7000e-003	0.0000	17.1287	17.1287	4.3000e-004	0.0000	17.1394
Total	**7.4800e-003**	**4.9300e-003**	**0.0596**	**1.9000e-004**	**0.0209**	**1.6000e-004**	**0.0211**	**5.5500e-003**	**1.5000e-004**	**5.7000e-003**	**0.0000**	**17.1287**	**17.1287**	**4.3000e-004**	**0.0000**	**17.1394**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**4.1404**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4800e-003	4.9300e-003	0.0596	1.9000e-004	0.0209	1.6000e-004	0.0211	5.5500e-003	1.5000e-004	5.7000e-003	0.0000	17.1287	17.1287	4.3000e-004	0.0000	17.1394
Total	**7.4800e-003**	**4.9300e-003**	**0.0596**	**1.9000e-004**	**0.0209**	**1.6000e-004**	**0.0211**	**5.5500e-003**	**1.5000e-004**	**5.7000e-003**	**0.0000**	**17.1287**	**17.1287**	**4.3000e-004**	**0.0000**	**17.1394**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Unmitigated	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,512.6465	2,512.6465	0.1037	0.0215	2,521.6356
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,512.6465	2,512.6465	0.1037	0.0215	2,521.6356
NaturalGas Mitigated	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	1,383.4267	1,383.4267	0.0265	0.0254	1,391.6478
NaturalGas Unmitigated	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	1,383.4267	1,383.4267	0.0265	0.0254	1,391.6478

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003		0.0487	0.0487		0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003		0.0310	0.0310		0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004		6.4900e-003	6.4900e-003		6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004		6.8800e-003	6.8800e-003		6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301
Total		**0.1398**	**1.2312**	**0.7770**	**7.6200e-003**		**0.0966**	**0.0966**		**0.0966**	**0.0966**	**0.0000**	**1,383.4268**	**1,383.4268**	**0.0265**	**0.0254**	**1,391.6478**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003		0.0487	0.0487		0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003		0.0310	0.0310		0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004		6.4900e-003	6.4900e-003		6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004		6.8800e-003	6.8800e-003		6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301
Total		**0.1398**	**1.2312**	**0.7770**	**7.6200e-003**		**0.0966**	**0.0966**		**0.0966**	**0.0966**	**0.0000**	**1,383.4268**	**1,383.4268**	**0.0265**	**0.0254**	**1,391.6478**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartments Mid Rise	3.94697e+006	1,257.5879	0.0519	0.0107	1,262.0869
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		**2,512.6465**	**0.1037**	**0.0215**	**2,521.6356**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartments Mid Rise	3.94697e+006	1,257.5879	0.0519	0.0107	1,262.0869
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		**2,512.6465**	**0.1037**	**0.0215**	**2,521.6356**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Unmitigated	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003		0.0143	0.0143		0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004		0.0572	0.0572		0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	**5.1437**	**0.2950**	**10.3804**	**1.6600e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**	**0.0000**	**220.9670**	**220.9670**	**0.0201**	**3.7400e-003**	**222.5835**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003		0.0143	0.0143		0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004		0.0572	0.0572		0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	**5.1437**	**0.2950**	**10.3804**	**1.6600e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**	**0.0000**	**220.9670**	**220.9670**	**0.0201**	**3.7400e-003**	**222.5835**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	585.8052	3.0183	0.0755	683.7567
Unmitigated	585.8052	3.0183	0.0755	683.7567

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02688	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		**585.8052**	**3.0183**	**0.0755**	**683.7567**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02688	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		**585.8052**	**3.0183**	**0.0755**	**683.7567**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	207.8079	12.2811	0.0000	514.8354
Unmitigated	207.8079	12.2811	0.0000	514.8354

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430
Hotel	27.38	5.5579	0.3285	0.0000	13.7694
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706
Total		**207.8079**	**12.2811**	**0.0000**	**514.8354**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430
Hotel	27.38	5.5579	0.3285	0.0000	13.7694
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706
Total		**207.8079**	**12.2811**	**0.0000**	**514.8354**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Trips and VMT - Local hire provision

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82

tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27
tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2561	46.4415	31.4494	0.0636	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	6,163.4166	6,163.4166	1.9475	0.0000	6,212.1039
2022	4.5441	38.8811	40.8776	0.1240	8.8255	1.6361	10.4616	3.6369	1.5052	5.1421	0.0000	12,493.4403	12,493.4403	1.9485	0.0000	12,518.5707
2023	4.1534	25.7658	38.7457	0.1206	7.0088	0.7592	7.7679	1.8799	0.7136	2.5935	0.0000	12,150.4890	12,150.4890	0.9589	0.0000	12,174.4615
2024	237.0219	9.5478	14.9642	0.0239	1.2171	0.4694	1.2875	0.3229	0.4319	0.4621	0.0000	2,313.1808	2,313.1808	0.7166	0.0000	2,331.0956
Maximum	**237.0219**	**46.4415**	**40.8776**	**0.1240**	**18.2032**	**2.0456**	**20.2488**	**9.9670**	**1.8820**	**11.8490**	**0.0000**	**12,493.4403**	**12,493.4403**	**1.9485**	**0.0000**	**12,518.5707**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2561	46.4415	31.4494	0.0636	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	6,163.4166	6,163.4166	1.9475	0.0000	6,212.1039
2022	4.5441	38.8811	40.8776	0.1240	8.8255	1.6361	10.4616	3.6369	1.5052	5.1421	0.0000	12,493.4403	12,493.4403	1.9485	0.0000	12,518.5707
2023	4.1534	25.7658	38.7457	0.1206	7.0088	0.7592	7.7679	1.8799	0.7136	2.5935	0.0000	12,150.4890	12,150.4890	0.9589	0.0000	12,174.4615
2024	237.0219	9.5478	14.9642	0.0239	1.2171	0.4694	1.2875	0.3229	0.4319	0.4621	0.0000	2,313.1808	2,313.1808	0.7166	0.0000	2,331.0955
Maximum	**237.0219**	**46.4415**	**40.8776**	**0.1240**	**18.2032**	**2.0456**	**20.2488**	**9.9670**	**1.8820**	**11.8490**	**0.0000**	**12,493.4403**	**12,493.4403**	**1.9485**	**0.0000**	**12,518.5707**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Total	**41.1168**	**67.2262**	**207.5497**	**0.6278**	**45.9592**	**2.4626**	**48.4217**	**12.2950**	**2.4385**	**14.7336**	**0.0000**	**76,811.1816**	**76,811.1816**	**2.8282**	**0.4832**	**77,025.8786**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Total	**41.1168**	**67.2262**	**207.5497**	**0.6278**	**45.9592**	**2.4626**	**48.4217**	**12.2950**	**2.4385**	**14.7336**	**0.0000**	**76,811.1816**	**76,811.1816**	**2.8282**	**0.4832**	**77,025.8786**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1273	4.0952	0.9602	0.0119	0.2669	0.0126	0.2795	0.0732	0.0120	0.0852		1,292.2413	1,292.2413	0.0877		1,294.4337
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0487	0.0313	0.4282	1.1800e-003	0.1141	9.5000e-004	0.1151	0.0303	8.8000e-004	0.0311		117.2799	117.2799	3.5200e-003		117.3678
Total	**0.1760**	**4.1265**	**1.3884**	**0.0131**	**0.3810**	**0.0135**	**0.3946**	**0.1034**	**0.0129**	**0.1163**		**1,409.5212**	**1,409.5212**	**0.0912**		**1,411.8015**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1273	4.0952	0.9602	0.0119	0.2669	0.0126	0.2795	0.0732	0.0120	0.0852		1,292.2413	1,292.2413	0.0877		1,294.4337
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0487	0.0313	0.4282	1.1800e-003	0.1141	9.5000e-004	0.1151	0.0303	8.8000e-004	0.0311		117.2799	117.2799	3.5200e-003		117.3678
Total	**0.1760**	**4.1265**	**1.3884**	**0.0131**	**0.3810**	**0.0135**	**0.3946**	**0.1034**	**0.0129**	**0.1163**		**1,409.5212**	**1,409.5212**	**0.0912**		**1,411.8015**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0584	0.0375	0.5139	1.4100e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374		140.7359	140.7359	4.2200e-003		140.8414
Total	**0.0584**	**0.0375**	**0.5139**	**1.4100e-003**	**0.1369**	**1.1400e-003**	**0.1381**	**0.0363**	**1.0500e-003**	**0.0374**		**140.7359**	**140.7359**	**4.2200e-003**		**140.8414**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0584	0.0375	0.5139	1.4100e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374		140.7359	140.7359	4.2200e-003		140.8414
Total	**0.0584**	**0.0375**	**0.5139**	**1.4100e-003**	**0.1369**	**1.1400e-003**	**0.1381**	**0.0363**	**1.0500e-003**	**0.0374**		**140.7359**	**140.7359**	**4.2200e-003**		**140.8414**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0649	0.0417	0.5710	1.5700e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415		156.3732	156.3732	4.6900e-003		156.4904
Total	**0.0649**	**0.0417**	**0.5710**	**1.5700e-003**	**0.1521**	**1.2700e-003**	**0.1534**	**0.0404**	**1.1700e-003**	**0.0415**		**156.3732**	**156.3732**	**4.6900e-003**		**156.4904**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0649	0.0417	0.5710	1.5700e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415		156.3732	156.3732	4.6900e-003		156.4904
Total	**0.0649**	**0.0417**	**0.5710**	**1.5700e-003**	**0.1521**	**1.2700e-003**	**0.1534**	**0.0404**	**1.1700e-003**	**0.0415**		**156.3732**	**156.3732**	**4.6900e-003**		**156.4904**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0607	0.0376	0.5263	1.5100e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415		150.8754	150.8754	4.2400e-003		150.9813
Total	**0.0607**	**0.0376**	**0.5263**	**1.5100e-003**	**0.1521**	**1.2300e-003**	**0.1534**	**0.0404**	**1.1300e-003**	**0.0415**		**150.8754**	**150.8754**	**4.2400e-003**		**150.9813**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0607	0.0376	0.5263	1.5100e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415		150.8754	150.8754	4.2400e-003		150.9813
Total	**0.0607**	**0.0376**	**0.5263**	**1.5100e-003**	**0.1521**	**1.2300e-003**	**0.1534**	**0.0404**	**1.1300e-003**	**0.0415**		**150.8754**	**150.8754**	**4.2400e-003**		**150.9813**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4079	13.2032	3.4341	0.0364	0.9155	0.0248	0.9404	0.2636	0.0237	0.2873		3,896.5482	3,896.5482	0.2236		3,902.1384
Worker	2.4299	1.5074	21.0801	0.0607	6.0932	0.0493	6.1425	1.6163	0.0454	1.6617		6,042.5585	6,042.5585	0.1697		6,046.8000
Total	**2.8378**	**14.7106**	**24.5142**	**0.0971**	**7.0087**	**0.0741**	**7.0828**	**1.8799**	**0.0691**	**1.9490**		**9,939.1067**	**9,939.1067**	**0.3933**		**9,948.9384**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4079	13.2032	3.4341	0.0364	0.9155	0.0248	0.9404	0.2636	0.0237	0.2873		3,896.5482	3,896.5482	0.2236		3,902.1384
Worker	2.4299	1.5074	21.0801	0.0607	6.0932	0.0493	6.1425	1.6163	0.0454	1.6617		6,042.5585	6,042.5585	0.1697		6,046.8000
Total	**2.8378**	**14.7106**	**24.5142**	**0.0971**	**7.0087**	**0.0741**	**7.0828**	**1.8799**	**0.0691**	**1.9490**		**9,939.1067**	**9,939.1067**	**0.3933**		**9,948.9384**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3027	10.0181	3.1014	0.0352	0.9156	0.0116	0.9271	0.2636	0.0111	0.2747		3,773.8762	3,773.8762	0.1982		3,778.8300
Worker	2.2780	1.3628	19.4002	0.0584	6.0932	0.0479	6.1411	1.6163	0.0441	1.6604		5,821.4028	5,821.4028	0.1529		5,825.2254
Total	**2.5807**	**11.3809**	**22.5017**	**0.0936**	**7.0088**	**0.0595**	**7.0682**	**1.8799**	**0.0552**	**1.9350**		**9,595.2790**	**9,595.2790**	**0.3511**		**9,604.0554**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3027	10.0181	3.1014	0.0352	0.9156	0.0116	0.9271	0.2636	0.0111	0.2747		3,773.8762	3,773.8762	0.1982		3,778.8300
Worker	2.2780	1.3628	19.4002	0.0584	6.0932	0.0479	6.1411	1.6163	0.0441	1.6604		5,821.4028	5,821.4028	0.1529		5,825.2254
Total	**2.5807**	**11.3809**	**22.5017**	**0.0936**	**7.0088**	**0.0595**	**7.0682**	**1.8799**	**0.0552**	**1.9350**		**9,595.2790**	**9,595.2790**	**0.3511**		**9,604.0554**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0427	0.0255	0.3633	1.0900e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311		109.0150	109.0150	2.8600e-003		109.0866
Total	**0.0427**	**0.0255**	**0.3633**	**1.0900e-003**	**0.1141**	**9.0000e-004**	**0.1150**	**0.0303**	**8.3000e-004**	**0.0311**		**109.0150**	**109.0150**	**2.8600e-003**		**109.0866**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0427	0.0255	0.3633	1.0900e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311		109.0150	109.0150	2.8600e-003		109.0866
Total	**0.0427**	**0.0255**	**0.3633**	**1.0900e-003**	**0.1141**	**9.0000e-004**	**0.1150**	**0.0303**	**8.3000e-004**	**0.0311**		**109.0150**	**109.0150**	**2.8600e-003**		**109.0866**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0403	0.0233	0.3384	1.0600e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311		105.6336	105.6336	2.6300e-003		105.6992
Total	**0.0403**	**0.0233**	**0.3384**	**1.0600e-003**	**0.1141**	**8.8000e-004**	**0.1150**	**0.0303**	**8.1000e-004**	**0.0311**		**105.6336**	**105.6336**	**2.6300e-003**		**105.6992**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0403	0.0233	0.3384	1.0600e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311		105.6336	105.6336	2.6300e-003		105.6992
Total	**0.0403**	**0.0233**	**0.3384**	**1.0600e-003**	**0.1141**	**8.8000e-004**	**0.1150**	**0.0303**	**8.1000e-004**	**0.0311**		**105.6336**	**105.6336**	**2.6300e-003**		**105.6992**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.4296	0.2481	3.6098	0.0113	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315		1,126.7583	1,126.7583	0.0280		1,127.4583
Total	**0.4296**	**0.2481**	**3.6098**	**0.0113**	**1.2171**	**9.4300e-003**	**1.2266**	**0.3229**	**8.6800e-003**	**0.3315**		**1,126.7583**	**1,126.7583**	**0.0280**		**1,127.4583**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.4296	0.2481	3.6098	0.0113	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315		1,126.7583	1,126.7583	0.0280		1,127.4583
Total	**0.4296**	**0.2481**	**3.6098**	**0.0113**	**1.2171**	**9.4300e-003**	**1.2266**	**0.3229**	**8.6800e-003**	**0.3315**		**1,126.7583**	**1,126.7583**	**0.0280**		**1,127.4583**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Unmitigated	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
NaturalGas Unmitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1119.16	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35784.3	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1283.42	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22759.9	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4769.72	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5057.75	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	251.616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1.11916	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35.7843	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1.28342	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22.7599	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4.76972	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5.05775	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	0.251616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Unmitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Trips and VMT - Local hire provision

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82

tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27
tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2621	46.4460	31.4068	0.0635	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	6,154.3377	6,154.3377	1.9472	0.0000	6,203.0186
2022	4.7966	38.8851	39.6338	0.1195	8.8255	1.6361	10.4616	3.6369	1.5052	5.1421	0.0000	12,035.3440	12,035.3440	1.9482	0.0000	12,060.6013
2023	4.3939	25.8648	37.5031	0.1162	7.0088	0.7598	7.7685	1.8799	0.7142	2.5940	0.0000	11,710.4080	11,710.4080	0.9617	0.0000	11,734.4497
2024	237.0656	9.5503	14.9372	0.0238	1.2171	0.4694	1.2875	0.3229	0.4319	0.4621	0.0000	2,307.0517	2,307.0517	0.7164	0.0000	2,324.9627
Maximum	**237.0656**	**46.4460**	**39.6338**	**0.1195**	**18.2032**	**2.0456**	**20.2488**	**9.9670**	**1.8820**	**11.8490**	**0.0000**	**12,035.3440**	**12,035.3440**	**1.9482**	**0.0000**	**12,060.6013**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2621	46.4460	31.4068	0.0635	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	6,154.3377	6,154.3377	1.9472	0.0000	6,203.0186
2022	4.7966	38.8851	39.6338	0.1195	8.8255	1.6361	10.4616	3.6369	1.5052	5.1421	0.0000	12,035.3440	12,035.3440	1.9482	0.0000	12,060.6013
2023	4.3939	25.8648	37.5031	0.1162	7.0088	0.7598	7.7685	1.8799	0.7142	2.5940	0.0000	11,710.4080	11,710.4080	0.9617	0.0000	11,734.4497
2024	237.0656	9.5503	14.9372	0.0238	1.2171	0.4694	1.2875	0.3229	0.4319	0.4621	0.0000	2,307.0517	2,307.0517	0.7164	0.0000	2,324.9627
Maximum	**237.0656**	**46.4460**	**39.6338**	**0.1195**	**18.2032**	**2.0456**	**20.2488**	**9.9670**	**1.8820**	**11.8490**	**0.0000**	**12,035.3440**	**12,035.3440**	**1.9482**	**0.0000**	**12,060.6013**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Total	**40.7912**	**67.7872**	**202.7424**	**0.6043**	**45.9592**	**2.4640**	**48.4231**	**12.2950**	**2.4399**	**14.7349**	**0.0000**	**74,422.3787**	**74,422.3787**	**2.8429**	**0.4832**	**74,637.4417**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Total	**40.7912**	**67.7872**	**202.7424**	**0.6043**	**45.9592**	**2.4640**	**48.4231**	**12.2950**	**2.4399**	**14.7349**	**0.0000**	**74,422.3787**	**74,422.3787**	**2.8429**	**0.4832**	**74,637.4417**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1304	4.1454	1.0182	0.0117	0.2669	0.0128	0.2797	0.0732	0.0122	0.0854		1,269.8555	1,269.8555	0.0908		1,272.1252
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0532	0.0346	0.3963	1.1100e-003	0.1141	9.5000e-004	0.1151	0.0303	8.8000e-004	0.0311		110.4707	110.4707	3.3300e-003		110.5539
Total	**0.1835**	**4.1800**	**1.4144**	**0.0128**	**0.3810**	**0.0137**	**0.3948**	**0.1034**	**0.0131**	**0.1165**		**1,380.3262**	**1,380.3262**	**0.0941**		**1,382.6791**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1304	4.1454	1.0182	0.0117	0.2669	0.0128	0.2797	0.0732	0.0122	0.0854		1,269.8555	1,269.8555	0.0908		1,272.1252
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0532	0.0346	0.3963	1.1100e-003	0.1141	9.5000e-004	0.1151	0.0303	8.8000e-004	0.0311		110.4707	110.4707	3.3300e-003		110.5539
Total	**0.1835**	**4.1800**	**1.4144**	**0.0128**	**0.3810**	**0.0137**	**0.3948**	**0.1034**	**0.0131**	**0.1165**		**1,380.3262**	**1,380.3262**	**0.0941**		**1,382.6791**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0638	0.0415	0.4755	1.3300e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374		132.5649	132.5649	3.9900e-003		132.6646
Total	**0.0638**	**0.0415**	**0.4755**	**1.3300e-003**	**0.1369**	**1.1400e-003**	**0.1381**	**0.0363**	**1.0500e-003**	**0.0374**		**132.5649**	**132.5649**	**3.9900e-003**		**132.6646**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0638	0.0415	0.4755	1.3300e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374		132.5649	132.5649	3.9900e-003		132.6646
Total	**0.0638**	**0.0415**	**0.4755**	**1.3300e-003**	**0.1369**	**1.1400e-003**	**0.1381**	**0.0363**	**1.0500e-003**	**0.0374**		**132.5649**	**132.5649**	**3.9900e-003**		**132.6646**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0709	0.0462	0.5284	1.4800e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415		147.2943	147.2943	4.4300e-003		147.4051
Total	**0.0709**	**0.0462**	**0.5284**	**1.4800e-003**	**0.1521**	**1.2700e-003**	**0.1534**	**0.0404**	**1.1700e-003**	**0.0415**		**147.2943**	**147.2943**	**4.4300e-003**		**147.4051**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0709	0.0462	0.5284	1.4800e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415		147.2943	147.2943	4.4300e-003		147.4051
Total	**0.0709**	**0.0462**	**0.5284**	**1.4800e-003**	**0.1521**	**1.2700e-003**	**0.1534**	**0.0404**	**1.1700e-003**	**0.0415**		**147.2943**	**147.2943**	**4.4300e-003**		**147.4051**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0665	0.0416	0.4861	1.4300e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415		142.1207	142.1207	4.0000e-003		142.2207
Total	**0.0665**	**0.0416**	**0.4861**	**1.4300e-003**	**0.1521**	**1.2300e-003**	**0.1534**	**0.0404**	**1.1300e-003**	**0.0415**		**142.1207**	**142.1207**	**4.0000e-003**		**142.2207**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0665	0.0416	0.4861	1.4300e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415		142.1207	142.1207	4.0000e-003		142.2207
Total	**0.0665**	**0.0416**	**0.4861**	**1.4300e-003**	**0.1521**	**1.2300e-003**	**0.1534**	**0.0404**	**1.1300e-003**	**0.0415**		**142.1207**	**142.1207**	**4.0000e-003**		**142.2207**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4284	13.1673	3.8005	0.0354	0.9155	0.0256	0.9412	0.2636	0.0245	0.2881		3,789.0750	3,789.0750	0.2381		3,795.0283
Worker	2.6620	1.6677	19.4699	0.0571	6.0932	0.0493	6.1425	1.6163	0.0454	1.6617		5,691.9354	5,691.9354	0.1602		5,695.9408
Total	**3.0904**	**14.8350**	**23.2704**	**0.0926**	**7.0087**	**0.0749**	**7.0836**	**1.8799**	**0.0699**	**1.9498**		**9,481.0104**	**9,481.0104**	**0.3984**		**9,490.9691**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4284	13.1673	3.8005	0.0354	0.9155	0.0256	0.9412	0.2636	0.0245	0.2881		3,789.0750	3,789.0750	0.2381		3,795.0283
Worker	2.6620	1.6677	19.4699	0.0571	6.0932	0.0493	6.1425	1.6163	0.0454	1.6617		5,691.9354	5,691.9354	0.1602		5,695.9408
Total	**3.0904**	**14.8350**	**23.2704**	**0.0926**	**7.0087**	**0.0749**	**7.0836**	**1.8799**	**0.0699**	**1.9498**		**9,481.0104**	**9,481.0104**	**0.3984**		**9,490.9691**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3183	9.9726	3.3771	0.0343	0.9156	0.0122	0.9277	0.2636	0.0116	0.2752		3,671.4007	3,671.4007	0.2096		3,676.6417
Worker	2.5029	1.5073	17.8820	0.0550	6.0932	0.0479	6.1411	1.6163	0.0441	1.6604		5,483.7974	5,483.7974	0.1442		5,487.4020
Total	**2.8211**	**11.4799**	**21.2591**	**0.0893**	**7.0088**	**0.0601**	**7.0688**	**1.8799**	**0.0557**	**1.9356**		**9,155.1981**	**9,155.1981**	**0.3538**		**9,164.0437**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3183	9.9726	3.3771	0.0343	0.9156	0.0122	0.9277	0.2636	0.0116	0.2752		3,671.4007	3,671.4007	0.2096		3,676.6417
Worker	2.5029	1.5073	17.8820	0.0550	6.0932	0.0479	6.1411	1.6163	0.0441	1.6604		5,483.7974	5,483.7974	0.1442		5,487.4020
Total	**2.8211**	**11.4799**	**21.2591**	**0.0893**	**7.0088**	**0.0601**	**7.0688**	**1.8799**	**0.0557**	**1.9356**		**9,155.1981**	**9,155.1981**	**0.3538**		**9,164.0437**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0282	0.3349	1.0300e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311		102.6928	102.6928	2.7000e-003		102.7603
Total	**0.0469**	**0.0282**	**0.3349**	**1.0300e-003**	**0.1141**	**9.0000e-004**	**0.1150**	**0.0303**	**8.3000e-004**	**0.0311**		**102.6928**	**102.6928**	**2.7000e-003**		**102.7603**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0282	0.3349	1.0300e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311		102.6928	102.6928	2.7000e-003		102.7603
Total	**0.0469**	**0.0282**	**0.3349**	**1.0300e-003**	**0.1141**	**9.0000e-004**	**0.1150**	**0.0303**	**8.3000e-004**	**0.0311**		**102.6928**	**102.6928**	**2.7000e-003**		**102.7603**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0444	0.0257	0.3114	1.0000e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311		99.5045	99.5045	2.4700e-003		99.5663
Total	**0.0444**	**0.0257**	**0.3114**	**1.0000e-003**	**0.1141**	**8.8000e-004**	**0.1150**	**0.0303**	**8.1000e-004**	**0.0311**		**99.5045**	**99.5045**	**2.4700e-003**		**99.5663**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0444	0.0257	0.3114	1.0000e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311		99.5045	99.5045	2.4700e-003		99.5663
Total	**0.0444**	**0.0257**	**0.3114**	**1.0000e-003**	**0.1141**	**8.8000e-004**	**0.1150**	**0.0303**	**8.1000e-004**	**0.0311**		**99.5045**	**99.5045**	**2.4700e-003**		**99.5663**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.4734	0.2743	3.3220	0.0107	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315		1,061.3818	1,061.3818	0.0264		1,062.0410
Total	**0.4734**	**0.2743**	**3.3220**	**0.0107**	**1.2171**	**9.4300e-003**	**1.2266**	**0.3229**	**8.6800e-003**	**0.3315**		**1,061.3818**	**1,061.3818**	**0.0264**		**1,062.0410**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.4734	0.2743	3.3220	0.0107	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315		1,061.3818	1,061.3818	0.0264		1,062.0410
Total	**0.4734**	**0.2743**	**3.3220**	**0.0107**	**1.2171**	**9.4300e-003**	**1.2266**	**0.3229**	**8.6800e-003**	**0.3315**		**1,061.3818**	**1,061.3818**	**0.0264**		**1,062.0410**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Unmitigated	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
NaturalGas Unmitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1119.16	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35784.3	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1283.42	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22759.9	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4769.72	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5057.75	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	251.616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1.11916	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35.7843	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1.28342	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22.7599	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4.76972	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5.05775	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	0.251616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Unmitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment C

Local Hire Provision Net Change	
Without Local Hire Provision	
Total Construction GHG Emissions (MT CO2e)	3,623
Amortized (MT CO2e/year)	120.77
With Local Hire Provision	
Total Construction GHG Emissions (MT CO2e)	3,024
Amortized (MT CO2e/year)	100.80
% Decrease in Construction-related GHG Emissions	***17%***

O14-22

EXHIBIT B

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on volatile organic compound filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

Professional Experience

Dr. Rosenfeld has over 25 years' experience conducting environmental investigations and risk assessments for evaluating impacts to human health, property, and ecological receptors. His expertise focuses on the fate and transport of environmental contaminants, human health risk, exposure assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from unconventional oil drilling operations, oil spills, landfills, boilers and incinerators, process stacks, storage tanks, confined animal feeding operations, and many other industrial and agricultural sources. His project experience ranges from monitoring and modeling of pollution sources to evaluating impacts of pollution on workers at industrial facilities and residents in surrounding communities.

Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing lead, heavy metals, mold, bacteria, particulate matter, petroleum hydrocarbons, chlorinated solvents, pesticides, radioactive waste, dioxins and furans, semi- and volatile organic compounds, PCBs, PAHs, perchlorate, asbestos, per- and poly-fluoroalkyl substances (PFOA/PFOS), unusual polymers, fuel oxygenates (MTBE), among other pollutants. Dr. Rosenfeld also has experience evaluating greenhouse gas emissions from various projects and is an expert on the assessment of odors from industrial and agricultural sites, as well as the evaluation of odor nuisance impacts and technologies for abatement of odorous emissions. As a principal scientist at SWAPE, Dr. Rosenfeld directs air dispersion modeling and exposure assessments. He has served as an expert witness and testified about pollution sources causing nuisance and/or personal injury at dozens of sites and has testified as an expert witness on more than ten cases involving exposure to air contaminants from industrial sources.

Professional History:

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)
UCLA School of Public Health; 2003 to 2006; Adjunct Professor
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator
UCLA Institute of the Environment, 2001-2002; Research Associate
Komex H_2O Science, 2001 to 2003; Senior Remediation Scientist
National Groundwater Association, 2002-2004; Lecturer
San Diego State University, 1999-2001; Adjunct Professor
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor
King County, Seattle, 1996 – 1999; Scientist
James River Corp., Washington, 1995-96; Scientist
Big Creek Lumber, Davenport, California, 1995; Scientist
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist

Publications:

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Rosenfeld P. E. (March 2007). Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florala, Alabama. *The AEHS Annual Meeting.* Lecture conducted from San Diego, CA.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (August 21 – 25, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006*. Lecture conducted from Radisson SAS Scandinavia Hotel in Oslo Norway.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (November 4-8, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *APHA 134 Annual Meeting & Exposition.* Lecture conducted from Boston Massachusetts.

Paul Rosenfeld Ph.D. (October 24-25, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. Mealey's C8/PFOA. *Science, Risk & Litigation Conference.* Lecture conducted from The Rittenhouse Hotel, Philadelphia, PA.

Paul Rosenfeld Ph.D. (September 19, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, *Toxicology and Remediation PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel, Irvine California.

Paul Rosenfeld Ph.D. (September 19, 2005). Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP. *PEMA Emerging Contaminant Conference.* Lecture conducted from Hilton Hotel in Irvine, California.

Paul Rosenfeld Ph.D. (September 26-27, 2005). Fate, Transport and Persistence of PDBEs. *Mealey's Groundwater Conference.* Lecture conducted from Ritz Carlton Hotel, Marina Del Ray, California.

Paul Rosenfeld Ph.D. (June 7-8, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. *International Society of Environmental Forensics: Focus On Emerging Contaminants*. Lecture conducted from Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Fate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals. *2005 National Groundwater Association Ground Water And Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation. *2005 National Groundwater Association Ground Water and Environmental Law Conference.* Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. and Rob Hesse R.G. (May 5-6, 2004). Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. *National Groundwater Association. Environmental Law Conference*. Lecture conducted from Congress Plaza Hotel, Chicago Illinois.

Paul Rosenfeld, Ph.D. (March 2004). Perchlorate Toxicology. *Meeting of the American Groundwater Trust*. Lecture conducted from Phoenix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse (2004). Perchlorate Contamination of the Colorado River. *Meeting of tribal representatives*. Lecture conducted from Parker, AZ.

Paul Rosenfeld, Ph.D. (April 7, 2004). A National Damage Assessment Model For PCE and Dry Cleaners. *Drycleaner Symposium. California Ground Water Association*. Lecture conducted from Radison Hotel, Sacramento, California.

Rosenfeld, P. E., Grey, M., (June 2003) Two stage biofilter for biosolids composting odor control. *Seventh International In Situ And On Site Bioremediation Symposium Battelle Conference* Orlando, FL.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. (February 20-21, 2003) Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. *National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants*.. Lecture conducted from Hyatt Regency Phoenix Arizona.

Paul Rosenfeld, Ph.D. (February 6-7, 2003). Underground Storage Tank Litigation and Remediation. *California CUPA Forum*. Lecture conducted from Marriott Hotel, Anaheim California.

Paul Rosenfeld, Ph.D. (October 23, 2002) Underground Storage Tank Litigation and Remediation. *EPA Underground Storage Tank Roundtable*. Lecture conducted from Sacramento California.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Understanding Odor from Compost, *Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Using High Carbon Wood Ash to Control Compost Odor. *Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Grey, M. A. (September 22-24, 2002). Biocycle Composting For Coastal Sage Restoration. *Northwest Biosolids Management Association*. Lecture conducted from Vancouver Washington..

Rosenfeld, P.E. and Grey, M. A. (November 11-14, 2002). Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Soil Science Society Annual Conferenc*e. Lecture conducted from Indianapolis, Maryland.

Rosenfeld. P.E. (September 16, 2000). Two stage biofilter for biosolids composting odor control. *Water Environment Federation.* Lecture conducted from Anaheim California.

Rosenfeld. P.E. (October 16, 2000). Wood ash and biofilter control of compost odor. *Biofest.* Lecture conducted from Ocean Shores, California.

Rosenfeld, P.E. (2000). Bioremediation Using Organic Soil Amendments. *California Resource Recovery Association*. Lecture conducted from Sacramento California.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings*. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., and C.L. Henry. (1999). An evaluation of ash incorporation with biosolids for odor reduction. *Soil Science Society of America*. Lecture conducted from Salt Lake City Utah.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. *Brown and Caldwell.* Lecture conducted from Seattle Washington.

Rosenfeld, P.E., C.L. Henry. (1998). Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. *Biofest.* Lecture conducted from Lake Chelan, Washington.

Rosenfeld, P.E, C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., C.L. Henry, R. B. Harrison, and R. Dills. (1997). Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. *Soil Science Society of America*. Lecture conducted from Anaheim California.

Teaching Experience:

UCLA Department of Environmental Health (Summer 2003 through 20010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course in Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5, 2002. Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

Academic Grants Awarded:

California Integrated Waste Management Board. $41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: $10,000 grant awarded to San Diego State University.
Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. $100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. $20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: $10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: $15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. $500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993

Deposition and/or Trial Testimony:

In the United States District Court For The District of New Jersey
Duarte et al, *Plaintiffs,* vs. United States Metals Refining Company et. al. *Defendant.*
Case No.: 2:17-cv-01624-ES-SCM
Rosenfeld Deposition. 6-7-2019

In the United States District Court of Southern District of Texas Galveston Division
M/T Carla Maersk, *Plaintiffs,* vs. Conti 168., Schiffahrts-GMBH & Co. Bulker KG MS "Conti Perdido" *Defendant.*
Case No.: 3:15-CV-00106 consolidated with 3:15-CV-00237
Rosenfeld Deposition. 5-9-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
Carole-Taddeo-Bates et al., vs. Ifran Khan et al., Defendants
Case No.: No. BC615636
Rosenfeld Deposition, 1-26-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
The San Gabriel Valley Council of Governments et al. vs El Adobe Apts. Inc. et al., Defendants
Case No.: No. BC646857
Rosenfeld Deposition, 10-6-2018; Trial 3-7-19

In United States District Court For The District of Colorado
Bells et al. Plaintiff vs. The 3M Company et al., Defendants
Case: No 1:16-cv-02531-RBJ
Rosenfeld Deposition, 3-15-2018 and 4-3-2018

In The District Court Of Regan County, Texas, 112th Judicial District
Phillip Bales et al., Plaintiff vs. Dow Agrosciences, LLC, et al., Defendants
Cause No 1923
Rosenfeld Deposition, 11-17-2017

In The Superior Court of the State of California In And For The County Of Contra Costa
Simons et al., Plaintiffs vs. Chevron Corporation, et al., Defendants
Cause No C12-01481
Rosenfeld Deposition, 11-20-2017

In The Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants
Case No.: No. 0i9-L-2295
Rosenfeld Deposition, 8-23-2017

In The Superior Court of the State of California, For The County of Los Angeles
Warrn Gilbert and Penny Gilber, Plaintiff vs. BMW of North America LLC
Case No.: LC102019 (c/w BC582154)
Rosenfeld Deposition, 8-16-2017, Trail 8-28-2018

In the Northern District Court of Mississippi, Greenville Division
Brenda J. Cooper, et al., *Plaintiffs,* vs. Meritor Inc., et al., *Defendants*
Case Number: 4:16-cv-52-DMB-JVM
Rosenfeld Deposition: July 2017

In The Superior Court of the State of Washington, County of Snohomish
Michael Davis and Julie Davis et al., Plaintiff vs. Cedar Grove Composting Inc., Defendants
Case No.: No. 13-2-03987-5
Rosenfeld Deposition, February 2017
Trial, March 2017

In The Superior Court of the State of California, County of Alameda
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants
Case No.: RG14711115
Rosenfeld Deposition, September 2015

In The Iowa District Court In And For Poweshiek County
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants
Case No.: LALA002187
Rosenfeld Deposition, August 2015

In The Iowa District Court For Wapello County
Jerry Dovico, et al., Plaintiffs vs. Valley View Sine LLC, et al., Defendants
Law No,: LALA105144 - Division A
Rosenfeld Deposition, August 2015

In The Iowa District Court For Wapello County
Doug Pauls, et al.,, et al., Plaintiffs vs. Richard Warren, et al., Defendants
Law No,: LALA105144 - Division A
Rosenfeld Deposition, August 2015

In The Circuit Court of Ohio County, West Virginia
Robert Andrews, et al. v. Antero, et al.
Civil Action N0. 14-C-30000
Rosenfeld Deposition, June 2015

In The Third Judicial District County of Dona Ana, New Mexico
Betty Gonzalez, et al. Plaintiffs vs. Del Oro Dairy, Del Oro Real Estate LLC, Jerry Settles and Deward DeRuyter, Defendants
Rosenfeld Deposition: July 2015

In The Iowa District Court For Muscatine County
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant
Case No 4980
Rosenfeld Deposition: May 2015

In the Circuit Court of the 17th Judicial Circuit, in and For Broward County, Florida
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.
Case Number CACE07030358 (26)
Rosenfeld Deposition: December 2014

In the United States District Court Western District of Oklahoma
Tommy McCarty, et al., Plaintiffs, v. Oklahoma City Landfill, LLC d/b/a Southeast Oklahoma City Landfill, et al. Defendants.
Case No. 5:12-cv-01152-C
Rosenfeld Deposition: July 2014

In the County Court of Dallas County Texas
Lisa Parr et al, *Plaintiff*, vs. Aruba et al, *Defendant.*
Case Number cc-11-01650-E
Rosenfeld Deposition: March and September 2013
Rosenfeld Trial: April 2014

In the Court of Common Pleas of Tuscarawas County Ohio
John Michael Abicht, et al., *Plaintiffs,* vs. Republic Services, Inc., et al., *Defendants*
Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)
Rosenfeld Deposition: October 2012

In the United States District Court of Southern District of Texas Galveston Division
Kyle Cannon, Eugene Donovan, Genaro Ramirez, Carol Sassler, and Harvey Walton, each Individually and on behalf of those similarly situated, *Plaintiffs,* vs. BP Products North America, Inc., *Defendant.*
Case 3:10-cv-00622
Rosenfeld Deposition: February 2012
Rosenfeld Trial: April 2013

In the Circuit Court of Baltimore County Maryland
Philip E. Cvach, II et al., *Plaintiffs* vs. Two Farms, Inc. d/b/a Royal Farms, Defendants
Case Number: 03-C-12-012487 OT
Rosenfeld Deposition: September 2013

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(cont.)

EXHIBIT C

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Matthew F. Hagemann, P.G., C.Hg., QSD, QSP

Geologic and Hydrogeologic Characterization
Industrial Stormwater Compliance
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
CEQA Review

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.
B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 25 years of experience in environmental policy, assessment and remediation. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) while also working with permit holders to improve hydrogeologic characterization and water quality monitoring.

Matt has worked closely with U.S. EPA legal counsel and the technical staff of several states in the application and enforcement of RCRA, Safe Drinking Water Act and Clean Water Act regulations. Matt has trained the technical staff in the States of California, Hawaii, Nevada, Arizona and the Territory of Guam in the conduct of investigations, groundwater fundamentals, and sampling techniques.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2014;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of over 100 environmental impact reports since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, Valley Fever, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at industrial facilities.
- Manager of a project to provide technical assistance to a community adjacent to a former Naval shipyard under a grant from the U.S. EPA.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.
- Expert witness on two cases involving MTBE litigation.
- Expert witness and litigation support on the impact of air toxins and hazards at a school.
- Expert witness in litigation at a former plywood plant.

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.

- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9. Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt taught physical geology (lecture and lab and introductory geology at Golden West College in Huntington Beach, California from 2010 to 2014.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Coloradao.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal repesentatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F**. 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

Selected as subject matter expert for the California Professional Geologist licensing examination, 2009-2011.

2.3.2.14 Letter O14: Southwest Mountain States Regional Council of Carpenters

This letter provides input on the Revised Draft 2045 CAP as well as CEQA comments on the Recirculated Draft PEIR. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4, Comments on the Revised Draft 2045 CAP, in Chapter 1, *Introduction*. PEIR-focused comments are addressed below.

O14-1 This comment does not raise significant environmental issues related to the Recirculated Draft PEIR warranting a response pursuant to CEQA Guidelines section 15088(a). However, all comments timely provided and fairly presented by SWMSRCC during the public comment period and before the close of the Project's public hearing shall be included within the administrative record and presented to the County Board of Supervisors for consideration prior to Project approval.

O14-2 In response to the comment's incorporation by reference of comments raising issues regarding the Revised Draft 2045 CAP and its environmental review, this comment does not identify any specific alleged deficiencies in the Recirculated Draft PEIR such that a specific response cannot be provided and does not raise significant environmental issues relating to the Recirculated Draft PEIR warranting a response pursuant to CEQA Guidelines section 15088(a). However, all public comments timely provided and fairly presented to the County shall be included within the administrative record and presented to the County Board of Supervisors for consideration prior to Project approval.

O14-3 The County will provide notice to the commenter of actions relating to the Revised Draft 2045 CAP as required under CEQA and Planning and Zoning Law. For the notices regarding the Revised Draft 2045 CAP project, interested parties can register for the project listserv to receive email notifications: https://planning.lacounty.gov/get-involved/.

O14-4 to O14-5 The comment requests the consideration of measures and strategies in addition to increasing densities and diversity of land uses near transit, reducing single-occupancy vehicle trips, and institutionalizing low-carbon transportation. See O14-6 to O14-10 for a response to the specific additional requested measures and strategies.

O14-6 to O14-10 In regards to the comment's statement that local hire is helpful to reduce environmental impacts by reducing the length of vendor trips and GHG emissions, ensuring that local workers have employment opportunities on projects situated within their communities has long been a core element of economic development programs at the municipal level. To this end, the County adopted a Local and Targeted Worker Hire Policy that took effect for contracts approved by the Board of Supervisors after October 31, 2016. This policy imposes a 30 percent Local Hire goal and a 10 percent

Targeted Worker hire goal on most major construction projects approved by the Board. A Targeted Worker is defined as a County resident of the County who has indices of career-limiting circumstances such as documented annual income at or below 100 percent of the Federal Poverty Level (FPL). A Local Worker is defined as an individual living within Tier 1 or Tier 2 qualifying Zip Codes. Before employing workers from Tier 2 Zip Codes, the available pool of local residents whose primary place of residence is within Tier 1 Zip Codes must first be exhausted. Tier 1 means a qualifying Zip Code within five miles of the proposed project site and Tier 2 means a qualifying Zip Code beyond five miles of the proposed project site.

The Local and Targeted Worker Hire Policy achieves the following: 1) retain and create jobs in communities that need them most; 2) provide opportunities and life-long skills that can become real careers; 3) provide second chance and hope to those facing barriers of employment; 4) stimulate local economy; and 5) promote small business. Simultaneously, it contributes to the reduction of GHG emissions from this segment of the workforce.

The remainder of this comment regarding local hire effects on economic development does not raise significant environmental issues relating to the Recirculated Draft PEIR warranting a further response pursuant to CEQA Guidelines section 15088(a).

O14-11 Assembly Bill 2011 focuses on affordable housing on commercially zoned lands and has a list of other specified criteria. The County's Local and Targeted Worker Hire Policy complements Assembly Bill 2011 since it has a broader range of projects than solely affordable housing projects on commercially zoned lands. This comment does not raise significant environmental issues relating to the Recirculated Draft PEIR warranting a further response pursuant to CEQA Guidelines section 15088(a).

O14-12 to O14-15 See Response O14-6 through O14-10. The County already implements a Local and Targeted Worker Hire Policy that contributes to the environmental benefits stated in the comment, including the reduction of GHG emissions from this segment of the workforce.

O14-16 This comment provides a recitation of certain general legal standards regarding CEQA compliance, and no response is required for such comments, as it does not raise significant environmental issues relating to the Recirculated Draft PEIR warranting a response pursuant to CEQA Guidelines section 15088(a). The Recirculated Draft PEIR has been prepared in compliance with CEQA. Regarding the comment's discussion regarding preparation of an EIR, as described in Chapter 1, *Introduction*, of the Recirculated Draft PEIR, the Recirculated Draft PEIR is an informational document intended to disclose to the public and decision-makers the environmental impacts of the Revised Draft 2045 CAP. Consistent with CEQA Guidelines section 15081, the County has prepared the Recirculated Draft PEIR to document its analysis of the environmental impacts of the Revised Draft 2045 CAP. All environmental resource areas in the CEQA Guidelines Appendix G Environmental Checklist have

been studied, as shown in Appendix A.1, *Notice of Preparation and Initial Study*, of the Recirculated Draft PEIR. Some environmental resource areas were screened out of detailed review based on substantial evidence that the Revised Draft 2045 CAP would have no impact or a less-than-significant impact on the environment. The Recirculated Draft PEIR provided a more detailed analysis as to whether the Revised Draft 2045 CAP would result in significant environmental impacts to the remaining resources that were not screened out.

O14-17 The County acknowledges the commenter's support for the Checklist as a mechanism for general plan-consistent projects to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). See General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects, for additional discussion.

O14-18 The County acknowledges the commenter's summary of CEQA Guidelines section 15183.5(b) regarding the requirements of a qualified CAP, and concurrence that the Revised Draft 2045 CAP meets these requirements. See General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects, for additional discussion.

O14-19 In response to the comment's request for the Checklist to include a local hire requirement, although a local hire measure has the potential to reduce Countywide VMT and associated mobile source GHG emissions, the Revised Draft 2045 CAP does not include a local hire measure or as a requirement in the Checklist. At this time, the County respectfully declines to include a local hire measure or as a Checklist requirement. However, such a measure could potentially be used as an alternative GHG emission reduction measure pursuant to Checklist Step 4, provided that a project applicant demonstrate how such a measure would reduce GHG emissions equivalent or greater level than to the Checklist requirement that it replaces. (Revised Draft 2045 Appendix F, pp. F-4, F-12 to F-15). See General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects, for additional discussion. As a matter of policy, the County does employ a Local and Targeted Worker Hire Policy on most major construction projects approved by the Board of Supervisors.

O14-20 See Response O14-10.

O14-21 The County notes the information contained in Attachment A of the comment letter, consisting of a draft technical report regarding worker trips with respect to the estimation of GHG emissions in support of the substance of the main comment letter. The Recirculated Draft PEIR has adequately analyzed impacts associated with transportation resources and VMT specifically (see Recirculated Draft PEIR p. 3.15-18) and the Revised Draft 2045 CAP includes measures that reduce VMT (see, for example, Measures T1, T4, and T5). The County has reviewed SWAPE's draft report and determined that the information provided is generic, offers no opinion about

impacts associated with the Revised Draft 2045 CAP, and does not bear on the adequacy or accuracy of the Recirculated Draft PEIR or the conclusions reached in the Recirculated Draft PEIR. The commenter's draft opinions about worker trips and GHG emissions are acknowledged, but in light of substantial evidence cited and relied upon in the Recirculated Draft PEIR, the County disagrees with any suggestion that the opinions expressed should result in revision to or clarification of the Recirculated Draft PEIR. This comment presenting data to support a suggested policy directive does not raise significant environmental issues specifically relating to the adequacy of the Recirculated Draft PEIR such that no response is required pursuant to CEQA Guidelines section 15088(a).

O14-22 This comment consists of the resumes of Paul Rosenfeld CV and Matt Hagemann CV of SWAPE, which prepared the technical report referenced in Comment O14-21; however, this comment does not raise significant environmental issues relating to the adequacy of the Recirculated Draft PEIR such that no response is required pursuant to CEQA Guidelines section 15088(a).

TEJON RANCH
COMPANY

May 15, 2023

VIA U.S. MAIL:
Los Angeles County Department of Regional Planning
Attn: Thuy Hua
320 W. Temple Street, 13th Floor
Los Angeles, CA 90012

VIA EMAIL: climate@planning.lacounty.gov

SUBJECT: Draft 2045 Climate Action Plan (CAP) Comment Period

Dear Ms. Hua:

Tejon Ranch Co., on behalf of itself and its subsidiary/affiliated entities Tejon Ranchcorp and Centennial Founders, LLC (collectively, the "Tejon Ranch") offers these written comments on the proposed Draft 2045 Climate Action Plan ("CAP") and the Recirculated Draft Program Environmental Impact Report ("PEIR"), State Clearinghouse #2021120568.

Tejon Ranch applauds Los Angeles County's pledge to fight global climate change. We believe that State and local climate measures can be feasibly implemented in furtherance of other critical California priorities such as the continued growth of the California economy, the increased equity and upward mobility for our working families and employers, the funding and timely completion of urgently needed transportation, water and other infrastructure, and the implementation of the housing elements approved by our cities and counties to solve our regional housing crisis. Tejon Ranch is committed to being at the forefront of conservation and sustainable development to help lead the charge on protecting California's resources while creating communities that provide jobs and housing that align with the State's and County's goals. O15-1

Tejon Ranch – Leading the Way

In 2008, Tejon Ranch entered into the Tejon Ranch Conservation and Land Use Agreement (Ranchwide Agreement), a historic conservation agreement with the state's leading environmental advocacy groups (Natural Resources Defense Council, Sierra Club, Audubon Society, Planning and Conservation League, and Endangered Habitats League) to conserve approximately 240,000 acres (roughly 90 percent) of the Ranch lands, and allow development of four significant new master planned communities on sites scientifically selected as having lower natural resource values, which are located proximate to existing transportation and utility infrastructure on the remaining, approximately 30,000 acres (roughly 10 percent). As a voluntary and proactive conservation agreement by Tejon Ranch, the Ranchwide Agreement is the largest private land conservation commitment in California history and was finalized following many years of detailed project-level scientific analysis and data collection on Tejon Ranch. At 240,000 acres, the open space preservation at Tejon Ranch is larger than any other private conservation commitment in

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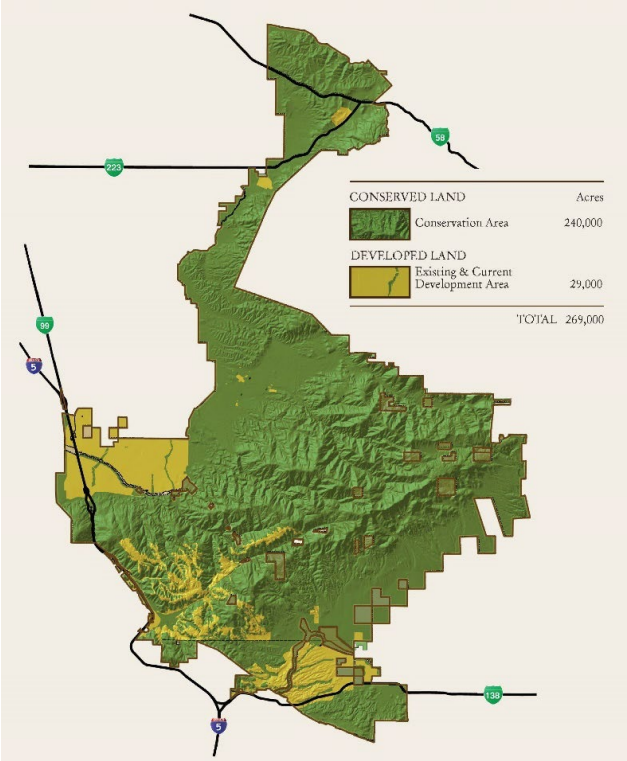
Tejon Ranch Co. (NYSE:TRC)—a diversified real estate development and agribusiness company.

under the Ranchwide Agreement contain multitudes of trees and plants which serve as carbon sinks that will fight climate change in perpetuity. These lands capture approximately 3.3 million tons of carbon, which is equivalent to the carbon produced by 2.5 million passenger vehicles (5% of California's fleet) in a year.



Tejon Ranch is an iconic California property in remarkable condition – but not from being untouched. It is working land that is cared for with intention and principles of good stewardship that inspired the creation of huge conservation areas that conserve hundreds of plant and animal species. Tejon Ranch's extensive water assets meet our current needs as well as our projected future needs through the full buildout of our master planned communities. The Ranch has led in the adoption of environmentally sensitive practices throughout our enterprise, including water conservation in our ranching, farming, and real estate operations, including water resource recovery facilities (WRRF) incorporated into each of our master plans including Centennial, Tejon Mountain Village, Grapevine, and the Tejon Ranch Commerce Center. Environmental sensitivity and sustainability are cornerstones of the thoughtful planning, intentional design, and careful development of our master planned communities which will serve to solve California's housing crisis in an intelligent way. All communities at Tejon Ranch will be built with resiliency features such as permanently maintained defensible space, community water systems incorporating state-of-the-art water conservation measures, reclaimed water for irrigation, stormwater capture, drought-tolerant landscaping, photovoltaic solar, multi-modal transportation, and prolific EV charging stations.

O15-1 (cont.)

Tejon Ranch has executed upon thoughtful, forward-thinking development at our Tejon Ranch Commerce Center (TRCC), which has created thousands of jobs for the surrounding communities. One such example was the completion of second largest single-roof commercial solar energy system in the State of California in 2011[1] which was the equivalent of "eliminating the emissions of 389 cars or powering 241 homes yearly." The water used for irrigating the drought tolerant landscaping at TRCC is recycled at Tejon Castac Water District's water

[1] https://www.businesswire.com/news/home/20110511005387/en/IKEA-Powers-Up-2nd-Largest-Single-Roof-Commercial-Solar-Energy-System-in-State-at-Distribution-Center-in-Tejon-California

reclamation and recycling facilities. The Commerce Center is also a focal stopping point along the Interstate 5 corridor for electric vehicles. To date, there are over one hundred charging stations built on-site and we are working to deliver many more.

O15-1 (cont.)

Tejon Ranch's masterplan, Centennial, a future net-zero GHG community[2] located in Los Angeles County, includes 19,333 homes, of which nearly 3,500 are affordable housing units, and provides a jobs-housing balance through 10.1 million square feet of commercial, industrial and institutional uses. During the many years of planning of Centennial, Tejon meticulously identified achievable GHG reductions and project level mitigation measures that dramatically reduced the GHG impacts of the project. Many of these GHG reduction measures are included within the certified Environmental Impact Report ("EIR") for the Centennial project and the remainder are included in the legally-binding and publicly transparent Climate Resolve Settlement Agreement which has been previously provided to the County. As a result of our commitment to these unrivaled GHG reduction measures, the project has been formally recognized by the state's leading climate regulatory agency, the California Air Resources Board, as a model for large residential development projects in achieving net-zero GHG emissions[3]. A few of these measures are listed below and are consistent with the Draft 2045 CAP or exceed what Los Angeles County has envisioned to date.

O15-2

- 50% of the project's total electric energy demand (i.e. household, business, civic/institutional, recreational, and public facilities) shall be met by onsite renewable energy.
- 100% of project single-family detached homes shall be "solar-ready" or equivalent, based on the latest technology.
- Provide a ride-share program, on demand pick up, shuttle service or similar methods to employment, commercial and residential areas of Centennial.
- Provide "complete streets" throughout the community to provide alternative modes of transport (walking, biking, low-speed vehicles (LSVs) such as neighborhood electric scooters, bikes, and other Neighborhood Electric Vehicles (NEVs).
- Implement a NEV Network – for NEVs (a "low speed vehicle" up to 35 MPH that are electric powered and ideal for short trips up to 30 miles in length). A NEV network includes roadways, parking, charging stations, striping, signs, and educational tools and can double as bicycle routes. NEVs are an alternative to traditional vehicle trips and therefore would reduce vehicle trips.
- Net Zero GHG Emissions: The community commits to net zero GHG emissions by reducing to zero all emissions through significant on-site and off-site commitments. A large component prioritizes disadvantaged communities, followed by other projects within Los Angeles County, and other parts of southern and central California.
- Electric Vehicle Advancement: Advance the EV future through commitments to install almost 30,000 chargers within and outside the community. Provide incentives to support the purchase of 10,500 electric vehicles.

[2] Environmental group and Tejon Ranch agree on plan to build 19,300 zero-emission homes, Los Angeles Times, December 1, 2021

[3] California Air Resources Board Final 2022 Scoping Plan Update, Appendix D, pages 25-26.

- 95 miles of bike/pedestrian trails to encourage walkability and non-motorized transportation for residents to work, live and play within Centennial.
- Wildfire Prevention: Funding for on-site and off-site fire protection and prevention measures, including up to 4 fire stations, comprehensive fire protection plan and emergency response plan, fire-resilient community design, planning, and vegetation management (including fuel modification zones) with benefits to neighboring communities and new buildings that will employ the latest building codes.

O15-2 (cont.)

These are just some of the forward-thinking commitments that Tejon Ranch has made on a project level to minimize and then fully offset remaining GHG emissions as to its Centennial project. These project features are important because they demonstrate feasible, clear, implementable project level mitigations. Tejon Ranch is proud of Centennial and the progressive measures it will implement while providing attainable housing and affordable housing for Los Angeles County residents. Tejon Ranch will continue to support climate crisis goals and is partnering with Los Angeles County to bring cutting edge concepts to address climate change on a project level.

Draft 2045 CAP Should Not be a Component of the General Plan

The Draft 2045 CAP is crafted for an enormous County with vastly different pockets of populations and densities and is trying to address numerous issues in a one-size-fits-all section of the County General Plan. Erroneously, as currently written, the Draft 2045 CAP is contemplated to be adopted as part of the Los Angeles County General Plan. Irreparably, once included in the General Plan, compliance with the Draft 2045 CAP is mandatory: neither elected officials nor staff can authorize deviations from the Draft 2045 CAP without amending the General Plan. Third parties seeking to block funding or approvals of infrastructure, job-creation, and housing projects can also sue the County, alleging failure to fully comply with the Draft 2045 CAP in accepting or disbursing funds, or approving, infrastructure, jobs or housing projects. Both the County and applicants receiving County approvals for such projects will become targets in such opposition lawsuits.

O15-3

Inclusion of the Draft 2045 CAP in the General Plan also creates new County obligations, and expands litigation risks, under the California Environmental Quality Act ("CEQA"). As the Draft 2045 CAP itself explains, any project that fails to comply with all applicable requirements (inclusive of the 25 Draft 2045 CAP measures, more than 90 implementation actions, and scores of PEIR mitigation measures, collectively "CAP Measures") would conflict with an environmental component of the General Plan, a significant and unavoidable Land Use impact, and would have a significant GHG impact. These conflicts would trigger the necessity for an Environmental Impact Report (EIR) and preclude the County or applicants from making use of less costly, less time-consuming, and less litigious CEQA compliance pathways. The Draft 2045 CAP specifies that for each non-compliant Draft 2045 CAP Measure, the "infeasibility" of such a measure must be demonstrated with substantial evidence. Each one of these "infeasibility" findings, as well as the sufficiency of any alternative Draft 2045 CAP measure, is also subject to challenge in CEQA and General Plan compliance lawsuits.

O15-4

O15-5

O15-6

O15-7

California Governor Newsom has stressed that California needs 2.5 million new homes by 2030[4], and officials at the California Department of Housing and Community Development are implementing state law to achieve this goal. To meet the demand of the housing crisis, including achieving the goal of 1 million new units of affordable housing, Los Angeles County must dramatically ramp up housing construction. The Southern California Association of Governments (SCAG) 6th Cycle Regional Housing Needs Allocation (RHNA) plan driving the 2021-2029 housing element for Los Angeles County targets the delivery of over 812,000 homes, 90,000 of which are to be delivered in unincorporated Los Angeles County by 2029. These targets include over 330,000 low income and very-low-income homes, over 39,000 of which are allocated to Unincorporated Los Angeles County. If adopted as part of the General Plan, the Draft 2045 CAP will be used to stop development and will be weaponized against achieving State goals and thwarting the delivery of desperately needed homes. The Draft 2045 CAP should be revised to include only feasible, clear, implementable Draft 2045 CAP Measures that are aligned with and allow for full implementation and achievement of other critical County infrastructure, economic development, housing, and other needs. O15-8 O15-9

If adopted as part of the General Plan, the Draft 2045 CAP hinders County elected and appointed officials' ability to implement long-term housing law compliance obligations. Once adopted, the Draft 2045 CAP cannot be amended without undergoing further CEQA review inclusive of adoption of "all feasible mitigation" to achieve either the same or a modified GHG reduction goal. Evidence of this happening can be found when San Diego County adopted what its Board of Supervisors believed to be an aspirational CAP into its General Plan in 2018. Anti-housing litigants weaponized the CAP, and courts concluded that the County had adopted the CAP as a fully enforceable General Plan and CEQA mandate. Housing opponents have had an unbroken run of successful lawsuits in blocking multiple new housing projects in that county. San Diego attempted unsuccessfully to amend its CAP and allow for example the use of CARB-approved and other GHG offsets to mitigate GHG emissions, only to lose in court – again, and again. Another example is Solano County, in Northern California, which suffered the same fate when its General Plan aspirational CAP also failed to pass muster in a no-growth advocacy CEQA lawsuit challenge. Looking at this woeful record of local agency losses when CAPs were included in General Plans, even the most pro-climate jurisdictions in California, such as San Francisco, have elected not to include their CAPs in their General Plan – while others have very carefully drafted CAPs to assure that they are clear, feasible, implementable, and operate in alignment with and support other approved General Plan elements, as well as other policy priorities, plans and obligations. O15-10 O15-11 O15-12

Tejon Ranch supports the currently adopted County CAP, because it is feasible and includes measures that are within the County's jurisdiction and control to feasibly implement. As the County knows, the Centennial project was determined in both our EIR and by the trial court to be fully consistent with the County's current CAP. The Draft 2045 CAP, in contrast, is a massive and sprawling set of mandates – some of which are not even defined, and none of which are tailored to quantitatively assign feasible GHG reduction obligations to new projects, proposed retrofits, and existing structures. CAP 2045 also does not include an economic feasibility assessment for the vast range of structures and activities that it seeks to regulate, from advanced manufacturing to entertainment and tourism, from every category of infrastructure project, and O15-13 O15-14 O15-15

[4] Governor Newsom's Newly Created Housing Accountability Unit Marks First Year, Nov 4, 2022.

from isolated single-family homes to multi-family, mixed-use, and master planned communities. O15-15 (cont.)

Overview and Examples of Concerning Draft 2045 CAP Measures

Building homes or commercial and retail is a calculated risk in Los Angeles County and comes with a certain level uncertainty because of CEQA and how CEQA allows opponents to litigate all aspects of each project. However, even the tortuous CEQA process lays out the road map for project applicants to follow to demonstrate compliance, including how to analyze and mitigate impacts through a series of measures and performance standards. CEQA Guidelines are analyzed, debated, studied and compared to previously completed projects, and yet litigants are consistently successful in overruling approvals throughout the State. The reason for the success of overturning approvals during the court process is because project level mitigation and impact analysis can be subjective and left to a judge's interpretation of CEQA. The Draft 2045 CAP and PEIR add more than 50 new General Plan consistency and compliance obligations, and dozens more implementation and other measures, often without any detail and almost always without any GHG quantification metric, which will only add more uncertainty for project applicants. O15-16

The Draft 2045 CAP and PEIR collectively provide project opponents a vast bucket list of items to weaponize through CEQA challenges arguing that projects did not sufficiently mitigate impacts against poorly defined, unclear measures and performance standards. The following are just some examples of infeasible measures and mitigations that would create uncertainty for future development in Los Angeles County. O15-17

1. **Land Use to Address Jobs/Housing Balance:** *By 2030 achieve a jobs density of 300 jobs per acre:* O15-18

   The Draft 2045 CAP 300 employee per acre mandate would not have any immediate effect on existing employers; however, employers and applicants proposing new or expanded commercial, manufacturing, infrastructure, tourism, entertainment, and even church and educational uses, that do not have 300 employees per acre, would be inconsistent with the Draft 2045 CAP. These projects would thus have a significant and unavoidable GHG impact triggering the need for an EIR instead of more streamlined CEQA addendum and categorical exemptions for projects that are consistent with the General Plan, O15-19

   These projects would then be subject to a costly CEQA compliance process, the outcome of which would provide opponents with scores of new CEQA deficiency litigation claims about the sufficiency of substantial evidence to support infeasibility determinations as well as whether the substitute measure will indeed achieve the GHG reduction performance target that corresponds to this 300 employee per acre employment target. O15-20

   Since no such GHG calculations are disclosed in the Draft 2045 CAP, prospective employers would not even know how to begin to show compliance with this Draft 2045 CAP mandate, which is proposed to be independently and fully enforceable as part of the General Plan. O15-21

   Imposing this narrowly defined County-wide employment density metric to such a broad array of future projects, thus exposing them all to CEQA litigation while being out of compliance with the General Plan, is not consistent with the State and County goals to create economic growth and bring jobs to the County's many and diverse communities. O15-22

The Draft 2045 CAP and associated Program EIR do not, however, analyze or mitigate the consequences of this measure on the economic development plan components of the County's General Plans, Area Plans, and Community Plans. O15-23 This is both a fatal flaw in the Program EIR, and a violation of General Plan laws requiring internal harmony and consistency within the County's complex General Plan, which also includes multiple Area Plans and Community Plans. O15-24

The County should encourage job creation that will bring employment opportunities to the residents of Los Angeles County, especially higher wage jobs in expanding and innovating industry and business sectors. It is unrealistic to mandate a job creation of 300 jobs per acre that would be hard to meet for even high-density downtown areas. O15-25 This measure will discourage any small businesses, hospital expansions, medical offices, manufacturers, retail services, church, entertainment, schools and others from building as none of them could meet the employment density standard established by the Draft 2045 CAP and would be considered inconsistent with the General Plan and have an unavoidable CEQA GHG impact. O15-26 This is particularly unachievable given the expansion of hybrid workforce, where only a portion of employees are present daily, especially in the goods movement sector, entertainment or religious venues, schools or recreational sports facilities, or on college and university campuses, this mandate would not be achievable. O15-27 Table 1 below includes the average employment densities of common categories of commercial use, none of which come close to the 300 employee per acre Draft 2045 CAP requirement.

Table 1: Employment Density per Acre by Sector O15-28

Sector (NAICS codes)	Mean	Median	IQR	Sample size
Manufacturing (31, 32, 33)	18.8	11.0	15.7	217
Transportation and Warehousing (48, 49)	11.2	8.0	10.8	34
Construction (23)	19.4	9.9	18.4	122
Wholesale Trade (42)	12.8	8.0	11.1	132
Retail Trade (44, 45)	13	7.1	11.6	65
Real Estate and Rental and Leasing (53)	5.7	2.2	5.8	24
Administrative Support and Waste Management and Remediation Services (56)	22.5	20.3	22.0	25

2. **Ban on Net Zero Projects Using CARB-Approved Methodologies for Feasibly Achieving Net Zero GHG Projects**:

The Draft 2045 CAP correctly relies on other laws and agencies previously completed work product to help Los Angeles County meet their goals. The Draft 2045 CAP heavily touts the California Air Resources Board (CARB), widely considered the state's expert climate agency, adopted the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan), *"which lays out a path for achieving the statewide goals"*. The goals and priorities of the Draft 2045 CAP can mirror the 2022 Scoping Plan without being adopted O15-29

in the General Plan. Instead, the County should consider the Draft 2045 CAP as aspirations for the County to achieve and review each individual project to thoughtfully craft and adopt measures that can be implemented to help off-set emissions. O15-29 (cont.)

In fact, the County has already done this with their approval of the only two major mixed use master planned communities recognized by CARB to have achieved Net Zero GHG: Centennial and Newhall. Centennial is a model for achieving Net Zero GHG as acknowledged by CARB in their 2022 Scoping Plan **"**Tejon Ranch Company, the developer for the Centennial Specific Plan located in northern Los Angeles County, also committed its development to result in no net increase of GHG emissions… Mitigation measures employed by these developers include the prohibition of natural gas in residential and commercial properties; the requirement of on-site solar photovoltaic energy systems on residential and commercial properties; the installation of almost 30,000 EV chargers within and outside the plan area; funding incentives for the purchase of 10,500 passenger EVs and electric school buses and trucks; and procuring and retiring carbon offset credits from the voluntary market… they do demonstrate the feasibility of a net-zero approach for other large and complex residential development projects." O15-30

The County likewise recognized this achievement and commitment from Centennial with their trial court filing on February 2, 2022, stating, "that Real Parties (*Tejon Ranch Co. et al.)* have reached an accord with Climate Resolve to **achieve a "net zero GHG project" with massive investments in green infrastructure.**"[5]

Centennial's net zero GHG program also complies with the CARB-endorsed geographic hierarchy of GHG mitigation to successfully mitigate GHG emissions: "The State recommends prioritizing GHG mitigation actions according to a geographic hierarchy as follows: on-site opportunities; local, off-site GHG mitigation; and GHG offsets that meet CEQA's requirements." "The recent settlement agreement applicable to the Centennial Specific Plan in Los Angeles County also applied a geographic hierarchy for GHG mitigation, specifying that at least 51 percent of mitigated emissions should take place within the project, 69.5 percent within California, 82.25 percent within the United States, and no more than 17.75 percent from international projects. The geographic hierarchy of GHG mitigation is feasible, as demonstrated by these examples."[6] O15-31

Despite supporting these Centennial project approvals and supporting CARB's 2022 Scoping Plan, the Draft 2045 CAP specifically forbids projects from partnering with CARB to achieve carbon neutral goals, rejecting use of the CARB-approved Net Zero GHG compliance pathway employed by the only recognized large residential Net Zero GHG projects in California, by expressly disallowing GHG reductions to be achieved by CARB-approved GHG offsets that are quantified, validated, and meet other criteria including additionality. Instead, the Draft 2045 CAP allows, but does not provide detail on, a future County-only GHG reduction offset credit program that may potentially be O15-32 O15-33

[5] Objections to Petitioners' [Proposed] Judgment Granting Peremptory Writ of Mandate at p. 6, Center for Biological Diversity et al. v. County of Los Angeles, et al., Case No. 19STCP02100 (Los Angeles County Superior Court, filed Feb. 22, 2022).

[6] https://ww2.arb.ca.gov/sites/default/files/2022-05/2022-draft-sp-appendix-d-local-actions_0.pdf Draft 2022 Scoping Plan May 2022

defined, evaluated, adopted, and ultimately implemented at some later date. In fact, there is no information provided about the cost, feasibility, schedule, or scale of any such future offset program. The Draft 2045 CAP states:

> *"An offsets/credits program is not a 2045 CAP strategy, measure, or action currently proposed for implementation… Further, offset credits are not currently permitted to be used as alternative project emissions reduction measures for new development pursuant to the 2045 CAP Consistency Checklist. The offsets/credits program would be considered for potential implementation later, and only after completion of the feasibility study. The potential offsets/credit program would be designed to be consistent with applicable CEQA case law requirements, including requirements that offsets be enforceable, real, permanent, quantifiable, verifiable, and additional. The potential offsets/credits program would provide clear, objective, and measurable performance standards for all allowable GHG offsets. For any potential future GHG offsets/credits program evaluated by the County, the County would prioritize implementation of offsets generated within or close to Los Angeles County."*

O15-33 (cont.)

The Draft 2045 CAP asserts that it will fulfill CARB's goals and policies, but then expressly forbids the essential GHG offset component that were critical components of the net zero GHG programs in the County's own CARB-recognized master planned communities.

O15-34

If the County's ultimate goal is indeed to achieve carbon neutrality by 2045, while simultaneously fighting climate change, the County should embrace any method that helps reduce GHG for both the County, State and the Globe.

O15-35

As mentioned above, the Draft 2045 CAP allows but does not include a County-only GHG reduction offset credit program, but includes zero information about the cost, feasibility, schedule or scale of any such future program.

O15-36

The Draft 2045 CAP does not create any feasible new Net Zero GHG compliance pathway for any new project, undermining the Board's Resolution endorsing net zero GHG project outcomes similar to those already achieved by Centennial and Newhall.

O15-37

The Draft 2045 CAP currently creates only a net zero GHG compliance pathway for like-kind replacement projects on the same site that emit less GHG. Replacing an old office building or home with a new "like-kind" office building or home easily achieves this net zero GHG outcome given new lower GHG technologies and legal mandates, but the Draft 2045 CAP creates no compliance pathway for projects that would increase land use densities and intensities which are called for under the Housing Element as well as economic development components of the General Plan, or that include new uses beyond those that already exist on the same site.

O15-38

The Draft 2045 CAP makes housing, commercial, and mixed-use master planned community projects – as well as infrastructure and public facility projects - that are in full compliance with the General Plan, Housing Element and every existing GHG reduction mandate, a violation of the County's General Plan.

O15-39

3. Severe and Unlawful New Prohibitions Regarding the Use of Existing Water Supplies:

Like much of California, the development of Los Angeles County was and remains dependent on a diverse and resilient water supply that includes imported water. The Draft 2045 CAP demands that 90% of all water consumed within the unincorporated County boundaries, and 80% of agricultural irrigation water, be supplied exclusively by local water sources consisting of reclaimed water, grey water, and potable recycled water by 2045 with no pathway to achieve this. Under this Draft 2045 CAP Measure, no imported water source – including water delivered directly to the County, and water purchased and stored for use in the County, and no de-salinization technology or other technology falling outside the three designated technologies, can supply more than 10% of the County's total water demand. It is unrealistic and infeasible to demand new projects study and comply with this measure when the technology does not currently exist to do so, regulations do not currently authorize potable use of treated water, and existing development within the County will not be held to the same standards. This will create certain litigation for any project moving forward as a red flag of General Plan inconsistency, and yet the Draft 2045 CAP provides no pathway for new projects to be compliant. Consider the following five concerns if the Draft 2045 CAP moves forward with this measure.

O15-40

O15-41

O15-42

i. Legally infeasible. The County is party to numerous water infrastructure, supply, and management contracts that govern imported water, which is by far the largest source of water to the County and cities within the County.

O15-43

ii. Technically and scientifically infeasible. While all three of the exclusively sanctioned water treatment technologies (grey water, reclaimed water, and toilet-to-tap water) have already been invented and implemented on a small scale in limited areas (almost none of which supply water to unincorporated Los Angeles County), all of these treatment technologies effectively concentrate nitrate and other residual chemicals in the treated water supply, and for technical, scientific, and regulatory compliance reasons, these treated waters must be blended with fresh water to be usable (for either non-potable or potable uses) over time through multiple treatment cycles. It is not technically feasible, based on both the realities of chemistry and geographic distribution, to supply 90% of the County's water supply from grey water, recycled water, and potable reclaimed water.

O15-44

O15-45

iii. Conflict with other County General Plan, plan, policy, and state law legal mandates. The County is required by its own General Plan as well as state law to implement its approved Housing Element, calling for delivery of 90,000 new homes in Unincorporated Los Angeles County by 2029, and plan for and approve plan-compliant housing for these many thousands of new homes. New homes cannot be built without adequate water supplies;

O15-46

however, the Draft 2045 CAP would cause the County to violate housing laws by disapproving new housing dependent on existing and new water supplies that are not supplied by a minimum of 90% recycled, grey water, and potable recycled water – none of which are currently available or legally sanctioned to meet the potable drinking water needs of multi-family and community-scale housing seeking County approvals today. O15-47

The County also cannot achieve its economic diversification goals, including for example attracting additional advanced manufacturing, battery and climate-tech, aerospace, research, medical, and technology employers, without providing an adequate, secure, and high-quality water supply. O15-48

iv. The Draft 2045 CAP, if adopted into the General Plan as proposed, applies most directly and immediately to the County's own projects, and to the County's approval of project applications. This means that the legal risks and compliance costs of the legally and technically infeasible water mandate in the Draft 2045 CAP will fall most immediately on challenges to County-funded projects (e.g., infrastructure, arts, parks), as well as County-approved and applicant-proposed housing and job-creation projects that meet other urgent County needs and legal obligations. A new water recycling project that relies on blending treated water with imported water would, for example, fail if it used even 15% of imported water as a blending source for recycled water. O15-49 O15-50

v. The One-Size Fits All Technology Mandates in the Draft 2045 CAP (for Water Supplies and Other prescriptions) Are Anti-Innovation and Impede Global GHG Reductions. The Draft 2045 CAP accepts only three water technologies to provide 90% of the County's total water supply, all of which are technologies that exist today. The Draft 2045 CAP is hostile to innovative technologies, notwithstanding decades of progress in achieving environmental goals through technology innovation. CARB has confirmed that the entire California economy contributes less than 1% to global GHG emissions, and the County's most significant climate change leadership opportunities are supporting innovation including development and production of new technologies and practices that are desirable and cost-effective, and thus likely to be used by other states and countries. The County's leadership in technology innovation, capital and company formation, advanced manufacturing, and marketing, are the necessary and appropriate engines of global climate change solutions. The 2045 Draft CAP's 10% cap on imported water frustrates, rather than furthers, these climate change leadership opportunities and is more likely to shuffle people and jobs to other states and local jurisdictions than result in meaningful global GHG reductions. O15-51 O15-52 O15-53

Additional Challenges with the Draft 2045 CAP

As documented throughout this letter, the Draft 2045 CAP does not quantify the amount of GHG reductions the various measures would bring to the County if implemented, and yet each project applicant will be left trying to calculate reduction numbers to try and comply with the measures. O15-54

The Draft 2045 CAP indicates that to show consistency through an alternative measure, a project must show how it can quantitatively achieve the same reductions as the listed measure (Page F-5 of Appendix F). However, for many of these measures the Draft 2045 CAP does not quantify the emissions associated with the measure (e.g., ES4, ES5, T5, E3, W2, A2, and emission reductions within sub-measures listed in Appendix E for each measure are not broken out individually either) and thus, there is 1) no basis in the Draft 2045 CAP how these measures are achieving GHG reductions, and 2) no basis for a Project to demonstrate consistency with the Draft 2045 CAP or for alternatives to these measures. O15-55 O15-56 O15-57

The Draft 2045 CAP Checklist also includes aspirational requirements (i.e., EV trucks [Measure T8] and construction electric equipment [Measure T9]) which no project can currently be consistent with given the lack of technology to meet these requirements. However, when included in the General Plan as proposed for the Draft 2045 CAP, the County has ensured that projects will be inconsistent with the General Plan by not being able to comply with technology that doesn't exist. O15-58 O15-59

In addition, the Draft 2045 CAP includes many plans (e.g., Zero Emission Vehicle Master Plan, Building Performance Standards, Carbon Intensity Limits, ZNE Ordinance, All-Electric New Buildings Ordinance, and Net Zero Water Ordinance) that are cited in Appendix E and F, but have not even been developed yet. Without knowing the content of these undeveloped plans, neither housing and job-creating applicants, nor supporters of public facilities or infrastructure improvement projects proposed by other County departments or public agencies, can confidently assess project consistency with the Draft 2045 CAP, nor could a project demonstrate that it meets the requirements of the Draft 2045 CAP checklist. This is another example of why the Draft 2045 CAP should not be substantially revised, as well as excluded from the General Plan. O15-60

Furthermore, the performance criteria listed in Appendix E are mostly established on a county-wide basis, yet they are connected to the checklist items in Appendix F for specific projects (e.g. Measure T6 lists County-wide goals for EV sales and number of EVCS installed but does not indicate project-specific goals for this measure). In this way, the Draft 2045 CAP does not present a viable basis for a project to demonstrate consistency with the Draft 2045 CAP. As discussed at length, the County should consider projects on an individual basis, fully consider foreseeable GHG project-level impacts based on core state law GHG reduction mandates that comprise the vast majority of the quantified GHG reductions as documented in the Draft 2045 CAP, and then identify feasible additional GHG reductions and mitigation measures based on specific project information as well as ever-evolving technologies and practices. Only this modified Draft 2045 CAP General Plan approach can be implemented consistent with, and in furtherance of, the many other housing, jobs, conservation, infrastructure, and other priorities included in existing, approved General Plan, Area Plans, and Community Plans. The many infeasible, one-size-fits-all measures in the Draft 2045 CAP should be removed from the General O15-61 O15-62 O15-63 O15-64 O15-65

Plan, but can potentially be maintained as a list, outside the General Plan, of potentially feasible GHG reduction measures for consideration on project-by-project basis, and in the context of evaluating potential future ordinances as state law and feasible technologies and practices continue to evolve. O15-65 (cont.)

Considerations

In closing, Tejon Ranch Company thanks the County for providing the opportunity for us to share our deep and broad concerns regarding the Draft 2045 Climate Action Plan. The Company takes seriously its responsibility to lead in addressing the critical climate and housing crises facing our County. We have consistently demonstrated through our substantial and voluntary land conservation efforts, the employment of best practices in environmentally sensitive and sustainable community planning and design and our entering the legally-binding, publicly transparent Climate Resolve Agreement, the Company's unrivaled commitment to achieving Net Zero GHG emissions for our Centennial project and enabling the County to successfully address the dire housing crisis in a safe, resilient, and sustainable way. O15-66

We respectfully submit that the County should recognize Centennial as a model for achieving net zero GHG emissions, just as CARB has, and not impede or otherwise take action to add costs, uncertainties, or new or inconsistent GHG reduction obligations for the project. O15-67

We further ask that the County give serious and thoughtful consideration to addressing the following problematic core elements of the Draft 2045 CAP, O15-68

and that the County stay on track to provide for the housing and economic growth that is consistent with the approved General Plan, as carefully determined by the Board of Supervisors to best serve all Angelinos. O15-69

- The Draft 2045 CAP should be substantially revised into an aspirational document that focuses solely on feasible GHG reduction measures which are within the jurisdiction of the County to implement, operate in full alignment and support of the County's economic development, housing, and infrastructure goals, and do not increase the cost, time, or litigation risks for the County or applicants. O15-70

- The Draft 2045 CAP should separately quantify GHG reductions from the successful implementation of statewide laws and mandates, and calculate what additional measures, if any, should be undertaken by the County, while allowing projects to reduce their GHG emissions through CARB-approved offsets and other mitigation approaches. O15-71

- The Draft 2045 CAP inventory and GHG reduction methodology should pivot into recognition that retaining County residents and jobs, and providing the necessary expansions of housing, economic development and infrastructure needed to restore economic opportunity and upward mobility to County residents, is a more effective GHG strategy than exporting jobs to states and countries with lower standards and practices for reducing GHG impacts. O15-72

community planning and design and our entering the legally-binding, publicly transparent Climate Resolve Agreement, the Company's unrivaled commitment to achieving Net Zero GHG emissions for our Centennial project and enabling the County to successfully address the dire housing crisis in a safe, resilient, and sustainable way. We respectfully submit that the County should recognize Centennial as a model for achieving net zero GHG emissions, just as CARB has, and not impede or otherwise take action to add costs, uncertainties, or new or inconsistent GHG reduction obligations for the project. We further ask that the County give serious and thoughtful consideration to addressing the following problematic core elements of the Draft 2045 CAP, and that the County stay on track to provide for the housing and economic growth that is consistent with the approved General Plan, as carefully determined by the Board of Supervisors to best serve all Angelinos.

O15-66 (dupl.)
O15-67 (dupl.)
O15-68 (dupl.)
O15-69 (dupl.)

- The Draft 2045 CAP should be substantially revised into an aspirational document that focuses solely on feasible GHG reduction measures which are within the jurisdiction of the County to implement, operate in full alignment and support of the County's economic development, housing, and infrastructure goals, and do not increase the cost, time, or litigation risks for the County or applicants.

O15-70 (dupl.)

- The Draft 2045 CAP should separately quantify GHG reductions from the successful implementation of statewide laws and mandates, and calculate what additional measures, if any, should be undertaken by the County, while allowing projects to reduce their GHG emissions through CARB-approved offsets and other mitigation approaches.

O15-71 (dupl.)

- The Draft 2045 CAP inventory and GHG reduction methodology should pivot into recognition that retaining County residents and jobs, and providing the necessary expansions of housing, economic development and infrastructure needed to restore economic opportunity and upward mobility to County residents, is a more effective GHG strategy than exporting jobs to states and countries with lower standards and practices for reducing GHG impacts.

O15-72 (dupl.)

Thank you for your consideration of these important items.

Sincerely,

Marc W. Hardy
Senior Vice President and General Counsel

2.3.2.15 Letter O15: Tejon Ranch Company

This letter provides input on the Revised Draft 2045 CAP as well as CEQA comments on the Recirculated Draft PEIR. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4, *Comments on the Revised Draft 2045 CAP*, in Chapter 1, *Introduction*. Recirculated Draft PEIR-focused comments are addressed below.

O15-1 The comment discusses the Tejon Ranch development but does not raise any significant environmental issues or inadequacies associated with the Recirculated Draft PEIR; no response is required pursuant to CEQA Guidelines section 15088(a).

O15-2 The comment discusses the Tejon Ranch development and its project-level mitigation measures but does not raise any significant environmental issues or inadequacies associated with the Recirculated Draft PEIR; no response is required pursuant to CEQA Guidelines section 15088(a).

O15-3 In response to the comment's statement regarding the General Plan, please refer to General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan. The County has chosen to prepare and utilize the Revised Draft 2045 CAP as an implementation program for the Air Quality Element of the General Plan and would adopt the Revised Draft 2045 CAP by General Plan amendment together with proposed revisions to the Air quality Element. In California, local governments regulate many activities that contribute to GHG emissions and air pollutants, including land use and transportation planning, zoning and urban growth decisions, implementation of building codes and other standards, and control of municipal operations. Local governments have typically addressed climate change either in policies in the general plan itself, or through adoption of a CAP.

As an implementation program for the Air Quality Element, the Revised Draft 2045 CAP is not a regulatory document but is rather a plan-level framework for the County to implement; General Plan consistency would be determined by comparing a future project to the Air Quality Element goals and policies rather than with the detailed implementation programs identified in order to achieve Countywide strategies, goals, and actions to reach emissions reductions targets of the Revised Draft 2045 CAP. A subcomponent of the Revised Draft 2045 CAP implementation program is the Checklist, Appendix F, which the County will only utilize to determine the consistency of future project applicants who wish to streamline the GHG impact analysis of their project with the Revised Draft 2045 CAP pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). If a project is consistent with the General Plan and can demonstrate consistency with the Revised Draft 2045 CAP by completing the Checklist, the project would be considered consistent with the Revised Draft 2045 CAP and eligible for CEQA streamlining of its project-level GHG analysis. (Recirculated Draft PEIR, p. 2-40.)

However, demonstrating consistency with the Checklist is no longer mandatory for new development projects, but is rather a voluntary option that project applicants can utilize to streamline their project's GHG impact analysis. The Checklist provides a list of Tier 1 measures, which are required for all discretionary private development projects to demonstrate consistency with the Revised Draft 2045 CAP unless alternative measures are proposed. Nothing beyond the Tier 1 measures is required for project applicants to streamline their CEQA GHG impacts analysis. Projects that do not intend to streamline their GHG impact analysis do not need to demonstrate consistency with the Checklist. Such projects would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist. Please refer to General Response 3 for further discussion regarding the Revised Draft 2045 CAP processes applicable to various project applicants.

Responding to the comment's point about amendments to the General Plan, the Revised Draft 2045 CAP is a plan-level framework for the County to implement to achieve Countywide GHG reduction targets for 2030, 2035, and 2045 that are consistent with the state's GHG reduction targets and related legislative actions. (Recirculated Draft PEIR, p. 2-8.) The Revised Draft 2045 CAP recognizes that future amendments to CAP measures may be needed to address future federal and state regulations. (Revised Draft 2045 CAP, p. 1-7.) Amendments to the Revised Draft 2045 CAP would represent a change to the County's General Plan implementation program and would be a discretionary action subject to CEQA compliance.

In response to the comment's concern regarding potential litigants, while potential litigation challenging future projects is always a possibility, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. Any project approval is subject to legal challenge and there is no evidence presented by the commenters suggesting that it is more likely that future projects implementing the Revised Draft 2045 CAP would be challenged. The comment raising potential legal challenges does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O15-4 It is true the Revised Draft 2045 CAP would create new County obligations – which include specific County policies, programs, or tools to support long-range planning – necessary to achieve the emissions reduction targets consistent with AB 1279 and the 2022 Scoping Plan. The Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan and would be adopted by General Plan Amendment together with proposed revisions to the Air Quality Element. Please refer to General Response 2 for further discussion on the relationship between the Revised Draft 2045 CAP and the County's General Plan.

Regarding the comment's allegation that the Revised Draft 2045 CAP would expand litigation risks under CEQA, while potential litigation challenging future projects is always a possibility, it is speculative at this time to presume that there would be

imminent lawsuits challenging future projects. Any project approval is subject to legal challenge and there is no evidence presented by the commenters suggesting that it is more likely that future projects implementing the Revised Draft 2045 CAP would be challenged. The comment raising potential legal challenges does not raise significant environmental issues related to the Recirculated Draft PEIR and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O15-5 The comment incorrectly asserts that any project that fails to comply with all CAP measures and actions would conflict with an environmental component of the General Plan, a significant and unavoidable land use impact, and would have a significant GHG impact. As stated above, since the Revised Draft 2045 CAP is an implementation program for the Air Quality Element of the General Plan and would be adopted by General Plan Amendment together with proposed revisions to the Air Quality Element, General Plan consistency would be determined by comparing a future project to the Air Quality Element goals and policies rather than with the detailed implementation programs identified in the Revised Draft 2045 CAP.

Demonstrating consistency with the Checklist is no longer mandatory for new development projects, but is rather a voluntary option that project applicants can utilize to streamline their project's GHG impact analysis with the Revised Draft 2045 CAP pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Projects that do not intend to streamline their GHG impact analysis do not need to demonstrate consistency with the Checklist. Such projects would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist.

Please refer to General Response 3 for further discussion regarding the Revised Draft 2045 CAP processes applicable to various project applicants.

O15-6 Regarding the comment's point about alternative CEQA compliance pathways, please see Response to Comment O15-3, explaining the processes applicable to project applicants. To reiterate, projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist. Such projects would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist. Such project applicants may utilize an appropriate CEQA compliance pathway tailored to their projects. Please refer to General Response 2 regarding General Plan conflict issues, and General Response 3 for more discussion regarding implementation of the Revised Draft 2045 CAP's measures and actions and the processes applicable to various project applicants.

O15-7 The Revised Draft 2045 CAP has been revised such that project applicants do not need to demonstrate compliance with the Revised Draft 2045 CAP measures and complete "infeasibility" findings if they do not intend to streamline their CEQA GHG impacts analysis. Projects that do not intend to streamline their GHG impact analysis do not need to demonstrate consistency with the Checklist. Such projects would be

required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist.

Only project applicants that wish to streamline their GHG impact analysis with the Revised Draft 2045 CAP pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b) must complete the Checklist to demonstrate consistency with the Revised Draft 2045 CAP. The Checklist is clear about what is required of projects that choose to streamline their CEQA GHG impact analysis. (See Appendix F, p. F-5 et seq..) The Checklist provides a list of Tier 1 measures, which are required for all discretionary private development projects unless alternative measures are proposed to demonstrate consistency with the Revised Draft 2045 CAP. Nothing beyond the Tier 1 measures is required for project applicants to streamline their CEQA GHG impacts analysis. Please refer to General Response 3 for further discussion as to the required elements of the Revised Draft 2045 CAP for certain projects.

Regarding the comment's concern about future CEQA and General Plan compliance lawsuits, while potential litigation challenging future projects is always a possibility, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. Any project approval is subject to legal challenge and there is no evidence presented by the commenters suggesting that it is more likely that future projects implementing the Revised Draft 2045 CAP would be challenged. The comment raising potential legal challenges does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O15-8 The Housing Element serves as a policy guide to address the comprehensive housing needs of the County. Its focus is to ensure decent, safe, sanitary, and affordable housing for current and future residents. It also focuses on equitable development to counter historical residential segregation and environmental injustice. The Housing Element sets forth implementing actions that encourage the private sector to build and improve housing. To that end, a climate action plan was identified as a program of the Housing Element. The Revised Draft 2045 CAP includes a streamlined procedure for environmental clearance for certain projects, which could include individual housing projects, thereby reducing the time and expense needed for individual environmental clearances. Qualifying projects will be able to rely on the Revised Draft 2045 CAP for their GHG emissions analysis under CEQA. Housing projects have been able to successfully integrate climate action as identified in the CARB's 2022 Scoping Plan. In response to the comment's concern about the Revised Draft 2045 CAP's relationship in the General Plan and alleged use of the Revised Draft 2045 CAP to stop housing development, please refer to General Response 2.

O15-9 The Revised Draft 2045 CAP includes feasible, clear, and implementable measures that allow for implementation of County goals related to infrastructure, economic development, and housing. The Revised Draft 2045 CAP's measures and actions support the County's goals related to economic development, housing, and

infrastructure: general goals and policies relevant to the Revised Draft 2045 CAP include those related to infill development (Goal LU 4), vibrant, livable and healthy communities that contain a mix of community-serving uses (Goal LU 5), and land use patterns and community infrastructure that promote health and wellness for all neighborhoods (Goal LU 10). For further discussion regarding the Revised Draft 2045 CAP measures and how they would achieve Countywide GHG reduction targets consistent with the state's GHG reduction targets and related legislative actions, including AB 1279 and the 2022 Scoping Plan, please refer to General Response 5.

See General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan. Also see General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects.

O15-10 Implementation of the Revised Draft 2045 CAP into the General Plan would not hinder the ability to implement long-term housing law compliance obligations. The Revised Draft 2045 CAP is a policy document that would support development allowed under the General Plan. No changes to General Plan land use designations, zoning, or land use-specific projects are proposed as part of the Revised Draft 2045 CAP.

In fact, the Revised Draft 2045 CAP focuses on the importance of housing availability and seeks to balance encouragement for increased housing supply with GHG reductions. The County prioritizes strategies that both invest in and support frontline communities, which include providing specific incentives and subsidies for affordable housing developments and implementing other initiatives that integrate equity in ways that help reverse the trends of discrimination and disinvestment. For example, Action ES5.1 requires identification of new requirements for new development to reduce GHG emissions from energy use, transportation, and other sources that includes affordable housing considerations in these requirements and supporting measures to maintain housing affordability. Measure T1 seeks to increase housing opportunities that are affordable and near high-quality transit areas to reduce VMT. Action T1.2 directs the County to develop land use tools that will increase the production of a diversity of housing types, such as missing middle housing. As such, the Revised Draft 2045 CAP implements measures and actions that would help fulfill the County's housing law compliance obligations.

O15-11 The Revised Draft 2045 CAP, once finalized and approved, would require an amendment to the Los Angeles County General Plan 2035 to replace the existing implementation strategy of the Air Quality Element, known as the Unincorporated Los Angeles County Community Climate Action Plan 2020 (2020 CCAP). The Revised Draft 2045 CAP builds on previous climate action work from the 2020 CCAP, adopted in October 2015 as a subcomponent of the Air Quality Element of the Los Angeles County General Plan 2035 and includes new emissions reduction targets consistent with AB 1279 and the 2022 Scoping Plan.

In addition to the proposed Revised Draft 2045 CAP, the proposed project evaluated in the Recirculated Draft PEIR includes proposed revisions to the General Plan's Air Quality Element. The revisions to the General Plan's Air Quality Element are set forth in Table 2-1, *Proposed Updates to the Los Angeles County General Plan 2035 Air Quality Element*, and Table 2-2, *Proposed Updates to the Los Angeles County General Plan 2035 Implementation Program*, in Chapter 2, Project Description. The Revised Draft 2045 CAP is consistent with these revisions and helps implement them.

Future amendments to the Revised Draft 2045 CAP would represent a change to the County's General Plan implementation program and would be a discretionary action subject to CEQA compliance. For further discussion regarding the relationship between the Revised Draft 2045 CAP and the County's General Plan, please refer to General Response 2.

O15-12 The County notes the comment's examples of other jurisdictions' actions in adopting their own climate action plans. For a specific response regarding the County of San Diego's Climate Action Plan and how it differs from the County's 2045 CAP, please refer to Response to Comment O5b-36. The Revised Draft 2045 CAP is an implementation program of the Air Quality Element of the County's General Plan and will be adopted by General Plan Amendment together with proposed revisions to the Air Quality Element. In California, local governments regulate many activities that contribute to GHG emissions and air pollutants, including land use and transportation planning, zoning and urban growth decisions, implementation of building codes and other standards, and control of municipal operations. Local governments have typically addressed climate change either in policies in the general plan itself, or through adoption of a CAP. Please refer to General Response 2 for further discussion of the relationship between the Revised Draft 2045 CAP and the County's General Plan.

Regarding the comment's concerns regarding future litigation, while potential litigation challenging future projects is always a possibility, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. Any project approval is subject to legal challenge and there is no evidence presented by the commenters suggesting that it is more likely that future projects implementing the Revised Draft 2045 CAP would be challenged. The comment raising potential legal challenges does not raise significant environmental issues related to the Recirculated Draft PEIR and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O15-13 This comment does not raise significant environmental issues regarding the Recirculated DEIR and no further response is required pursuant to CEQA Guidelines section 15088(a). Also, please note that the "currently adopted CAP" is no longer in effect.

O15-14 Regarding the comment's claim that the Revised Draft 2045 CAP would impose mandates on development and new projects, the comment fails to recognize the difference between Revised Draft 2045 CAP performance goals (as identified in the Revised Draft 2045 CAP strategies, measures, and actions) and the Checklist's requirements for new projects. First, the performance goals in the Revised Draft 2045 CAP are *Countywide goals*, not requirements or mandates for individual projects. All project-level requirements for CEQA streamlining are identified in the Checklist itself. There are no additional streamlining requirements for new projects that are not included in the Checklist. Please see General Response 3 for additional discussion. Second, as explained in the Checklist instructions (Appendix F, p. F-5 to F-15), the Checklist is clear about what is required of projects that choose to streamline their CEQA GHG impact analysis. (See Appendix F, p. F-10 to F-12.) The Checklist provides a list of "Tier 1" measures, which are required for all discretionary projects in order to use CEQA streamlining for GHG impacts, and "Tier 2" measures, which are not mandatory, but encouraged for all discretionary projects to implement.

Implementation of the Revised Draft 2045 CAP into the General Plan would not hinder the ability to implement long-term housing law compliance obligations. The Revised Draft 2045 CAP is a policy document that would support development allowed under the General Plan. No changes to General Plan land use designations, zoning, or land use-specific projects are proposed as part of the Revised Draft 2045 CAP.

In fact, the Revised Draft 2045 CAP focuses on the importance of housing availability and seeks to balance encouragement for increased housing supply with GHG reductions. The County prioritizes strategies that both invest in and support frontline communities, which include providing specific incentives and subsidies for affordable housing developments and implementing other initiatives that integrate equity in ways that help reverse the trends of discrimination and disinvestment. For example, Action ES5.1 requires identification of new requirements for new development to reduce GHG emissions from energy use, transportation, and other sources that includes affordable housing considerations in these requirements and supporting measures to maintain housing affordability. Measure T1 seeks to increase housing opportunities that are affordable and near high-quality transit areas to reduce VMT. Action T1.2 directs the County to develop land use tools that will increase the production of a diversity of housing types, such as missing middle housing. As such, the Revised Draft 2045 CAP implements measures and actions that would help fulfill the County's housing law compliance obligations.

O15-15 Regarding the comment's concern about the alleged mandates of the Revised Draft 2045 CAP and their quantification, please refer to General Response 2 for discussion regarding the Revised Draft 2045 CAP's relation to the General Plan and General Response 3 for a discussion regarding the application of the Checklist to project applicants. Quantification of the Revised Draft 2045 CAP strategies, measures and actions are discussed in detail in General Response 5.

O15-16 Please refer to General Response 3 for a discussion regarding the application of the Checklist to project applicants. See General Response 5, which addresses the obligation of the Revised Draft 2045 CAP to quantify GHG emission reductions for strategies, measures, and actions. The comment's concern regarding potential litigation challenging future projects is speculative at this time and there is no evidence presented by the comment suggesting that it is more likely that future projects implementing the Revised Draft 2045 CAP would be challenged.

O15-17 The Revised Draft 2045 CAP does not present poorly defined, unclear measures and performance standards; please refer to General Response 3 regarding the application of the Checklist to project applicants and which addresses the Revised Draft 2045 CAP's GHG reduction measures. Regarding the comment's concerns regarding future litigation, while potential litigation challenging future projects is always a possibility, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. Any project approval is subject to legal challenge and there is no evidence presented by the commenters suggesting that it is more likely that future projects implementing the Revised Draft 2045 CAP would be challenged. The comment raising potential legal challenges does not raise significant environmental issues related to the Recirculated Draft PEIR and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O15-18 Regarding the commenter's claim that all future projects must meet a job density of 300 jobs per acre and that projects that do not achieve this standard would be inconsistent with the Revised Draft 2045 CAP, this is not a mandate for individual projects. A job density of 300 jobs per acre is not a requirement of the Checklist or the Revised Draft 2045 CAP for new projects. As discussed in General Response 3, Draft 2045 CAP measure T2 (Develop Land Use Plans Addressing Jobs-Housing Balance and Increase Mixed Use) includes a *Countywide* performance goal of 300 jobs per acre by 2030; this is a goal for the entire County to meet by 2030 and represents an average value for Countywide job density. For projects that wish to streamline their GHG impacts evaluation under CEQA, the Checklist requires nothing in the way of job density for new projects and Measure T2 is also not a requirement for demonstrating consistency with the Revised Draft 2045 CAP. See General Response 3 for additional discussion.

O15-19 The comment incorrectly asserts that a project's failure to meet a job density of 300 jobs per acre would be deemed to conflict with an Recirculated Draft PEIR sufficiently analyzes and mitigates the environmental component of the General Plan, and that such projects would have significant and unavoidable GHG impacts that would trigger the need for an EIR. As discussed in response to comment O15-18 above and in General Response 3, the Checklist does not mandate that all new projects achieve 300 jobs per acre. Checklist item #12, *TIER 2: Achieve a High Jobs/Housing Balance*, is a voluntary Tier 2 item that encourages projects with nonresidential development to "*support* the County's goal to achieve a job density of 300 jobs per acre" (emphasis

added). A project that could not meet this metric could still use the Checklist to streamline its GHG impact analysis under CEQA.

Further, the Checklist would ***not*** be used as a tool for evaluating a project's consistency with the County's General Plan. General Plan consistency will be determined by comparing a future project to the Air Quality Element goals and policies rather than with the detailed implementation programs identified in the Revised Draft 2045 CAP. Demonstrating consistency with the Checklist is no longer mandatory for new development projects, but is rather a voluntary option that project applicants can utilize to streamline their project's GHG impact analysis. Projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist. These projects can demonstrate CEQA compliance in the most appropriate way tailored to the project, which may not necessitate a full EIR. Please see General Response 3 for further discussion regarding the process for project applicants.

O15-20 Regarding the commenter's claim that all future projects must meet a job density of 300 jobs per acre and that projects that do not achieve this standard would be inconsistent with the Revised Draft 2045 CAP, a job density of 300 jobs per acre is not a requirement of the Checklist or the Revised Draft 2045 CAP for new projects. Please refer to responses to comments O15-18 and O15-19 above, which explain that projects that do not intend to streamline their GHG impact analysis need not demonstrate consistency with the Checklist. Such projects can demonstrate CEQA compliance in the most appropriate way tailored to the project, which may not necessitate what the comment calls "a costly CEQA compliance process." Also see General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects.

With regard to the commenter's concerns regarding CEQA litigation, while potential litigation challenging future projects is always a possibility, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. measures and actions. Also see General Response 2, which addresses concerns regarding third parties initiating lawsuits against the County and future project applicants. This comment raising potential litigation concerns does not raise environmental issues and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O15-21 Regarding the comment's concern regarding GHG calculations, see General Response 5, which addresses quantification, estimated costs, and sources of funding for the Revised Draft 2045 CAP measures. Regarding the commenter's claim that all future projects must meet a job density of 300 jobs per acre and that projects that do not achieve this standard would be inconsistent with the Revised Draft 2045 CAP, a job density of 300 jobs per acre is not a requirement of the Checklist or the Revised Draft 2045 CAP for new projects. Please refer to responses to comments O15-18 and O15-19 above, along with General Response 3, which addresses how the Revised Draft

2045 CAP and 2045 Checklist applies to development projects. See also General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan. Also, the County has added a new subsection in Revised Draft 2045 CAP Appendix F in Section F.2 under Step 4 titled, "Guidance for Quantifying GHG Reductions from Alternative Measures" to help project applicants choose this pathway. This new section provides guidance for how applicants can quantify the GHG reduction benefits of a Checklist streamlining requirement for an individual project to determine the amount of GHG emissions reduction that an alternative project emissions reduction measure must achieve. See Revised Draft 2045 CAP Appendix F, pages F-13 to F-15 for more detail.

O15-22 Regarding the commenter's claim that all future projects must meet a job density of 300 jobs per acre and that projects that do not achieve this standard would be inconsistent with the Revised Draft 2045 CAP, a job density of 300 jobs per acre is not a requirement of the Checklist or the Revised Draft 2045 CAP for new projects. Please refer to responses to comments O15-18 and O15-19 above, along with General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects. Refer to General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan. Also see General Response 2, which addresses concerns regarding potential lawsuits against the County and future project applicants. The comment regarding economic growth and jobs does not raise significant environmental issues related to the Recirculated Draft PEIR and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O15-23 The Recirculated Draft PEIR sufficiently analyzes and mitigates the environmental consequences of the Revised Draft 2045 CAP measures and actions. In response to the comment's concern related to consequences of the Revised Draft 2045 CAP associated with the County's General Plan, community plans, area plans, and specific plans, the comment does not allege any specific conflicts. Section 3.12, *Land Use and Planning*, of the Recirculated Draft PEIR evaluates land use and planning issues to determine whether the Revised Draft 2045 CAP would result in a significant impact related to a physical division of an established community or conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental impact. As described in Section 3.12.2.3, the Revised Draft 2045 CAP is a policy document intended to reduce community-wide GHG emissions and would support development allowed under the General Plan. No changes to General Plan land use designations, zoning, or land use–specific projects are proposed as part of the Revised Draft 2045 CAP. The Recirculated Draft PEIR concluded that projects facilitated by the Revised Draft 2045 CAP would have less-than-significant impacts related to a conflicting with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental impact. See General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan.

O15-24 See Response O15-23 and General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan.

O15-25 Regarding the commenter's claim that all future projects must meet a job density of 300 jobs per acre and that projects that do not achieve this standard would be inconsistent with the Revised Draft 2045 CAP, a job density of 300 jobs per acre is not a requirement of the Checklist or the Revised Draft 2045 CAP for new projects. Please refer to responses to comments O15-18 and O15-19 above, along with General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects.

O15-26 As explained in General Response 3, project applicants that do not intend to streamline their GHG impact analysis need no longer demonstrate consistency with the Checklist, which would *not* be used as a tool for evaluating a project's consistency with the County's General Plan. Such projects would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist.

The comment incorrectly asserts that a project's failure to meet a job density of 300 jobs per acre would be deemed to conflict with the General Plan, and that such projects would have significant and unavoidable GHG impacts. As discussed, the Checklist does not mandate that all new projects achieve 300 jobs per acre. Please refer to responses to comments O15-18 and O15-19 above, along with General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects. Also see General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan.

O15-27 Please refer to responses to comments O15-18 and O15-19 above, along with General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects. Also see General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan.

O15-28 Please refer to responses to comments O15-18 and O15-19 above, along with General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects. Also see General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan. See response to comment O15-26 above.

O15-29 In response to the comment's point about the aspirational nature of the Revised Draft 2045 CAP and relation to the General Plan, the Revised Draft 2045 CAP is an implementation program of the Air Quality Element of the County's General Plan. In California, local governments regulate many activities that contribute to GHG emissions and air pollutants, including land use and transportation planning, zoning and urban growth decisions, implementation of building codes and other standards, and control of municipal operations. Local governments have typically addressed climate change either in policies in the general plan itself, or through adoption of a CAP.

Project applicants that do not intend to streamline their GHG impact analysis need no longer demonstrate consistency with the Checklist, which would *not* be used as a tool for evaluating a project's consistency with the County's General Plan. Such projects would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist. Project applicants that do not wish to streamline their project would be required to thoughtfully craft and adopt measures that must be implemented to mitigate project-specific GHG emissions impacts.

Please refer to General Response 2 for further discussion of the relationship between the Revised Draft 2045 CAP and the County's General Plan and to General Response 3 for further discussion regarding the Revised Draft 2045 CAP processes applicable to various project applicants. Please also refer to General Response 4 for further discussion about the voluntary GHG offset credits (GHG offsets) as a strategy for achieving the County's GHG reduction targets.

O15-30 In response to the comment's point about project-level measures to mitigate GHG emissions impacts, the County has developed the Checklist, Appendix F, as a subcomponent of the implementation program. Per Revised Draft 2045 CAP revisions, the Checklist would ***not*** be used as a tool for evaluating a project's consistency with the County's General Plan. Demonstrating consistency with the Checklist is no longer mandatory for new development projects, but is rather a voluntary option that project applicants can utilize to streamline their project's GHG impact analysis. Projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist. Such projects would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist. This tailored, project-specific CEQA analysis would be required to include feasible mitigation measures to lessen the project's significant GHG impacts.

Please refer to General Response 3 for further discussion regarding the Revised Draft 2045 CAP processes applicable to various project applicants.

O15-31 Please refer to General Response 3 for further discussion regarding the Revised Draft 2045 CAP processes applicable to various project applicants. This comment does not raise significant environmental issues regarding the Revised Draft 2045 CAP Recirculated DEIR and no further response is required pursuant to CEQA Guidelines section 15088(a).

O15-32 The Revised Draft 2045 CAP does not preclude a project from using GHG offsets to demonstrate net zero emissions (or carbon neutrality) or to attain any other CEQA significance threshold. In other words, a project can undergo its own CEQA review of GHG impacts and determine such impacts would be less than significant based on substantial evidence and valid CEQA mitigation, which (as previous projects have demonstrated) may include the use of voluntary GHG offset credits. The Revised Draft 2045 CAP does not prohibit this approach. See Revised Draft 2045 CAP

Appendix F, page F-13 for more discussion. However, for projects intending to use the Revised Draft 2045 CAP CEQA Streamlining Checklist to streamline CEQA review of their GHG impacts, the use of GHG offsets is not an option. For further discussion, see General Response 4, which addresses concerns regarding the use of voluntary GHG offset credits in the Revised Draft 2045 CAP and as an alternative GHG reduction measure in the Checklist for streamlining CEQA review of a project's GHG impacts.

O15-33 See General Response 6, which addresses concerns regarding the proposed Offsite GHG Emissions Reduction Program.

O15-34 and O15-35 As discussed above in Response to Comment O15-32, the Revised Draft 2045 CAP does not preclude a project from using GHG offsets to demonstrate net zero emissions (or carbon neutrality) or to attain any other CEQA significance threshold. See General Response 4, which addresses concerns regarding the use of voluntary GHG offset credits in the Revised Draft 2045 CAP and as an alternative GHG reduction measure Checklist for streamlining CEQA review of a project's GHG impacts.

O15-36 See General Response 5, which addresses quantification, estimated costs, and sources of funding for the Revised Draft 2045 CAP measures. Also see General Response 6, which addresses concerns regarding the proposed Offsite GHG Emissions Reduction Program. As stated, the Revised Draft 2045 CAP presents a *framework* for the Offsite GHG Reduction Program and does not represent the program itself. As stated on page F-35, the actual program will be developed after the Revised Draft 2045 CAP is adopted. Given that the program itself has not been developed, it would be speculative to estimate the implementation costs of such a program at this point. Further, the Offsite GHG Reduction Program itself is not a Revised Draft 2045 CAP measure that is quantified for GHG reductions and it is not relied upon to achieve the Revised Draft 2045 CAP's GHG emission reduction targets. Use of the Offsite GHG Reduction Program is not mandatory for project applicants wishing to streamline environmental review of their project's GHG impacts using the Revised Draft 2045 CAP's Recirculated Draft PEIR pursuant to CEQA Guidelines section 15183.5(b).

O15-37 The Revised Draft 2045 CAP does not undermine the County Board of Supervisors' resolution endorsing net zero project outcomes. See General Response 4, which addresses concerns regarding the use of voluntary GHG offset credits in the Revised Draft 2045 CAP and as an alternative GHG reduction measure in the Checklist for streamlining CEQA review of a project's GHG impacts.

O15-38 In response to this comment, the County has revised the Checklist to change the "net-zero" GHG requirement with a "zero GHG" requirement as follows.

> ***2045 CAP Checklist Screening Criteria:*** *Projects may skip the <u>Demonstrate Compliance with the CEQA Streamlining</u> ~~2045 CAP Measure and Action~~*

~~*Consistency Requirements*~~ *section of Table F-1 below if they meet the following criteria:*

- *If the project would achieve* ***net-zero GHG emissions*** ~~*compared to existing on-site development at the project site, provided that existing on-site development is similar to the proposed project and that GHG emissions from existing on-site development are not substantially larger than emissions from the proposed project*~~*, the project is considered consistent with the 2045 CAP and the analysis is complete.*

Net-zero *GHG emissions means that the project's GHG emissions from construction and operational activities occurring at full buildout would result in zero total GHG emissions on an annual basis. In other words, all GHGs emitted to the atmosphere during construction and operation by a project are balanced completely by GHG sequestration and removal over each calendar year period. Construction GHG emissions should be amortized for the project (typically 30 or 40 years) and added to the annual full buildout operational emissions to determine total annual emissions. Net zero GHG emissions for a project does not consider* ~~*the difference in*~~ *GHG emissions from* ~~*between*~~ *existing conditions or existing uses at the project site* ~~*and the emissions from construction and operation of the proposed project is zero*~~*. For example, if a project emits 1,500 $MTCO_2e$ per year for both construction and operation, but includes the planting of enough new trees to sequester 1,500 $MTCO_2e$ per year, the project would achieve net zero GHG emissions.* ~~*existing on-site uses at the project site are 3,000 metric tons of carbon dioxide equivalent (MTCO2e) per year, and if the project emits fewer than 3,000 MTCO2e per year through both construction and operations, it would achieve net-zero GHG emissions. Existing conditions constitute the project's CEQA baseline for GHG impacts.*~~

~~*The net-zero criterion can only be applied if existing on-site development is similar to the proposed project. This means that the existing land use type and the project's land use type(s) are reasonably similar, subject to the County's discretion. For example, a mixed-use project replacing an office land use would be considered similar. However, a mixed-use project replacing an industrial facility or a distribution center would not be considered similar.*~~

~~*Additionally, this criterion can only be applied if emissions from existing on-site development are not substantially larger than emissions from the proposed project, subject to the County's discretion. For example, a retail project with low emissions replacing a large office building with high emissions could not use the net-zero criterion, producing as many emissions as the large office building; such a project would have to produce lower emissions than the large office building to be consistent with the 2045 CAP. Although the 2045 CAP intends to replace high-emitting land use types (such as oil and gas facilities) with low-emissions land use types (such as mixed-use transit-oriented development) to*~~

> ~~*reduce emissions overall, it does not intend to make such replacements without reducing emissions compared to existing uses, which a net-zero emissions criterion would not necessarily facilitate.*~~
>
> *To demonstrate that the project achieves net-zero GHG emissions ~~compared to existing on-site development at the project site, that the existing land use type and the project's land use type(s) are reasonably similar, and that emissions from existing on-site development are not substantially larger than emissions from the proposed project~~, the applicant must submit a comprehensive quantitative project-specific analysis of all GHG emissions, sinks, and removals from construction and full buildout operations, consistent with all CEQA guidelines and standard practice for modeling GHG emissions for projects. If the project meets this criterion~~these criteria~~, the project does not need to complete Table F-1 below and the analysis is complete.* (Revised Draft 2045 CAP Appendix F, p. F-8).

The commenter's claim that the Checklist does not create a compliance pathway for projects which increase land use densities as called for in the 2021-2029 Housing Element is incorrect. To the contrary, a proposed mixed-use project which achieves zero GHG emissions for operations would indeed qualify for the zero GHG screening criterion. The existing use is not part of this zero GHG screening criterion. The reason for this is that the current use may choose to relocate to another place in the County and continue to emit GHGs; the new mixed-use project would therefore not actually "remove" the GHG emissions produced by the existing building from the County entirely. This approach is consistent with the CARB 2022 Scoping Plan, which states, "Lead agencies should consider whether there is substantial evidence that the GHG emissions generated by existing uses of the project site will cease to exist as a direct result of the proposed project and will not merely occur at a different location after the proposed project is developed."[34]

See General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan. See General Response 4, which addresses concerns regarding the use of voluntary GHG offset credits in the Revised Draft 2045 CAP and as an alternative GHG reduction measure in the Checklist for streamlining CEQA review of a project's GHG impacts. This comment does not raise significant environmental issues regarding the Recirculated Draft PEIR and no further response is required pursuant to CEQA Guidelines section 15088(a).

O15-39 See General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan. The Revised Draft 2045 CAP is not a regulatory document but is rather a plan-level framework for the County to implement to achieve Countywide GHG reduction targets for 2030, 2035, and 2045 that are consistent with

[34] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Pages 24. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed July 2023.

the state's GHG reduction targets and related legislative actions. (Recirculated Draft PEIR, p. 2-8.) Demonstrating consistency with the Checklist is no longer mandatory for new development projects, but is rather a voluntary option that project applicants can utilize to streamline their project's GHG impact analysis.

Also see General Response 3, which addresses how the Revised Draft 2045 CAP and 2045 Checklist applies to development projects, as well as the feasibility of Revised Draft 2045 CAP measures and actions. The comment does not provide specific evidence as to why the Revised Draft 2045 CAP would make master planned community projects and infrastructure/public projects inconsistent with the County's General Plan, such that a specific response cannot be provided.

O15-40 The performance goals of Measure E5 are to increase the use of alternative water sources such that 25 percent of Unincorporated Los Angeles County demand is met by recycled water, graywater, or potable reuse by 2030, 50 percent by 2035, and 90 percent by 2045. The commenter is incorrect that the Revised Draft 2045 CAP does not provide a pathway to achieve these goals. Actions E5.1 through E5.5 are identified to achieve these goals. For example, Action E5.1 requires dual waste piping to be installed in new residential developments to allow for future graywater irrigation systems. Action E5.3 requires the use of recycled water and graywater for industrial purposes where recycled water is available. Action E5.5 requires partnering with the County water districts and retail suppliers to explore the potential for widespread utilization of direct potable reuse through pilot projects.

The comment does not provide specific evidence as to why this measure is infeasible, such that a specific response cannot be provided.

O15-41 As discussed in General Response 3, the Checklist does not mandate that all new projects ensure that 90 percent of their water demand is met by alternative water sources or that 80 percent of agricultural irrigation uses be supplied exclusively by local water sources. Draft 2045 CAP Measure E5 includes a *Countywide* performance goal that 90 percent of total Countywide water demand is met by recycled water graywater, or potable reuse by the year 2045 (25 percent by 2030 and 50 percent by 2035) (Revised Draft 2045 CAP Chapter 3, p. 3-54). This is not a project-level mandate. Checklist item #21, *TIER 2: Use Recycled Water and Graywater for Non-potable Uses and Include Rainfall Capture*, is a voluntary Tier 2 item that encourages projects to implement water reuse strategies on-site through certain design elements such as using reclaimed water for outdoor uses and installing residential graywater systems. A project that could not meet this metric could still use the Checklist to streamline its GHG impact evaluation under CEQA.

Further, as discussed in General Response 3, in response to comments received, the County has revised the Checklist to clarify that the Checklist will be used only for projects that voluntarily wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b).

Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis under CEQA. Please refer to General Response 3, which addresses how the Revised Draft 2045 CAP and Checklist applies to development projects.

The comment does not provide specific evidence as to why this measure is unrealistic or technically infeasible and the examples given do not support the claim that these goals are legally or technically infeasible such that a specific response cannot be provided.

O15-42 As discussed in General Response 3 and responses to comments O15-40 and O15-41 above, Revised Draft 2045 CAP Measure E5 includes a performance goal that 90 percent of total Countywide water demand is met by recycled water graywater, or potable reuse by the year 2045 (25 percent by 2030 and 50 percent by 2035) (Revised Draft 2045 CAP Chapter 3, p. 3-54). This is not a project-level mandate. For projects that wish to streamline their GHG impacts evaluation under CEQA, the Checklist requires nothing regarding water source types. While potential litigation challenging future projects is always a possibility, it is speculative at this time to presume that there would be imminent lawsuits challenging future projects. The comment raising potential legal challenges does not raise environmental issues related to the Recirculated Draft PEIR and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a).

O15-43 The 2045 goal of Measure E5 is progressive and forward looking. This goal originally came from *OurCounty: Los Angeles Countywide Sustainability Plan* Goal 2, which has a target of sourcing 80 percent of Countywide water use locally (inclusive of all 88 cities). Measure E5 is legally feasible for the County to implement and the comment does not provide specific explanation or evidence as to why this measure is legally infeasible such that a specific response cannot be provided.

O15-44 As discussed above, Measure E5 is technically and scientifically feasible for the County to implement. The comment does not provide specific evidence as to why this measure is technically or scientifically infeasible and the examples given do not support the claim that these goals are technically or scientifically infeasible. The comment does not specify what technical, scientific and regulatory compliance reasons or evidence that the technologies needed to achieve the goals of Measure E5 would concentrate nitrate and other residual chemicals in the treated water supply, such that a specific response cannot be provided. However, see Response O2-5, explaining that all dual waste piping to be installed in new residential developments to allow for future graywater irrigation systems would meet regulatory standards for nitrate concentrations in septic system effluent.

O15-45 As discussed above, Measure E5 is feasible for the County to implement. The comment does not provide specific evidence as to why this measure is technically or

scientifically infeasible and the examples given do not support the claim that the goals of Measure E5 are technically infeasible, such that a specific response cannot be provided.

O15-46 As discussed in General Response 3 and responses to comments O15-40 and O15-41 above, Revised Draft 2045 CAP Measure E5 includes a performance goal that 90 percent of total Countywide water demand is met by recycled water graywater, or potable reuse by the year 2045 (25 percent by 2030 and 50 percent by 2035) (Revised Draft 2045 CAP Chapter 3, p. 3-54). This is not a project-level mandate. For projects that wish to streamline their GHG impacts evaluation under CEQA, the Checklist requires nothing regarding water source types. Further, the County has revised the Checklist to clarify that the Checklist will be used only for projects that voluntarily wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis under CEQA. As such, there is nothing in Measure E5 that would conflict with the County's Housing Element. Also see General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan.

O15-47 As discussed in General Response 3 and responses to comments O15-40 and O15-41 above, Revised Draft 2045 CAP Measure E5 includes a *Countywide* performance goal that 90 percent of total Countywide water demand is met by recycled water graywater, or potable reuse by the year 2045 (25 percent by 2030 and 50 percent by 2035) (Revised Draft 2045 CAP Chapter 3, p. 3-54). This is not a project-level mandate. Checklist item #21, *TIER 2: Use Recycled Water and Graywater for Non-potable Uses and Include Rainfall Capture*, is a voluntary Tier 2 item that encourages projects to implement water reuse strategies on-site through certain design elements such as using reclaimed water for outdoor uses and installing residential graywater systems. A project that could not meet this metric could still use the Checklist to streamline its GHG impact evaluation under CEQA. Contrary to the comment's claim, the County would not disapprove new housing that doesn't meet a 90 percent alternative water source target, and no housing laws would be violated. Please refer to General Response 3, which addresses how the Revised Draft 2045 CAP and Checklist applies to development projects.

O15-48 As discussed in General Response 3 and responses to comments O15-40 and O15-41 above, Revised Draft 2045 CAP Measure E5 includes no project-level mandates. Checklist item #21, *TIER 2: Use Recycled Water and Graywater for Non-potable Uses and Include Rainfall Capture*, is a voluntary Tier 2 item that encourages projects to implement water reuse strategies on-site through certain design elements such as using reclaimed water for outdoor uses and installing residential graywater systems. Further, the County has revised the Checklist to clarify that the Checklist will be used only for projects that voluntarily wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new

development projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis under CEQA.

As discussed above, Measure E5 is legally feasible for the County to implement and the comment does not provide specific evidence as to why this measure would preclude the County from achieving its economic diversification goals, such that a specific response cannot be provided.

O15-49 See General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan. As discussed above, Measure E5 is legally feasible for the County to implement and the comment does not provide specific evidence as to why this measure is legally and technically infeasible and the examples given do not support the claim that these goals are legally infeasible, such that a specific response cannot be provided.

O15-50 As discussed in General Response 3 and responses to comments O15-40 and O15-41 above, Revised Draft 2045 CAP Measure E5 includes a performance goal that 90 percent of total Countywide water demand is met by recycled water graywater, or potable reuse by the year 2045 (25 percent by 2030 and 50 percent by 2035) (Revised Draft 2045 CAP Chapter 3, p. 3-54). This is not a project-level mandate. For projects that wish to streamline their GHG impacts evaluation under CEQA, the Checklist requires nothing regarding water source types. This would include a new water recycling project that would blend imported water with recycled water.

Further, the County has revised the Checklist to clarify that the Checklist will be used only for projects that voluntarily wish to streamline their CEQA GHG impact analysis pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Demonstrating consistency with the Checklist is no longer mandatory for new projects but is rather a voluntary option that project applicants can use to streamline their project's GHG impact analysis under CEQA. As such, there is nothing in Measure E5 that would preclude a water recycling project from proceeding.

O15-51 As discussed in General Response 3 and responses to comments O15-40 and O15-41 above, Revised Draft 2045 CAP Measure E5 includes a performance goal that 90 percent of total Countywide water demand is met by recycled water graywater, or potable reuse by the year 2045 (25 percent by 2030 and 50 percent by 2035) (Revised Draft 2045 CAP Chapter 3, p. 3-54). The comment is incorrect that Measure E5 only accepts three alternative water source technologies. The three technologies cited in the comment; recycled water, graywater, and indirect potable reuse; are examples of technologies that could be used to achieve the performance goals of Measure E5. There is no requirement in the Revised Draft 2045 CAP to use only these three strategies, and no prohibition on other strategies. For reference, the full text of measure E5 is provided below:

> *Increase Use of Recycled Water and Graywater Systems: Increasing the use of alternative water sources (**e.g.,** recycled water, graywater, indirect potable reuse)*

reduces the demand for water sources with higher energy and carbon intensities (e.g., imported water, groundwater). (***Emphasis*** added.) (Revised Draft 2045 CAP p. 3-57.)

O15-52 The comment is correct that innovative new technologies will be required to achieve California's long-term goal of carbon neutrality by 2045, as identified by CARB in the 2022 Scoping Plan.[35] However, the comment is incorrect that the Revised Draft 2045 CAP is hostile to new technologies. To the contrary, the Revised Draft 2045 CAP encourages new technologies, such as by incorporating new technologies that become more commercially available over the next 20–25 years to further reduce the County's residual emissions, like zero-emission engine technologies for off-road equipment and heavy-duty on-road trucks (Revised Draft 2045 CAP pp. 3-11 to 3-12). Within the context of Measure E5's performance goals for alternative water supply, the three technologies listed in Measure E5 (recycled water, graywater, and indirect potable reuse) are example technologies that could be used to achieve the performance goals of Measure E5. There is no requirement in the Revised Draft 2045 CAP to use only these three strategies, and no prohibition on other strategies or new technologies.

The County agrees with the comment that the County must take a leadership role in technology innovation, capital and company formation, advanced manufacturing, and marketing, to achieve its GHG reduction targets and its long-term GHG reduction goal of carbon neutrality by 2045. The Revised Draft 2045 CAP serves as a key leadership roadmap to achieve these targets, and supports the development and use of innovative new technologies to reduce GHG emissions.

O15-53 As discussed above, Measure E5 is feasible for the County to implement. The comment does not provide specific evidence as to why this measure would frustrate the County's climate change leadership opportunities or why the measure would cause people and jobs to move to other states and local jurisdictions..

O15-54 to O15-57 See General Response 3, which addresses concerns regarding quantification of GHG emission reductions for each CAP measure and action included in the Checklist, or for each CEQA streamlining requirement in the Checklist (General Response 3, Section 2.2.3.2), and an adequate basis or guidance for demonstrating GHG reduction equivalency for Alternative Project Emissions Reduction Measures (General Response 3, Section 2.2.3.4). Regarding Alternative Project Emissions Reduction Measures, the County has added a new subsection in Revised Draft 2045 CAP Appendix F in Section F.2 under Step 4 titled, "Guidance for Quantifying GHG Reductions from Alternative Measures" to help project applicants choose this pathway. This new section provides guidance for how applicants can quantify the GHG reduction benefits of a Checklist streamlining requirement for an individual project to determine the amount of GHG emissions reduction that an alternative

[35] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* November 16, 2022. Pages 5 and 9. Available at https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents. Accessed July 2023.

project emissions reduction measure must achieve. See Revised Draft 2045 CAP Appendix F, pages F-13 to F-15 for more detail. Also see General Response 5, which addresses the obligation of the Revised Draft 2045 CAP to quantify GHG emission reductions for strategies, measures, and actions.

O15-58 The commenter is incorrect by claiming that no project could be consistent with Checklist streamlining requirements #9, *Decarbonize Trucks*, or #10, *Incorporate Zero-Emission Technologies for Off-Road Vehicles & Equipment*, because the technology needed to comply with these requirements does not exist. The commenter provides no evidence to support the claims that there is a lack of technology prohibiting projects from meeting these requirements.

Checklist streamlining requirement #9 requires that projects: comply with any CALGreen Code requirement, County ordinance, Building Code, or condition of approval that requires a certain amount of EV charging infrastructure and readiness for goods movement facilities and trucks; provide EVCSs at all new warehouse loading docks; and implement freight decarbonization technologies along highway corridors, among other things. EV charging infrastructure for trucks is readily available and commercially scalable.[36]

According to CARB, as of July 2022, there are currently 148 models of zero emission vehicle (ZEV) trucks in North America available for order or pre-order and 135 models are actively being produced and delivered to customers.[37] According to the Global Drive to Zero Zero-Emission Technology Inventory (ZETI) tool, a database for ZEVs, there are 20 manufacturers with over 50 models of medium-duty trucks currently available and 17 manufacturers with over 30 models of heavy-duty trucks currently available in the U.S. and Canada as of July 2023.[38] CARB's adopted Advanced Clean Trucks (ACT) regulation requires manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035.[39] By 2035, zero-emission truck/chassis sales would need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales. The ACT rule also requires large employers including retailers, manufacturers, brokers and others are to report information about shipments and shuttle services to help identify future strategies to ensure that fleets purchase

36 California Public Utilities Commission, 2022. CPUC Adopts Transportation Electrification Program To Help Accelerate Electric Vehicle Adoption. November 17. Available at https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-adopts-transportation-electrification-program-to-help-accelerate-electric-vehicle-adoption. Accessed July 2023.

37 California Air Resources Board, 2023. Advanced Clean Fleets Regulation Summary: Accelerating Zero-Emission Truck Markets. Updated May 17, 2023. Available at https://ww2.arb.ca.gov/resources/fact-sheets/advanced-clean-fleets-regulation-summary. Accessed July 2023.

38 Global Drive to Zero, 2023. ZETI (Zero-Emission Technology Inventory). Available at https://globaldrivetozero.org/tools/zeti/. Accessed July 2023.

39 California Air Resources Board, 2021. Advanced Clean Trucks Fact Sheet: Accelerating Zero-Emission Truck Markets. August 20. Available at https://ww2.arb.ca.gov/sites/default/files/2021-08/200625factsheet_ADA.pdf. Accessed July 2023.

available zero-emission trucks and place them in service where suitable to meet their needs.

CARB's new proposed Advanced Clean Fleets regulation would require several things including: 1) manufacturers sell only zero-emission medium- and heavy-duty vehicles starting in 2036; 2) beginning January 1, 2024, only zero-emission drayage trucks may register in the CARB Online System and all drayage trucks entering seaports and intermodal railyards would be required to be zero-emission by 2035; 3) high-priority fleets must purchase only ZEVs beginning 2024 and, starting January 1, 2025, must remove internal combustion engine vehicles at the end of their useful life as specified in the regulation; and 4) state and local government fleets, including city, county, special district, and State agency fleets, are required to ensure 50 percent of vehicle purchases are zero-emission beginning in 2024 and 100 percent of vehicle purchases are zero-emission by 2027.[40]

According to the South Coast Air Quality Management District, the zero emission truck market is beginning to grow rapidly with many models entering the commercial market today and many major manufacturers announcing plans for future commercialization of battery-electric and hydrogen fuel cell electric trucks.[41] Some notable manufacturer announcements include: Daimler Class 8 eCascadia, Navistar battery-electric Class 8, Volvo battery-electric VNR Class 8, Tesla's long range battery-electric tractor, BYD's battery-electric Class 6 and 8, Nikola's and Kenworth (in conjunction with Toyota) hydrogen fuel cell tractors, Sea Electric Class 4–8 battery-electric trucks, Lion Electric's Class 6–8 battery-electric trucks, Amazon's order of 100,000 Rivian's battery electric trucks, etc. NZE engines are currently available in two sizes: 11.9 liter and 8.9 liter. Major truck manufacturers offer these engines in different truck classes, including for class 8 regional haul and/or drayage truck operations.

Also see General Response 5, which addresses the obligation of the Revised Draft 2045 CAP to quantify GHG emission reductions for strategies, measures, and actions.

Regarding streamlining requirement #10, there are numerous pieces of electric and zero-emission construction equipment currently commercially available, including for

40 California Air Resources Board, 2023. Advanced Clean Fleets Regulation Summary: Accelerating Zero-Emission Truck Markets. Updated May 17, 2023. Available at https://ww2.arb.ca.gov/resources/fact-sheets/advanced-clean-fleets-regulation-summary. Accessed July 2023.

41 South Coast Air Quality Management District, 2021. WAIRE Implementation Guidelines: Rule 2305 – Warehouse Indirect Source Rule - Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program Rule 316 – Fees for Rule 2305. Available at http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/waire-implementation-guidelines.pdf?sfvrsn=12. Accessed July 2023.

generators, pumps, welders, forklifts, skid steer loaders, dumpers, cranes, air compressors, saws, excavators, rollers, front loaders, and others.[42,43]

Consequently, the technology is currently available for projects to comply with streamlining requirement #9 and #10, and available technologies will expand in response to CARB's rules and regulations in addition to market demand.

O15-59 See General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan. The Revised Draft 2045 CAP will be revisited every five years after adoption to adjust policies and programs, where needed, to account for changes in technology and evolving federal and state regulations.

O15-60 The commenter is correct that the Revised Draft 2045 CAP includes several Checklist streamlining requirements that point to future regulations and ordinances that would implement the Revised Draft 2045 CAP measures and actions, such as the Zero Emission Vehicle Master Plan and future decarbonization ordinances. Before such regulations and ordinances are developed and adopted by the County, there is nothing with which projects intending to streamline their CEQA GHG impact analysis must comply. Therefore, in these instances, projects using the Checklist must only comply with currently adopted ordinances and requirements at the time of project approval. See General Response 3 for additional discussion.

In response to the comment's statement regarding demonstrating consistency with the Revised Draft 2045 CAP and Checklist, the Checklist would ***not*** be used as a tool for evaluating a project's consistency with the County's General Plan.

Demonstrating consistency with the Checklist is no longer mandatory for new development projects, but is rather a voluntary option that project applicants can utilize to streamline their project's GHG impact analysis. Projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist. Such projects would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist. Please see General Response 3 for further discussion regarding the process for project applicants and General Response 2 for discussion regarding the Revised Draft 2045 CAP's relation to the General Plan.

O15-61 The Revised Draft 2045 CAP's measures and actions do, as the commenter accurately observes, include Countywide performance goals. For example, Measure T6 has a Countywide goal of installing 37,000 new public and shared private EV chargers by 2030 to support a fleetwide light-duty ZEV market share of 30 percent. However, contrary to the comment's claim, the Checklist does identify those specific project

42 California Air Resources Board, 2023. $125M in Incentives for Off-Road Zero-Emission Equipment Available through California's CORE Project. Available at https://ww2.arb.ca.gov/news/125m-incentives-road-zero-emission-equipment-available-through-californias-core-project Accessed July 2023.

43 California Clean Off-Road Equipment Voucher Incentive Project, 2023. California CORE - Equipment. Available at https://californiacore.org/equipment-category/construction/. Accessed July 2023.

requirements needed to demonstrate consistency with each applicable measure and action for new projects opting to streamline their GHG impacts analysis under CEQA, as required by CEQA Guidelines section 15183.5(b)(1)(D) ("Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level"). Using the comment's same example, the project-specific requirements to support implementation of Measure T6 in Checklist include several things such as complying with any CALGreen Code requirement, County ordinance, building code, or condition of approval that requires a certain amount of EV charging infrastructure and readiness (such as minimum requirements for EV charging stations, EV-capable parking spaces, and EV-ready parking spaces) and include electric options for promoting active transportation, such as electric scooters and e-bikes. This is the same for all Tier 1 streamlining requirements. Consequently, the commenter's claim that the Checklist does not indicate project-specific goals for measure T6 is incorrect.

O15-62 See General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan. See General Response 3, the Checklist is a valid basis for determining consistency with the Revised Draft 2045 CAP as which addresses project-level requirements for CEQA streamlining mechanism for GHG impacts as identified in the Checklist.

O15-63 As discussed in General Response 3, demonstrating consistency with the Checklist is no longer mandatory for new development projects, but is rather a voluntary option that project applicants can utilize to streamline their project's GHG impact analysis. Projects that do not intend to streamline their GHG impact analysis no longer need to demonstrate consistency with the Checklist.

Such projects would be required to prepare a project-specific impact analysis under CEQA, separate and apart from use of the Checklist. Such an analysis would be tailored to the specific project and could include state law GHG reduction mandates and feasible additional GHG reductions and mitigation measures based on specific project information and new technologies and practices, as the comment requests. Please see General Response 3 for further discussion regarding the process for project applicants.

O15-64 In response to the comment's statement that consideration of projects on an individual basis is the only way the Revised Draft 2045 CAP can be consistent with and in furtherance of other County plans, see General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan, and General Response 3, which addresses project-level requirements for CEQA streamlining as identified in the Checklist.

Please see General Response 3 for further discussion regarding the process for project applicants and General Response 2 for discussion regarding the Revised Draft 2045 CAP's relation to the General Plan.

O15-65 See General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan. See General Response 3, which addresses project-level requirements for CEQA streamlining as identified in the Checklist.

O15-66 The County acknowledges the legally binding agreement of the commenter; however, this comment does not raise significant environmental issues or raise inadequacies associated with the Recirculated Draft PEIR such that no response is required pursuant to CEQA Guidelines sections 15064(h)(3), 15064.4 and 15183.5(b). Please also refer to response to comment O15-61 above.

O15-67 This comment on the Revised Draft 2045 CAP does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses generally comments received on the Revised Draft 2045 CAP.

O15-68 The comment raises general concerns about the Revised Draft 2045 CAP core elements, which are individually addressed in the responses below. See General Response 2, which addresses the relationship between the Revised Draft 2045 CAP and the General Plan. See General Response 3, which addresses project-level requirements for CEQA streamlining as identified in the Checklist.

O15-69 The County intends to stay on track with the implementation of the Housing Element. The Housing Element sets forth implementing actions that encourage the private sector to build and improve housing. To that end, a climate action plan was identified as a program of the Housing Element. The Revised Draft 2045 CAP includes a streamlined voluntary procedure for environmental clearance for individual housing projects, thereby reducing the time and expense needed for individual environmental clearances. Such an analysis would be tailored to the specific project and could include state law GHG reduction mandates and feasible additional GHG reductions and mitigation measures based on specific project information and new technologies and practices, as the comment requests. Please see General Response 3 for further discussion regarding the process for project applicants.

O15-70 Regarding this comment's suggestion that the Revised Draft 2045 CAP be revised into an aspirational document, please refer to General Response 2, which addresses this suggestion by clarifying the relationship between the Revised Draft 2045 CAP and the County's General Plan.

O15-71 In response to the comment's suggestion that the Revised Draft 2045 CAP should quantify GHG reductions from statewide laws and mandates, and from measures that will be undertaken by the County and should allow projects to reduce emissions

through offsets and other approaches, the Revised Draft 2045 CAP does account for reductions from statewide laws and mandates, such as California's Advanced Clean Car Standards, starting on page 2-7, and from forthcoming County measures in Chapter 3. See General Response 4, which addresses concerns regarding the use of voluntary GHG offset credits in the Revised Draft 2045 CAP and as an alternative GHG reduction measure in the Checklist for streamlining CEQA review of a project's GHG impacts. See also General Response 3, which addresses concerns regarding the CEQA Streamlining Checklist and the use of alternative project emissions reduction measures, as well as General Response 5, which addresses the quantification of GHG emission reductions for the Revised Draft 2045 CAP strategies, measures, and actions.

O15-72 These comments on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on these issues pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses generally comments received on the Revised Draft 2045 CAP.

THE GREENLINING INSTITUTE

May 15, 2023

Los Angeles County Department of Regional Planning
Attn: Thuy Hua
320 W. Temple Street, 13th Floor
Los Angeles, CA 90012

RE: Comments on the Revised Draft 2045 Climate Action Plan

Dear Ms.Hua,

Thank you for the opportunity to help shape the County's Revised Draft 2045 Climate Action Plan (CAP).[1] The Greenlining Institute is a policy advocacy organization that works toward a future where communities of color can build wealth, live in healthy places filled with economic opportunity, and are ready to meet the challenges posed by climate change. Our organization has worked extensively to research and advocate for key strategies to make equity real in climate adaptation and resilience in California. In Los Angeles County, we work directly with communities of the San Gabriel and Pomona Valleys who are at the frontlines and have been identified by the LA County Climate Vulnerability Assessment as having a higher likelihood of increased exposure to climate hazards.[2] Our partners have also identified the following key priorities for local climate action in the region: mobility and transportation justice, food justice and urban agriculture, and extreme heat. However, the communities we serve face significant barriers such as the necessary capacity building and resources needed to address climate impacts. To overcome these challenges, our shared vision for the region is to:

- Connect leaders to build collective people power, and develop a common language to pursue climate opportunities;
- Center organizations and bring together stakeholders who have not been traditionally part of the climate conversation;
- Increase community ownership over climate solutions, including language justice to effectively engage in participatory planning and policy making at the local and state level;
- Support community stakeholders with the capacity, resources and partnerships needed to realize community visions for climate resilience and equity.

[1] *Revised Draft 2045 Climate Action Plan*, Los Angeles County Department of Regional Planning, Mar. 2023.https://planning.lacounty.gov/wp-content/uploads/2023/03/LA_County_2045-CAP_Rev_Public_Draft_March_2023_Chapters.pdf. Accessed 17 Apr. 2023.
[2] *LA County Climate Vulnerability Assessment,* Oct 2021. https://ceo.lacounty.gov/wp-content/uploads/2021/10/LA-County-Climate-Vulnerability-Assessment-1.pdf. Accessed 17 Apr. 2023.

We look forward to shaping the development of the CAP by applying our experience in climate resilience, capacity building and learnings from our local partners. There are numerous aspects of the the current draft that we appreciate:

- First, we support the newly added section on *Climate Equity* in Chapter 1 from the first iteration of the CAP, which includes a list of climate equity guiding principles and a proposed equity approach for implementation (pages 51-57).

- We also agree that investments should be prioritized in frontline communities of unincorporated regions of LA County, and alignment with existing resources and tools such as the County's Climate Vulnerability Assessment, Healthy Places Index and CalEnvironScreen 4.0 to identify frontline communities (page 54).

- Lastly, we appreciate that capacity building in frontline communities and partnerships with community-based organizations (CBOs) is prioritized to ensure meaningful engagement throughout the CAP implementation and evaluation process (page 55).

We appreciate the opportunity to provide feedback on the current draft and offer the following CAP recommendations to ensure equitable outcomes and meaningful benefits in frontline communities across unincorporated areas of Los Angeles County.

Recommendations

Communities of color, indigenous communities, and low-income neighborhoods have been shaped by deliberate and exclusionary public policies. As a result, under-resourced communities have borne the brunt of generational disparities in socioeconomic and health outcomes, and suffer first and worst from escalating climate impacts. Moreover, these communities have long been excluded from the decision-making processes that impact their lives and neighborhoods, despite the deep expertise and solutions that they hold.

To achieve full potential, we must dismantle the systemic barriers for communities to have full access and opportunity to participate in local climate action. In our experience, under-resourced communities face the following key structural challenges to addressing climate impacts:

- *Ecosystem Gaps:* Decades of disinvestment have resulted in gaps across local ecosystems. Local organizations often require additional support for specific issue-area, content, or technical expertise. Another challenge is staffing and overall administrative capacity to meaningfully engage in the development, implementation and evaluation of local climate plans. In LA County, unincorporated regions face additional challenges to fully and actively participate in local climate action without local city governments in place.

- *Need for More Robust Multi-Sector Partnerships*: Even where neighborhoods may have strong community-based or institutional anchors, those actors may not be working constructively together to achieve greater collective impact. Communities may be siloed by issue areas, sectors, or a lack of trust, and require more meaningful opportunities to work together towards a shared climate vision grounded in equity.

- *Funding:* Under-resourced communities have been systematically starved of funding and investments, both public and private. Communities lack the resources needed to meaningfully engage residents, build collective visions, share their expertise, and work with local governments to implement projects and policies set forth by climate action plans.

- *Access to Structural Power:* Under-resourced communities lack the access or influence needed to advance community priorities. Implementing projects and changing policies to meet the needs of residents often requires access to structural power as embodied by local and regional governments.

In order to address these structural challenges, DRP must support under-resourced communities to fully take ownership over the decisions and proposed actions from the CAP that will shape their neighborhoods for years to come.

1. Support Capacity Building from the Bottom Up

To support equitable opportunity and access to tools for community-driven climate action, DRP should actively support capacity building activities in under-resourced communities from the bottom up. This involves centering community engagement, leadership, and governance, and supporting the ecosystem of change. Our organization defines capacity building as the process of strengthening local leadership, skills, expertise, and resources to enable communities to meet their needs and achieve self-determination:

a. Center Community Engagement, Leadership, and Governance

Centering community engagement and leadership in local climate action is foundational. No one knows better than community members themselves what is needed in their neighborhoods, yet rarely are community voices centered in the decision-making processes that impact their daily lives. An example of a process that centered meaningful engagement is the community engagement model used in the development of the LA County Sustainability Plan (OurCounty).[3] The development of OurCounty employed a number of best practices including multi-stakeholder workshops, language-accessible outreach materials, and anchor community-based organizations to facilitate workshops and uplift equity strategies. Through local multi-stakeholder partnerships with philanthropy, the county was also able to provide anchor community-based organizations with grants and participation stipends for stakeholder engagement.

[3] *OurCounty Stakeholder Engagement Summary,* LA County Chief Sustainability Office. https://ourcountyla.lacounty.gov/wp-content/uploads/2019/07/OurCounty-Stakeholder-Engagement-Summary_For-Web.pdf. Accessed 17 Apr. 2023.

The Transformative Climate Communities (TCC) program, administered by the Strategic Growth Council, also provides a strong design model for both community engagement and collaborative governance that can be applied in the implementation of local climate action plans.[4] TCC requires the development of Community Engagement Plans, supports community-led decision-making that builds towards collective impact and requires collaborative governance between a diverse range of organizations. This creates a platform where community organizations and residents not only have a seat at the table, but also have meaningful decision-making power in developing strategies and actions for climate resilience in their communities.

b. Support the Ecosystem of Change

Across local ecosystems, we have found that successful collective impact depends on the resourcing of several key stakeholder types (a strong community anchor, supportive local government, and community-facing technical assistance or a third-party entity) so they can effectively collaborate to conduct community engagement efforts.

i. Community anchors are community-based organizations or coalitions which organize or engage directly with residents and have a history of strong relationships, trust, and cultural competency with impacted communities. Community anchors ground the effort in community-identified priorities and leadership, but may lack the technical or administrative capacity. Through using an intersectional approach, community anchors can also bring together stakeholders who have not traditionally been part of the climate conversation but whose communities are at the frontlines of climate impacts such as immigrant rights, worker centers and tenant rights organizations.

ii. Government partners may include local governments, regional governments, and other public agencies that can offer significant administrative and fiscal capacity. However, for local governments to be strong community-aligned partners, it is crucial that key political decision-makers and implementing staff support the community-led effort.

[4] *Transformative Climate Communities Program Final Round 5 Guidelines*, California Strategic Growth Council, 15 Feb. 2023. https://sgc.ca.gov/programs/tcc/docs/20230308-TCC_R5_Guidelines.pdf. Accessed 17 Apr. 2023.

iii. Technical assistance providers can be a vital component in advancing community-led visions for climate resilience. TA providers should tailor their services to fill capacity gaps of community partners including partnership-building support, funding, community engagement, project pre-development, building community capacity, and more. Furthermore, many community-based organizations have developed community-driven climate resilience plans and potential projects ideas. Therefore, the DRP should prioritize aligning the CAP with existing community visions for climate resilience, and provide TA support to build their capacity. Doing so will ensure communities' visions of climate resilience and adaptation become an integral component of the CAP.

2. Operationalize Equity from Project Goals through Evaluation

Including a commitment to equity is not enough to ensure that equity will occur. Operationalizing equity requires embedding equity into all stages of a climate action plan. We strongly encourage DRP to embed equity into the proposed strategies, measures and actions of the CAP and in the creation of any new local grant programs to support frontline communities. The Greenlining Institute's "Making Equity Real in Climate Adaptation and Community Resilience Guidebook" provides a framework for how to embed equity in policies, projects or programs using the following four steps.[5]

a. *Embed Equity in the Mission, Vision, & Values*

Equitable outcomes and a strong equity evaluation flow directly from the goals and targets established at the outset. The CAP should explicitly state a commitment to equity, clearly define equity, establish specific measurable equity targets, and identify the frontline communities they seek to benefit upfront. An example of equity-centered goals is the LA County's Sustainability Plan where equity is embedded in the twelve sustainability goals of the plan. Existing county resources such as the Climate Vulnerability Assessment can also be used for targeted benefits in communities most vulnerable to the impacts of climate change.[6] Such efforts will allow the county to tackle the climate impacts faced by frontline communities.The effort must also aim to create comprehensive climate strategies for communities that go beyond building the resilience of physical environments to address other health and economic injustices that climate impacts exacerbate.

b. Build Equity into the Process

[5] Mohnot, Sona, et al. The Greenlining Institute, 2019, *Making Equity Real in Climate Adaptation and Community Resilience Policies and Programs*, https://greenlining.org/wp-content/uploads/2019/08/Making-Equity-Real-in-Climate-Adaption-and-Community-Resilience-Policies-and-Programs-A-Guidebook-1.pdf. Accessed 17 Apr. 2023.

[6] *LA County Climate Vulnerability Assessment,* Oct 2021. https://ceo.lacounty.gov/wp-content/uploads/2021/10/LA-County-Climate-Vulnerability-Assessment-1.pdf. Accessed 17 Apr. 2023.

DRP should deeply engage community members to learn about and respond to their priorities, needs, and challenges in adapting to climate impacts in order to inform the development and implementation of the CAP. This includes building partnerships with diverse organizations such as immigrant rights organizations and worker centers that are increasingly advocating for measures to address extreme heat.

In addition, DRP Equity Guiding Principles can be improved upon. Figure 4-1: Equity Guiding Principles notes the engagement process as Step 6. Rather, engagement should be woven throughout. Communities should be actively part of the decision-making process in implementation (Step 5), when conducting evaluation (Step 8), and so on (pgs. 39-43). DRP should include securing funding sources for CBO grants and stipends to support participants throughout the engagement process as well. Through this, DRP will be able to better identify how proposed actions may generate burdens (e.g. time/capacity, displacement, and increased costs), either directly or indirectly to frontline communities and an accompanying plan to address and mitigate those burdens.

c. Ensure Equity Outcomes

The CAP must lead to equity outcomes that respond to community needs, reduce climate vulnerabilities, and increase community resilience. Outcomes can include improved public health and safety, workforce and economic development, and more in ways that reduce historical and current disparities. As one example, the Santa Cruz Climate Action Plan developed an Equity Screening Tool to screen all proposed actions to ensure equitable and just transition outcomes for communities. Some of the equity criteria used in the tool included community health and safety, affordability, and green job facilitation and creation.[7]

d. Measure & Analyze for Equity

The CAP should apply clear equity metrics in Chapter 4: Implementation and Monitoring (pages 139-143) and in tracking metrics proposed in Table 4-1 (page 144) to evaluate its successes and challenges in prioritizing frontline communities. DRP can partner with CBOs to establish reporting criteria and metrics to achieve this. Additionally, DRP should establish accountability checkpoints to measure the outcomes of actions to ensure equitable benefits to frontline communities and avoid disproportionate harm. Course correction checkpoints, and a transparent process for communicating progress to community stakeholders should also be put in place.

3. Assess Grant Administration and Potential Funding Opportunities

[7] *Climate Action Plan Appendices,* City of Santa Cruz, Jun. 2023. https://www.cityofsantacruz.com/home/showpublisheddocument/90694/637983259399030000. Accessed 17 April. 2023.

DRP must assess and improve its internal practices to simplify program administration, reduce barriers in the development of new grant programs and prioritize potential funding opportunities that invest in frontline communities.

a. Administrative Assessments

Communities working through local grants and other government processes often encounter a labyrinth of complicated rules and regulations. To reduce barriers for entry in the development of new grant programs for individuals for energy retrofits (page 57) and grants for local CBOs to conduct community engagement (page 142), we encourage DRP to conduct internal evaluations of their own grant management processes and requirements. Such an evaluation would help DRP assess how their internal administrative processes could be streamlined to improve public access. For example, such an assessment could distinguish which administrative requirements are statutorily required, and which requirements are in fact just custom or accepted practice. This would help to reduce the number of administrative specifications and increase overall accessibility of grants especially for under-resourced communities of LA County.

b. Remove Needless Funding Barriers

As DRP carries out its own internal assessments, funding barriers immediately stand out for limiting the ability of communities to participate in local climate action plans. As DRP acknowledges, many incentive programs present barriers to fully engage in local climate action (pg 57). The reimbursement model creates significant cash flow challenges for individuals as they may not have available extra resources to cover upfront costs. In the creation of any new programs targeted at frontline communities, DRP should offer advance pay to allow full equitable participation in climate resilience. Small and/or under-resourced community-based organizations seeking to partner with local governments to engage in climate action plans also have similar barriers when accessing local grants. When partnering with community-based organizations to support community engagement activities DRP should offer advance payment to reduce financial barriers.

c. Prioritize Funding Sources that Invest in Frontline Communities

Many of the funding sources identified in Table 3-3 (page 76) do not prioritize investments in frontline communities. DRP should identify a list of potential funding sources that invest in and outline clear benefits to frontline communities. When partnering with community-based organizations to seek state and federal grant opportunities, DRP should prioritize grant opportunities that also have the least administrative barriers and provide advance pay for partner organizations. For instance, the California Air Resources Board Sustainable

Transportation Equity Program (STEP) [8] uses an advance pay regulation to grant the majority of funds up front for planning and implementation grants[9]. Doing so will ensure DRP's commitment to *"prioritize funding and action in frontline communities"* and support diverse multi-stakeholder partnerships to implement actions from the CAP (pg 140).

Conclusion

Thank you for the opportunity to offer comments for the proposed LA County 2045 Climate Action Plan. We urge the LA County Department of Regional Planning to incorporate the recommendations outlined above into the final CAP and continue engaging frontline communities so the CAP is reflective of their visions for climate resilience.

Sincerely,

Katherine Cabrera
Program Manager of Capacity Building, *The Greenlining Institute*

[8] *Sustainable Transportation Equity Project Implementation Grant Solicitation*, 4 June 2020. https://ww2.arb.ca.gov/sites/default/files/classic/msprog/step/step_implementation_grant_solicitation.pdf. Accessed 17 Apr. 2023.
[9] *Proposed Additional Requirement for Advance Payment of Certain Funds Regulation*. California Air Resources Board, 3 Sept. 2019, https://ww2.arb.ca.gov/rulemaking/2019/advancedpayment2019. Accessed 17 Apr. 2023.

2.3.2.16 Letter O16: The Greenlining Institute

This letter provides input on the Revised Draft 2045 CAP only. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4, *Comments on the Revised Draft 2045 CAP*, in Chapter 1, *Introduction*.

2.3.3 Responses to Comments from Individuals

From: Chelsea Katan
To: DRP EPS Climate
Subject: 2045 Climate Action Plan Comments
Date: Monday, April 10, 2023 10:21:02 PM

CAUTION: External Email. Proceed Responsibly.

Hello,

I live in Pasadena, CA in LA County. I've focused my review on the transportation segments of the document as they are the greatest contributors to climate change by the numbers. There should be more of a focus on dense development and transit infrastructure and the intersection of land use and VMT than I currently see in this document. Is there a way to be alerted to revisions of this document, or meetings reviewing this document? I1-1

- Measure T1, p. 99: Please remove the maximum DU cap (quoted below). There should be no limitation to how many dwelling units are built surrounding transit. Increased transit access helps decrease single occupant trips and decrease vehicle miles traveled. I1-2
  - "Achieve a minimum of 20 dwelling units (DU) per acre (~~maximum of 30–150 DU per acre) for HQTAs~~. :
- Measure T1: I appreciated the focus on access to public amenities like parks!
- Measure T2, p. 100: This seems to not account for remote work and work from home lives. We're already seeing other downtowns struggle to fill office spaces. It would make more sense to emphasize housing combined with jobs. This also reduces VMT. I1-3
- Measure T3: What percentage of bike lanes will be physically protected? Paint is not protection. These need to be safe enough for children to ride to truly increase biking safety. I1-4
- Measure T4 - that's an awesome goal to increase transit hours! Short headways make transit way easier to take!
- Measure T4.6 - I love this measure! Increasing affordability of transit helps people use it!
- Measure T4.8 - can't wait to see it here!
- Measure T4.10 - don't let this one become a blocker to making transportation abundant and reliable. Something is better than nothing, even if it's not perfect. I1-5
- Measure T5 - love this, let's get rid of parking minimums! Especially near transit!
- I think there's an overfocus on EV's as a solution to climate change. I1-6
  - Is the grid system ready and changing to support that load in parallel? I1-7
  - How will that grid support EV during extreme temperatures? I1-8
  - Studies are starting to show that vehicle tires produce quite a bit of pollution too: https://www.theguardian.com/environment/2022/jun/03/car-tyres-produce-more-particle-pollution-than-exhausts-tests-show I1-9

Thank you,

Chelsea Katan
she/her/hers
chelseakatan@gmail.com
linkedin.com/in/chelseakatan/

2.3.3.1 Letter I1: Chelsea Katan

This letter provides input on the Revised Draft 2045 CAP as well as CEQA comments on the Recirculated Draft PEIR. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4, *Comments on the Revised Draft 2045 CAP*, in Chapter 1, *Introduction*. PEIR-focused comments are addressed below.

I1-1 For the notices regarding the Revised Draft 2045 CAP Measure T1, Measure T2, Measure T3, Measure T4, Measure T5, and other areas of the Revised Draft 2045 CAP are acknowledged and have been included in the record and they will be considered by decision-makers. Regarding housing density and land use decisions the project, interested parties can register for the project listserv to receive email notifications: https://planning.lacounty.gov/get-involved/.

The Revised Draft 2045 CAP is a policy document that is intended to reduce community-wide GHG emissions and would support development allowed under the General Plan. No changes to General Plan land use designations, zoning, or specific projects are proposed as part of the Revised Draft 2045 CAP. However, the Housing Element developed the Rezoning Program as one of the first steps to facilitate sustainable housing production. The rezoning is being implemented through the Area Plan and is named as Programs 7 (East San Gabriel Valley Area Plan), 8 (Metro Area Plan), 18 (South Bay Area Plan), 19 (West San Gabriel Valley Area Plan), and 20 (Westside Area Plan) in the Housing Element. The Rezoning Program will increase housing densities in areas with existing infrastructure.

The Revised Draft 2045 CAP includes Measure T1, which seeks to increase housing opportunities that are affordable and near high-quality transit areas to reduce VMT. Implementation of the Revised Draft 2045 CAP's measures and actions would reduce overall Countywide vehicle trips and VMT. The Revised Draft 2045 CAP would encourage mixed-use development (Measure T2) and place residential density near transit (Measure T1), which would reduce VMT within the County.

I1-2 to I1-5 These comments on the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on these issues pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses generally comments received on the Revised Draft 2045 CAP.

I1-6 Responding to the comment's opinion that the Revised Draft 2045 CAP includes too much focus on EVs as a solution to climate change, transportation represents over 50 percent of the County's total GHG inventory and it is notoriously difficult to reduce GHG emissions in the transportation sector. Increasing the Countywide market share of zero emission vehicles is a cornerstone of the Revised Draft 2045 CAP's

program to achieve the County's 2030, 2035, and 2045 GHG emission reduction targets. This aligns with CARB's 2022 Scoping Plan, which also heavily relies on ZEVs to achieve California's statutory GHG emission reduction targets.

The County has limited control over individual behaviors when it comes to transportation. The Revised Draft 2045 CAP includes Strategy 2, *Increase Densities and Diversity of Land Uses Near Transit*, which focuses on coordinating land use development that leads to outcomes associated with reduced VMT, such as increased densities near transit, jobs-housing balance, and strategically located land uses that can reduce travel distances for many trip purposes. Strategy 3, *Reduce Single-Occupancy Vehicle Trips*, focuses on development of transportation networks that increase the accessibility, comfort, and convenience of active travel modes to help reduce trips made in single-occupancy vehicles. The measures and actions listed under these two strategies aim to reduce the amount of time and miles traveled in vehicles throughout the County.

I1-7 In response to the commenter's concern that the electric grid is not ready to support the new electricity demand resulting from the new EVs in the vehicle fleet as called for by Draft 2045 CAP Measure T6, please refer to Draft PEIR Chapter 3.7, *Energy*, for a discussion of the capacity of the grid to support implementation of the Revised Draft 2045 CAP's electrification measures and actions. (Recirculated Draft PEIR, Chapter 3.7, pp. 3.7-13 to 3.7-14.)

I1-8 Please refer to Draft PEIR Chapter 3.7, *Energy*, for a discussion of the capacity of the grid to support implementation of the Revised Draft 2045 CAP's electrification measures and actions. (Recirculated Draft PEIR, Chapter 3.7, pp. 3.7-13 to 3.7-14.)

I1-9 The County has reviewed the Guardian article on car tires and air pollution (URL provided by the commenter). Tire wear is a known source of particulate matter and this is acknowledged in Recirculated Draft PEIR Chapter 3.4, *Air Quality*. (Recirculated Draft PEIR, Chapter 3.4, pp. 3.4-33.) Reducing particulate matter is a co-benefit of reducing VMT. However, the County has determined that the information provided in this article does not raise environmental issues related to the Recirculated Draft PEIR and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the information has been included in the administrative record where it will be considered as part of the decision-making process.

From: Emmanuel Alcantar
To: DRP EPS Climate
Subject: Climate Action Plan
Date: Thursday, May 11, 2023 1:17:07 PM

CAUTION: External Email. Proceed Responsibly.

Hello,

My name is Emmanuel Alcantar and I wanted to provide feedback on the County's climate action plan.

Right now, LA County's current plan is to cap housing density near high quality transit at as low as 30 homes/acre. CARB's own scoping plan says that we need 25% reduction in per capita VMT in order for the state to reach its own climate goals and building densely — especially in our transit corridors — is one of the most significant ways we can make progress on that. I do not believe we should be putting any limits on density, height, or floor area near public transit. I2-1

I also think we need to re-zone areas near our community colleges (many of which are high quality transit areas) and ensure that they are being used for dense housing, especially since we have so many students who are either severely rent burdened or are unhoused. I2-2

Lastly, in a similar vein, I believe the County should reform its parking requirements to allow for easier implementation of SB 9. I2-3

Thank you so much for your time.

Best regards,
Emmanuel Alcantar

2.3.3.2 Letter I2: Emmanuel Alcantar

This letter provides input on the Revised Draft 2045 CAP as well as CEQA comments on the Recirculated Draft PEIR. Comments specific to the Revised Draft 2045 CAP do not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, the County has received and reviewed comments on the Revised Draft 2045 CAP and common topics are discussed in Section 1.4, *Comments on the Revised Draft 2045 CAP*, in Chapter 1, *Introduction*. PEIR-focused comments are addressed below.

I2-1 The commenter is correct that the 2022 Scoping Plan has a statewide goal of reducing per-capita VMT 25 percent below 2019 levels by 2030. As discussed in Revised Draft 2045 CAP Appendix H, *2022 Scoping Plan Recommendations Consistency*, the Revised Draft 2045 CAP does not achieve the same levels of per-capita VMT reduction as the Scoping Plan Scenario for 2045. Compared to estimated 2019 levels, the Revised Draft 2045 CAP achieves a 10 percent reduction in per-capita VMT by 2030, a 12 percent reduction by 2035, and a 16 percent reduction by 2045, which is extremely aggressive for the land use profile of unincorporated Los Angeles County. Note that CARB's 30 percent reduction goal is a statewide target and not a mandate for individual jurisdictions, including cities and counties. Therefore, the Revised Draft 2045 CAP is consistent with the 2022 Scoping Plan. For additional discussion, see Revised Draft 2045 CAP Appendix H.

I2-2 Regarding the comment's recommendations related to increasing housing density near transit corridors and community colleges, as discussed in General Response 2, the Revised Draft 2045 CAP is a policy document that would support development allowed under the General Plan. No changes to General Plan land use designations, zoning, or land use–specific projects are proposed as part of the Revised Draft 2045 CAP. Specifically, the 30 dwelling units per acre minimum within HQTAs is directly from the County's 2021-2029 Housing Element, and is not a new component of the Revised Draft 2045 CAP.

I2-3 Assembly Bill 2097 removed parking minimums for projects located within one half mile of public transit. The County is currently working toward codifying AB 2097 regulations into the County Code.

CHAPTER 3
Revisions to the Recirculated Draft PEIR

3.1 Introduction

The following changes have been made to the previously published text of the Recirculated Draft Program Environmental Impact Report (PEIR). Changes to the Recirculated Draft PEIR include minor corrections: improving writing clarity, grammar, and consistency; making clarifications, additions, or deletions resulting from specific responses to comments; and showing changes to update information in the Recirculated Draft PEIR. These text revisions are organized by the chapter and page number (provided on the left-hand side of the page, below) that appear in the Recirculated Draft PEIR. An explanation of the change, including identification of where it would be made, is presented in italics. The specific additions and deletions use the following conventions:

- Text deleted from the EIR is shown in ~~strike out text.~~
- Text added to the EIR is shown in <u>underline text</u>.

These revisions are provided to clarify, refine, and provide supplemental information to the Recirculated Draft PEIR and are incorporated as part of this Final PEIR. These changes do not constitute substantial new information that requires recirculation of the Recirculated Draft PEIR pursuant to CEQA Guidelines section 15088.5. Recirculation is not required when new information is added that "merely clarifies or amplifies or makes insignificant modifications in an adequate EIR." (CEQA Guidelines, § 15088.5(b).) The new information added to the EIR through these modifications clarifies or amplifies information already provided or makes insignificant modifications to the already adequate Recirculated Draft PEIR. While these additions to the Recirculated Draft PEIR provide valuable information by which to evaluate the environmental impacts of the Project, and include clarification and insignificant modifications to the Recirculated Draft PEIR, they do not trigger recirculation under the standard articulated in the Guidelines. The information added to the EIR does not reveal any potentially new significant impacts which had not been previously analyzed. Recirculation is not required here.

3.2 Text Changes to the Recirculated Draft PEIR

3.2.1 Executive Summary

Page ES-4 Table ES-1: Action ES1.1 has been revised as follows:

Action ES1.1 – Collaborate with other local jurisdictions and utilities to develop a sunset strategy for all oil and gas operations that prioritizes disproportionately affected communities. ~~Develop an ordinance.~~

Page ES-4 Table ES-1: Action ES1.2 has been revised as follows:

Action ES1.2 – Develop a policy that requires the examination of ~~all active,~~ idle~~,~~ and abandoned oil wells for fugitive emissions of GHGs to develop and implement a closure plan. Coordinate with federal and state agencies ~~conducting~~ collecting fugitive emissions data.

Page ES-4 Table ES-1: Action ES 5.3 has been revised as follows:

~~Action ES5.3 - Evaluate a program for reducing GHG emissions for new development that require General Plan amendments.~~

Page ES-4 Table ES-1: Action ES 5.4 has been modified and revised as follows:

Action ES5.~~4~~ 3 - Establish an Offsite GHG Reduction Program for new development to use as a GHG reduction or mitigation pathway for 2045 CAP compliance and to fund programs for reducing GHG emissions in the built environment.

Page ES-5 Table ES-1: Action ES 5.2 has been modified and revised as follows:

Action ES5.2 - Implement the 2045 CAP ~~consistency review~~ CEQA streamlining checklist for new development to demonstrate consistency with the 2045 CAP's strategies, measures, and actions for purposes of streamlining environmental review of GHG impacts using the 2045 CAP's PEIR pursuant to CEQA Guidelines Section 15183.5(b).

Page ES-5 Table ES-1: Action ES 5.3 has been revised as follows:

~~Action ES5.3 - Evaluate a program for reducing GHG emissions for new development that require General Plan amendments.~~

Page ES-5 Table ES-1: Action ES 5.4 has been modified and revised as follows:

Action ES5.~~4~~ 3 - Establish an Offsite GHG Reduction Program for new development to use as a GHG reduction or mitigation pathway for 2045 CAP

compliance and to fund programs for reducing GHG emissions in the built environment.

Page ES-10 Table ES-1: Measure E1 has been modified and revised as follows:

Measure E1: ~~Transition~~ Decarbonize Existing Buildings ~~to All Electric~~

Page ES-10 Table ES-1: Action E 1.1 has been modified and revised as follows:

Action E1.1 - Adopt Building Performance Standards for existing buildings and reach code requirements for major retrofits and renovations that require zero-GHG emission appliances.~~electric water and space heating~~. ~~Require buildings to retrofit natural gas water and space heating to electric water and space heating at the point of sale.~~

Page ES-10 Table ES-1: Action E 1.2 has been modified as follows:

Action E1.2 - Increase alternatives to fossil natural gas uses, such as for cooking, in existing buildings. Establish carbon and GHG intensity limits for existing nonresidential and residential buildings over a certain size.

Page ES-11 Table ES-1: Action E 1.1 has been modified and revised as follows:

Action E1.1 - Adopt Building Performance Standards for existing buildings and reach code requirements for major retrofits and renovations that require zero-GHG emission appliances. ~~electric water and space heating~~. ~~Require buildings to retrofit natural gas water and space heating to electric water and space heating at the point of sale.~~

Page ES-11 Table ES-1: Measure E2 has been modified and revised as follows:

Measure E2: ~~Standardize~~ Decarbonize ~~All Electric~~ New Development

Page ES-11 Table ES-1: Action E2.1 has been modified and revised as follows:

Action E2.1 - Adopt an ordinance requiring all applicable new buildings to be zero-GHG emission ~~fully electric with no natural gas hookups~~. Include affordable housing considerations in these requirements, and develop supporting measures (financial support, technical assistance, or other incentives) to defray potential additional first costs in order to maintain housing affordability. Require all new development to be electric-ready.

Page ES-12 Table ES-1: Action E4.1 has been modified and revised as follows:

Action E4.1 – Adopt Building Performance Standards for energy efficiency in existing buildings. ~~Require buildings to perform energy efficiency retrofits at the point of sale.~~ Expand and enhance the energy efficiency programs offered by the

Southern California Regional Energy Network (SoCalREN). Include affordable housing considerations in these requirements, and develop additional renter protections and supporting measures (financial support, technical assistance, or other incentives) to limit the amount of first costs being passed on to low-income renters.

Page ES-14 Table ES-1: Action W 1.2 has been modified and revised as follows:

Action W1.2 - Implement, enforce, and expand to the maximum extent feasible the single-use plastics ~~ordinance~~ and expanded polystyrene ~~ban~~ordinance.

Page ES-14 Table ES-1: Action W 2.3 has been modified as follows:

Action W2.3 - Collaborate with the Los Angeles County Sanitation Districts and other waste and wastewater service providers to utilize unused anaerobic digestion capacity of existing wastewater treatment plants and solid waste facilities to generate vehicle fuel and other beneficial uses (electricity and/or biomethane) from newly diverted organic waste. Develop a strategy for using bioenergy created from recycled organic waste.

Page ES-16 Section ES 2.1 Project Overview has been modified and revised as follows:

- A new development review CEQA streamlining ~~consistency~~ checklist to allow projects to streamline CEQA compliance by using the Draft 2045 CAP, per CEQA Guidelines Section 15183.5.

Page ES-17 Section ES 2.2 Project Objectives has been modified and revised as follows:

(5) Demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide CEQA streamlining for development projects (serve as a "qualified CAP") via a Draft 2045 Climate Action Plan CEQA Streamlining ~~CAP Consistency~~ Checklist.

Page ES-54 Section 4.2.1 has been modified and revised as follows:

In this case, the No Project Alternative examines a scenario in which the County would not approve the Draft 2045 CAP for implementation in the unincorporated areas, and none of the GHG emissions reduction strategies, measures, or actions outlined in the 2045 CAP would be implemented ~~and none of the benefits and co-benefits identified in the 2045 CAP would be realized~~.

Page ES-58 Section 4.2.4 has been revised and modified as follows:

For example, Measure T6, Increase ZEV Market Share, has a 2030 performance goal of a 30 percent ZEV fleetwide percentage for light-duty vehicles in the

County; under Alternative 3, this performance objective ~~could~~ would likely be reduced to a 10 percent ZEV market share (or lower).

Pages ES-59 to ES-60 Section 4.4 has been revised and modified as follows:

~~The CEQA Guidelines define the *environmentally superior alternative* as that alternative with the least adverse impacts on the project area and its surrounding environment. For this Project, the No Project Alternative is considered the environmentally superior alternative for CEQA purposes because it would avoid all impacts of the Project even though air quality and GHG emissions would be the worst among all alternatives under the No Project Alternative. However, the No Project Alternative would fail to meet the basic objectives of the Project. Additionally, selection of the No Project Alternative would result in realization of none of the benefits identified in the Draft 2045 CAP. Because the environmentally superior alternative is the No Project Alternative, the EIR also must identify an environmentally superior alternative from among the other alternatives. (CEQA Guidelines Section 15126.6(e)(2).)~~

An EIR's discussion of alternatives to the proposed project must include a "no project alternative" to allow a comparison of the environmental impacts of approving the proposed project with the effects of not approving it. (CEQA Guidelines, § 15126.6(e)(1).). CEQA requires an EIR to identify the "environmentally superior alternative" if the no project alternative is environmentally superior. (CEQA Guidelines, § 15126.6 (e)(2).).

The EIR No Project Alternative evaluates the scenario where the County would not approve the Revised Draft 2045 CAP for implementation such that no GHG emissions reduction strategies, measures, or actions identified by the Revised Draft 2045 CAP would be implemented. This would avoid adverse impacts caused by projects facilitated by the Revised Draft 2045 CAP, as compared to impacts under the Revised Draft 2045 CAP. Because the No Project Alternative would not facilitate projects, there would be no project-related impacts when compared to implementation of the Revised Draft 2045 CAP (see Table 4-6, which provides a comparative summary), and thus, the No Project Alternative is identified as the environmentally superior alternative.

However, in the long-term, the No Project Alternative would result in substantially fewer environmental benefits to the County overall for several reasons. First, air pollutant (criteria pollutants and toxic air contaminants) and GHG emissions would be much higher under the No Project Alternative than air pollutant and GHG emissions under with all other alternatives and the Project such that impacts to human health would be higher. This is because the Project would substantially reduce countywide GHG emissions, and many of these emission reductions would produce parallel reductions in criteria pollutants and toxic air contaminants primarily by reducing fuel combustion. The No Project

Alternative would result in greater human health risks associated with exposure to toxic air contaminants than all other alternatives and the Project, because all other alternatives and the Project would substantially reduce TAC emissions in the County. The No Project Alternative would neither realize the long-term GHG emission reduction benefits associated with implementation of the Revised Draft 2045 CAP (and all the co-benefits that would also occur, such as reduced criteria pollutant and TAC emissions), nor provide a clear pathway for the County to meet and exceed the statewide 2030 GHG reduction goal identified in SB 32 or meet and exceed the 2045 direct emission reduction target and carbon neutrality goal established by AB 1279. Significantly, the No Project Alternative would not meet any of the Project objectives and the County is not obligated to select the environmentally superior alternative for implementation if it would not accomplish the basic project objectives. (CEQA Guidelines, § 15126.6(a), (c), (f).)

CEQA Guidelines Section 15126.6(e)(2) states, "[i]f the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

~~For purposes of this EIR,~~ Of Alternatives 1-3, Alternative 3 would reduce adverse environmental impacts compared to the Project to the greatest extent because it would result in fewer facilitated projects compared with the Revised Draft 2045 CAP. Alternative 3 ~~is considered the environmentally superior alternative for CEQA purposes because it~~ would result in similar but lesser impacts than ~~11 resource areas relative to~~ the Project in the following resource areas: ~~(i.e.,~~aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, utilities and service systems, and wildfire~~.) and~~ However, Alternative 3 would result in greater impacts than the Project ~~in two resource areas (i.e.,~~ for energy~~,~~ ~~and~~ GHG emissions, air quality, and utilities and service systems~~)~~. Alternative 3 would facilitate fewer projects that would reduce Countywide energy use compared to the Project, resulting in greater energy consumption than the Project. Alternative 3 would result in greater GHG emissions impacts than the Project because Alternative 3 would not reduce Countywide GHG emissions as much as the Project through 2030 and 2035, producing much greater GHG emissions than the Project. Additionally, implementation of Alternative 3 would result in greater air quality impacts than the Project for operational impacts because Alternative 3 would facilitate fewer projects through 2030 and 2035, resulting in much greater emissions of criteria pollutants and TACs throughout the county for these years, resulting in greater human health risks as compared to the Project. Finally, Alternative 3 would result in greater utilities and service systems because projects facilitated by Alternative 3 would lead to increased use of recycled and gray water systems compared to the Project, increasing the amount of wastewater requiring treatment by wastewater treatment providers, and thus, would require the development of new water recycling and direct potable reuse facilities.

Alternative 3 would have same impacts as the Project with respect to the remaining resources. See Table 4-6 for details.

However, ~~it should be noted that~~ Alternative 3 would likely only delay these impacts as compared to the Project ~~versus~~ rather than lessen~~ing these impacts~~ or eliminate ~~ing~~ these ~~m~~ impacts entirely~~. This is~~ because Alternative 3 has lower GHG emissions reduction targets ~~only~~ for ~~the~~ years 2030 and 2035 compared to the Project~~;~~ (it has the same targets for the year 2045). This means that Alternative 3 would likely facilitate fewer projects through 2030 and 2035 to achieve the lower ~~lesser~~ targets, resulting in reduced adverse environmental impacts for these years. ~~But~~ However,~~-~~Alternative 3 would likely facilitate the same number of projects through 2045, resulting in the same environmental impacts through 2045 compared to the Project. However, Alternative 3 would more likely facilitate a greater number of projects in the 2035 to 2045 period than the Project, worsening environmental impacts during the 2035 to 2045 timeframe compared to the Project. Consequently, Alternative 3 would delay the realization of its environmental ~~potential~~ impacts but would not ~~completely~~ lessen or eliminate ~~or permanently lessen~~ these adverse environmental impacts entirely, and could increase or create certain environmental impacts compared to the Project.

Additionally, ~~It should be noted that~~ Alternative 3 has ~~does have~~ some drawbacks compared to the Project. As discussed previously in the description of Alternative 3 (Section 4.4.4), ~~its ability to~~ it would not meet Project Objectives 1, 2, and 5 ~~would be limited compared to the Project~~. Alternative 3 would not meet Project Objective 1 (identify detailed programs, actions, and performance goals to achieve the climate policies of the General Plan) because implementation would result in an inconsistency with the County's General Plan Policy AQ 3.9 ("Ensure the availability of zero-carbon electricity to serve unincorporated Los Angeles County."). Additionally, the 2030 target of 40 percent below 1990 levels is ~~quite~~ far off the emissions reduction trajectory needed to achieve emissions of 83 percent below 2015 levels by 2045, which ~~may~~ likely means that Alternative 3 does not align with either County or state emissions reduction goals.

Alternative 3 does not align with County or state goals, including AB 1279, which establishes the state policy to achieve net zero GHG emissions as soon as possible but no later than 2045 and to achieve and maintain net negative GHG emissions thereafter. AB 1279 also mandates that by 2045, statewide anthropogenic GHG emissions are to be reduced at least 85 percent below 1990 levels. Implementation of Alternative 3 ~~may~~ would likely exclude several recommended priority local GHG emissions reduction strategies recommended by the 2022 Scoping Plan to ensure alignment with State climate goals.

Alternative 3 would also not meet Project Objective 5 (demonstrate a level of GHG emissions below which the County would have less than cumulatively

considerable GHG impacts for future environmental review projects and provide CEQA streamlining for development projects via the Checklist) because Alternative 3's lower targets would not meet CEQA standards for a level of GHG emissions that would not be cumulatively considerable for future environmental review of projects, given that Alternative 3's targets do not align with state goals and consistency with state goals is the criteria for whether the targets represent a level of GHG emissions that would have a less than cumulatively considerable GHG impact for future environmental review projects. Nevertheless, in balancing both Alternative 3's reduction in adverse environmental impacts and long-term beneficial effects compared to the Project, the County has determined that Alternative 3 is the environmentally superior alternative.

3.2.2 Chapter 1, Introduction

Pag 1-1 Section 1.1 has been revised as follows:

- A new CEQA streamlining ~~development review consistency~~ checklist to allow future projects to streamline GHG emissions analyses pursuant to the California Environmental Quality Act (CEQA)[1] as anticipated by CEQA Guidelines Section 15183.5 by using the Draft 2045 CAP.

3.2.3 Chapter 2, Project Description

Page 2-4 Table 2-1: Policy AQ 3.5 has been revised and modified as follows:

Policy AQ 3.5: ~~Encourage energy conservation in new development and municipal operations.~~ Require the full ~~electrification~~ decarbonization of new development. Encourage the retrofit of existing development to achieve full ~~electrification~~ decarbonization.

Pages 2-5 to 2-6 Table 2-2 has been revised and modified as follows:

Program No.	Program Description	General Plan Goals and Policies	Lead and Partner Agencies	Time Frame
~~AQ-1~~	~~**PACE Financing Program** Pursuant to AB 811, establish a countywide property assessed clean energy (PACE) financing program to provide municipal financing for energy and water efficiency and renewable energy projects on private property.~~	~~Air Quality Element: Policies AQ 3.2, AQ 3.3 Public Services and Facilities Element: Policy 6.5 Economic Development Element: Policy ED 1.2~~	~~Lead: ISD~~	~~Years 1-2~~
~~AQ-2~~	~~**Climate Change Adaptation Program** • Develop strategies to address the impacts of climate change related but not limited to agriculture, public health, ecosystems and natural resources, energy, infrastructure, and emergency management.~~	~~Air Quality Element: Policy AQ 3.8~~	~~Lead: CEO~~	~~Years 1-2~~

[1] This analysis is being prepared in accordance with CEQA (Public Resources Code Section 21000 et seq.) and its implementing regulations, the CEQA Guidelines (California Code of Regulations Title 14, Section 15000 et seq.).

	• Climate change adaptation strategies may be conducted sequentially, starting with the evaluation of threats, vulnerability and risk assessments, identification of mitigation actions, and implementation. • Investigate short and long-term funding mechanisms. • Amend the General Plan accordingly to incorporate proposed climate change adaptation actions.			
AQ-1	**Climate Action Plan Implementation** • Implement the actions identified in the Los Angeles County Climate Action Plan to reduce greenhouse gas emissions.	Air Quality Element: Goal AQ 2, AQ 3	Lead: Chief Executive Office, Department of Public Health, Department of Parks and Recreation, Department of Regional Planning, Fire, Internal Services Department, Public Works	Ongoing
AQ-2	**Alternative Renewable Energy Program** • Coordinate with the LADWP to identify potential alternative energy projects or facility types for the unincorporated areas.	Air Quality Element: Goals AQ2, AQ3	Lead: CSO, DPH, DPR, DRP, Fire, ISD, PW	Ongoing
AQ-3	**Travel Demand Management** • Encourage ride sharing programs and a permanent transportation management association membership • Implement marketing strategies to reduce commute trips. • Encourage market based bike sharing programs that support bicycle use around and between transit stations/hubs.	Air Quality Element: Policy AQ 2.6	Lead: CSO	Ongoing
AQ-4	**Car Sharing Program** • Conduct a feasibility study to identify priority residential and nonresidential areas for implementation. • Explore incentives to encourage employer-based and private car sharing programs.	Air Quality Element: Policies AQ 2.6, 2.7	Lead: CSO	Ongoing
AQ-5 AQ-1	**Efficient Goods Movement** • Coordinate with SCAG to facilitate implementation of a region-wide goods movement strategy. • Support SCAG and LA Metro on the evaluation of truck routes throughout the County to identify and target areas for improvement.	Air Quality Element: Goal AQ 2	Lead: PW Partner: DRP	Ongoing
AQ-6	**Electrify Construction and Landscaping Equipment** • Develop an outreach and education program. • Identify incentives for equipment electrification. • Collaborate with regulatory agencies such as South Coast Air Quality Management District (SCAQMD) to identify potential customers. • Coordinate with SCAQMD to implement an incentive program and/or lawnmower exchange program. • Develop an outreach and education program.	Air Quality Element: Goal AQ1	Lead: PW Partner: DRP, DPR, BH	Ongoing

~~AQ-7~~	~~**Water Supply Improvement Program**~~ ~~• Coordinate with water agencies to identify opportunities to expand groundwater management and begin development of groundwater management plans.~~ ~~• Expand the Low Impact Development (LID) stormwater catchment to more facilities, if feasible.~~ ~~• Identify partnership opportunities with regional entities or opportunities to expand regional programs.~~	~~Air Quality Element: Goal AQ3~~ ~~Safety Element: Goal S5~~	~~Lead: PW~~ ~~Partner: DPR, DRP, ISD~~	~~Ongoing~~
~~AQ-8~~	~~**Create New Vegetated Open Space**~~ ~~• Identify restoration projects.~~ ~~• Consider funding and program options.~~ ~~• Promote community-based restoration programs.~~	~~Air Quality Element: Policy AQ 2.3~~	~~Lead: Fire~~ ~~Partner: DRP, DPR, PW~~	~~Ongoing~~

NOTES:

1. The PACE Financing Program (existing program number AQ-1) is being deleted because the County of Los Angeles's contracts with Renovate America and Renew Financial expired on April 3, 2020. The County stopped approving new assessment contracts through PACE Funding Group on May 13, 2020. The County continues to work with its PACE administrators to manage existing assessment contracts and provide appropriate consumer protection.
2. The Climate Change Adaptation Program (existing program number AQ-2) is being deleted because the Safety Element Update developed adaptation strategies to address climate change impacts and because the OurCounty Sustainability Plan strategically addressed this directive.
3. The Climate Action Plan Implementation Program proposed as a part of the Air Quality Element amendment is being deleted to eliminate redundancies within the General Plan given that the Climate Action Plan is an implementing subcomponent of the General Plan that has been drafted and no further direction is needed to guide its development.
4. The Alternative Renewable Energy Program, Travel Demand Management, Car-Sharing Program, Electrify Construction and Landscaping Equipment, Water Supply Improvement Program, and Create New Vegetated Open Space proposed as a part of the Air Quality Element are being deleted to eliminate redundancies since they are incorporated, in its current or modified form, into the 2045 CAP.

Page 2-9 Section 2.3.2 has been revised as follows:

5. Demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide California Environmental Quality Act (CEQA) streamlining for development projects (serve as a "qualified CAP") via the 2045 Climate Action Plan ~~Consistency Review~~ CEQA Streamlining Checklist (2045 CAP Checklist).

Page 2-12 Section 2.3.3 has been revised as follows:

The Draft 2045 CAP is consistent with the requirements for a qualified GHG emissions reduction plan pursuant to CEQA as identified in Table 2-4 for the years 2030, ~~and~~ 2035, and 2045.

Page 2-13 Section 2.3.3 has been revised as follows:

Appendix F—2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~ Checklist: This appendix includes the ~~consistency review~~ CEQA streamlining checklist for new development that elect to streamline environmental review of GHG impacts using the 2045 CAP's PEIR pursuant to CEQA Guidelines Section 15183.5(b).

Page 2-23 Section 2.6.2.1 Measure ES5 has been revised as follows:

The performance objective for Measure ES5 is to require that all new development choosing to streamline their GHG impacts analysis under CEQA is consistent with the Draft 2045 CAP's goals and GHG emissions reduction targets and to develop reach codes, ordinances, and conditions of approval as needed to achieve this objective. ~~All new development not requiring General Plan amendments shall be consistent with the Draft 2045 CAP.~~=

Page 2-26 Section 2.6.2.5 Measure E1 has been revised as follows:

Measure E1: ~~Transition~~ Decarbonize Existing Buildings ~~to all Electric~~.

The primary performance objectives for Measure E1 are to: (1) ~~electrify~~ decarbonize 25 percent of the existing residential buildings by 2030, 40 percent by 2035, and 80 percent by 2045; (2) ~~electrify~~ decarbonize 15 percent of the existing nonresidential buildings by 2030, 25 percent by 2035, and 60 percent by 2045; and (3) require zero net energy (ZNE)[2] for 50 percent of all major renovations by 2030, 75 percent by 2035, and 100 percent by 2045.

Page 2-26 Section 2.6.2.5 Measure E2 has been revised as follows:

Measure E2: Decarbonize ~~Standardize All Electric~~ New Development.

The performance objectives for Measure E2 are to: (1) require that all applicable new buildings to be zero GHG emissions ~~are all electric~~ (taking into consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face), such that 90 percent of new residential and nonresidential buildings are zero-GHG emission buildings ~~all electric~~ by 2030, 95 percent by 2035, and 100 percent by 2045; and (2) require that all applicable new residential and nonresidential buildings are ZNE, such that 90 percent of new residential and nonresidential are ZNE by in 2030.

Page 2-30 Section 2.6.3 has been revised as follows:

As shown in the table, in 2030, nearly half (46 percent) of the anticipated reductions would be attributed to energy-related measures, including zero-carbon electricity, the sunset strategy for oil and gas operations, ~~electrification~~ decarbonization of the existing building stock, local renewable energy generation, decarbonization of new development, and energy efficiency.

Page 2-30 Table 2-10: Measure E1 has been revised and modified as follows:

E1 ~~Transition~~ Decarbonize Existing Buildings ~~to All-Electric~~

Page 2-30 Table 2-10: Measure E2 has been revised and modified as follows:

[2] *Zero net energy* is defined by the U.S. Department of Energy as follows: "An energy-efficient building where, on a source energy basis, the actual annual delivered energy is less than or equal to the on-site renewable exported energy" (U.S. Department of Energy 2015).

E2 Decarbonize ~~Standardize All-Electric~~ New Development

Page 2-31 to 2-31 Section 2.7 has been revised and modified as follows:

- **Phase 1: Short-Term Actions** (2024–2030)—Short-term actions that are high-priority with large emissions reductions that would lay the foundation for longer term actions. The short-term target of the Draft 2045 CAP is to reduce GHG emissions in the County by 40 percent below 2015 levels by 2030.
- **Phase 2: Medium-Term Actions** (2030~~1~~–2035)—Actions needed to achieve the 2030 or 2035 GHG emissions reduction targets that may need additional time, funding, or new technology to implement. The medium-term target of the Draft 2045 CAP is to reduce GHG emissions in the County by 50 percent below 2015 levels by 2035.
- **Phase 3: Long-Term Actions** (2035~~6~~–2045)—Actions needed to achieve the 2045 GHG emissions reduction target that may need substantial time, funding, or new technology to implement. The long-term target of the Draft 2045 CAP is to reduce GHG emissions in the County by 83 percent below 2015 levels by 2045. The long-term aspirational goal of the Draft 2045 CAP is to achieve carbon neutrality in the County by 2045.

Page 2-32 to 2-33 Table 2-11: Strategy 1—Measure ES4.3 and ES5 have been revised and modified as follows:

Strategy 1: Decarbonize the Energy Supply (cont.)			
ES4.3 Develop a publicly accessible community energy map that identifies opportunities for deploying distributed energy resources and microgrids to improve energy resiliency.	X	~~X~~	~~X~~
ES5 Establish GHG Requirements for New Development: Develop and implement requirements for new projects choosing to streamline their GHG impacts analysis under CEQA to ensure that such new development is consistent with the 2045 CAP goals as well as its milestone targets for 2030, 2035, and 2045. These requirements include applicant completion of a 2045 CAP CEQA streamlining ~~project review consistency~~ checklist for non-CEQA exempt new development requiring discretionary approvals to demonstrate consistency with the 2045 CAP and thereby streamline environmental review of their GHG impacts using the 2045 CAP's PEIR pursuant to CEQA Guidelines Section 15183.5(b). To demonstrate ~~consistency~~ compliance with the 2045 CAP CEQA streamlining requirements, all projects that do not screen out of the 2045 CAP consistency review process must implement either: 1) all feasible applicable checklist measures, or 2) for infeasible checklist measures, alternative project emission reduction measures. The project review checklist will be used ~~in one two ways: 1)~~ for projects consistent with the 2045 CAP, to demonstrate CAP consistency that allows for streamlined project-specific CEQA GHG analysis~~, or 2) for projects required or electing to prepare project-specific CEQA GHG analyses, to demonstrate that all feasible applicable checklist measures or alternative project emission reduction measures have nevertheless have been implemented, either as project features or GHG mitigation measures. Projects that do not implement all feasible applicable checklist measures or alternative project emission reduction measures may have~~	X	X	X

~~significant GHG impacts because they could conflict with an applicable GHG reduction plan per Guidelines Appendix G Section VII. They may also be inconsistent with the General Plan because the Cap is a component of the Air Quality Element~~ . In addition, the County will assess the feasibility of developing a GHG offsets/credit program to create a pathway toward achieving the aspirational 2045 goal of carbon neutrality.			
ES5.2 Implement the 2045 CAP CEQA streamlining ~~consistency review~~ checklist for new development to demonstrate consistency with the 2045 CAP's strategies, measures, and actions for purposes of streamlining environmental review of GHG impacts using the 2045 CAP's PEIR pursuant to CEQA Guidelines Section 15183.5(b).	X		
~~ES5.3 Evaluate a program for reducing GHG emissions for new development that require General Plan amendments~~	~~X~~		
ES5.~~4~~3 Establish an Offsite GHG Reduction Program for new development to use as a GHG reduction or mitigation pathway for 2045 CAP compliance and to fund programs for reducing GHG emissions in the built environment.	X		

Page 2-36 Table 2-11: Strategy 5—Measure E1 & E2 has been revised and modified as follows:

Strategy 5: Decarbonize Buildings			
E1 (Core) ~~Transition~~ Decarbonize Existing Buildings ~~to all electric~~: As the carbon intensity of grid-supplied ~~energy~~ electricity decreases, decarbonization must be combined with building decarbonization ~~electrification~~, shifting the energy ~~more~~ load from fossil fuels to carbon-free energy sources while taking into consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face. This measure aims to decarbonize ~~electrify~~ applicable existing buildings. A primary alternative to fossil natural fuel is renewable electricity supplied by CPA. Biomethane is another ~~preferred~~ alternative to fossil natural gas; however, the existing opportunities for widespread use of biomethane are limited. Consider the use of other zero-GHG-emission fuel sources for buildings will also be considered.	X	X	X
E1.1 Adopt Building Performance Standards for existing buildings and reach code requirements for major retrofits and renovations that require zero-GHG emission appliances ~~electric water and space heating~~. ~~Require buildings to retrofit natural gas water and space heating to electric water and space heating at the point of sale.~~	X	X	
E1.2 Increase alternatives to fossil natural gas uses, such as for cooking, in existing buildings. Establish carbon and GHG intensity limits for existing nonresidential and residential buildings over a certain size.	X	X	
E2 ~~Standardize All Electric~~ Decarbonize New Development: This measure aims to ~~electrify~~ decarbonize all applicable new buildings, while taking into consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face.	X		

E2.1 Adopt an ordinance requiring all applicable new buildings to be zero-GHG emission ~~fully electric with no natural gas hookups~~. Include affordable housing considerations in these requirements, and develop supporting measures (financial support, technical assistance, or other incentives) to defray potential additional first costs in order to maintain housing affordability. Require all new development to be electric-ready.	X		

Page 2-37 Table 2-11: Strategy 6 – Action 4.1 has been revised and modified as follows:

Action E4.1 – Adopt Building Performance Standards for energy efficiency in existing buildings. ~~Require buildings to perform energy efficiency retrofits at the point of sale.~~ Expand and enhance the energy efficiency programs offered by the Southern California Regional Energy Network (SoCalREN). Include affordable housing considerations in these requirements, and develop additional renter protections and supporting measures (financial support, technical assistance, or other incentives) to limit the amount of first costs being passed on to low-income renters.

Page 2-38 Table 2-11: Strategy 8—Measure W1.2 and W2.3 has been revised and modified as follows:

W1.2 Implement, enforce, and expand to the maximum extent feasible the single-use plastics ~~ordinance~~ and expanded polystyrene ordinance ~~ban~~.			
W2.2 Develop organic waste collection, management, and diversion programs for constituents in unincorporated communities and all County operations; establish a contamination monitoring plan for organic waste programs.	X	~~X~~	
W2.3 Collaborate with the Los Angeles County Sanitation Districts and other waste and wastewater service providers to utilize unused anaerobic digestion capacity of existing wastewater treatment plants and solid waste facilities to generate vehicle fuel and other beneficial uses (electricity and/or biomethane) from newly diverted organic waste. Develop a strategy for using bioenergy created from recycled organic waste.	X	X	~~X~~

Page 2-40 Section 2.7.1 has been revised and modified as follows:

2.7.1 2045 Climate Action Plan CEQA Streamlining ~~Consistency~~ Checklist

As discussed in Section 2.3.3, *Qualified Greenhouse Gas Emissions Reduction Plan*, projects in the County can demonstrate consistency with the Draft 2045 CAP (as a qualified GHG emissions reduction plan) if they are consistent with the 2045 CAP's future growth projections and with the CEQA streamlining requirements identified in the 2045 CAP Checklist ~~its GHG emission reduction measures~~.

The County has developed the 2045 CAP Checklist to assist with determining the consistency of projects with the Draft 2045 CAP for purposes of CEQA streamlining. The 2045 CAP Checklist provides individual projects the opportunity to demonstrate that they are reducing GHG emissions; it also ensures that future projects would achieve their proportion of emissions reductions consistent with the assumptions of the Draft 2045 CAP. A project would demonstrate consistency with the Draft 2045 CAP by complying with the CEQA streamlining requirements ~~incorporating the GHG emission reduction measures~~ included in the ~~Draft~~ 2045 CAP Checklist ~~that apply to new projects~~.

- If a project would be consistent with the General Plan growth projections ~~and Housing Element~~ *and* complies with all CEQA streamlining requirements ~~could demonstrate consistency with the Draft 2045 CAP~~ by completing the 2045 CAP Checklist, then the project would be considered consistent with the Draft 2045 CAP and would be eligible for CEQA streamlining of its project-level GHG analysis.

Page 2-41 Section 2.7.1 has been revised and modified as follows:

- If a project would be inconsistent with the General Plan growth projections ~~Housing Element~~ and require a General Plan amendment, then it would not be able to use this the 2045 CAP Checklist for CEQA streamlining. Such a project would have to undergo its own project-level analysis of GHG impacts pursuant to CEQA.

- If a project could not comply with all CEQA streamlining requirements ~~demonstrate consistency with the Draft 2045 CAP~~ by completing the 2045 CAP Checklist, by implementing equivalent replacement strategies, or by implementing a qualified off-site GHG emission reduction project, as provided for in the 2045 CAP Checklist, then a project-specific GHG analysis would be required. In this case, it is encouraged that the project incorporate all the CEQA streamlining requirements in the 2045 CAP Checklist, though this is not required ~~implementation of applicable CAP Checklist items that are feasible would still be required~~.

Consistency with General Plan Growth Projections ~~Land Use Assumptions~~. Projects consistent with the demographic forecasts and land use projection assumptions used in the Draft 2045 CAP can use the 2045 CAP Checklist to demonstrate compliance with the CEQA streamlining requirements ~~consistency with the 2045 CAP~~. If consistent, these projects could rely on the programmatic environmental review contained in the certified PEIR for the 2045 CAP.

If a project would not be consistent with the General Plan's growth projections ~~land use designations~~, then it would not be eligible for CEQA streamlining by using the 2045 CAP Checklist. Projects inconsistent with the General Plan's growth projections ~~land use designations~~ would prepare a project-specific analysis of GHG emissions. Such an analysis would quantify existing and projected GHG emissions for the project and is encouraged to incorporate applicable items from the 2045 CAP Checklist ~~to the maximum extent feasible~~ (though this is not required), along with any identified project-specific mitigation measures.

Offsite GHG Emission Reduction Projects. As part of the 2045 CAP Checklist, the County will develop an offsite GHG emissions reduction program. Future development projects that cannot achieve net-zero GHG emissions or are unable to comply with all CEQA streamlining requirements in the ~~required~~ 2045 CAP Checklist ~~items,~~ would have the option to participate in the offsite GHG emissions reduction program.

3.2.4 Chapter 3, Environmental Analysis

3.2.4.1 Section 3.1 Introduction to Environmental Analysis

No text changes have been made to Section 3.1, *Introduction to Environmental Analysis*.

3.2.4.2 Section 3.2 Aesthetics

Page 3.2-8 Section 3.2.2.3 has been revised as follows:

These and other relevant measures and actions include Action T3.3 (which would facilitate the use of shading [shadow] and shade structures); measures and actions associated with Strategy 1, Decarbonize the Energy Supply; Measure ES2, Procure Zero-Carbon Electricity; Measure ES3, Increase Renewable Energy Production; Measures T6, T7, T8, and T9, each regarding the ~~electrification~~ decarbonization of vehicles; and Strategy 5, regarding the ~~electrification~~ decarbonization of buildings. These measures and actions could facilitate renewable energy generation and infrastructure projects, the development of which could affect aesthetics.

Page 3.2-9 Section 3.2.2.3 has been revised as follows:

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~ Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), the County will develop an offsite GHG emissions reduction program.

Page 3.2-12 Impact 3.2-2 has been revised as follows:

Draft 2045 CAP strategies such as Strategy 5, Strategy 6, and Strategy 7 would include measures that would require retrofits to existing buildings to electrify appliances, increase energy efficiency, and reduce water consumption. For example, Measure E1 would ~~Transition~~ Decarbonize Existing Buildings ~~to all electric~~ and Measure E4 would improve the energy efficiency of existing buildings.

3.2.4.3 Section 3.3 Agricultural and Forestry Resources

Page 3.3-12 Section 3.3.2.3 has been revised as follows:

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~

Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), the County will be developing an offsite GHG emissions reduction program.

3.2.4.4 Section 3.4 Air Quality

Page 3.4-35 Section 3.4.2.3 has been revised as follows:

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~ Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), the County will be developing an offsite GHG emissions reduction program.

Page 3.4-36 Impact 3.4-1 has been revised as follows:

The Draft 2045 CAP would be implemented through future projects facilitated by the proposed Draft 2045 CAP measures and actions, as well as through the application of the Draft 2045 CAP CEQA Streamlining ~~Consistency~~ Checklist (**Appendix F**) to allow for streamlining of GHG impacts under CEQA. Additional analysis would be needed to determine the impacts of implementation of these measures at specific locations, and future projects would be analyzed at the project level and would be subject to CEQA.

For future projects seeking to use the Draft 2045 CAP CEQA Streamlining ~~Consistency~~ Checklist for CEQA GHG streamlining, the County would determine whether the future project would be consistent with the Draft 2045 CAP. As described above, projects implementing Draft 2045 CAP measures and actions that are deemed consistent with local land use plans would also be consistent with the AQMP, and this applies to each horizon year.

Page 3.4-43 Impact 3.4-1 has been revised as follows:

The Draft 2045 CAP would be implemented through future projects facilitated by the proposed Draft 2045 CAP measures and actions, as well as through the application of the Draft 2045 CAP CEQA Streamlining ~~Consistency~~ Checklist (Appendix F) to allow for streamlining of GHG impacts under CEQA.

Page 3.4-44 Impact 3.4-1 has been revised as follows:

For future projects seeking to use the Draft 2045 CAP CEQA Streamlining ~~Consistency~~ Checklist for CEQA GHG streamlining, the County would determine whether the future project would be consistent with the Draft 2045 CAP.

Page 3.4-56 Impact 3.4-2 has been revised as follows:

However, Draft 2045 CAP measures and actions may facilitate new facilities and projects such as decarbonize existing buildings and new development ~~electrification~~ (Measures E1 and E2), new renewable energy facilities (Measure ES3), energy storage facilities (Measure ES4), building retrofits for energy efficiency (Measure E4), new or expanded recycled water facilities (Measure

E5), new electric vehicle charging station infrastructure (Measure T6), new or expanded waste processing facilities (Measures W1 and W2), and demolition of impervious surfaces and planting trees (Measure A3).

Page 3.4-58 Impact 3.4-2 has been revised as follows:

Operational emissions from projects facilitated by the Draft 2045 CAP measures and actions in the unincorporated areas of the County would be further reduced as electric vehicles (Measures T6, T7, and T8), renewable energy use (Measures ES2 and ES3), decarbonize existing buildings and new development ~~electrification~~ (Measures E1 and E2), and other decarbonization actions (Measure E3) become more widespread.

Page 3.4-65 Impact 3.4-3a has been revised as follows:

Operational emissions from projects facilitated by the Draft 2045 CAP measures and actions in the unincorporated areas of the County would be further reduced as renewable energy use (Measures ES2 and ES3), decarbonize existing buildings and new development ~~electrification~~ (Measures E1 and E2), and other decarbonization actions (Measure E3) are implemented.

Page 3.4-67 Impact 3.4-3a has been revised as follows:

However, implementation of the Draft 2045 the CAP would substantially reduce fossil fuel use and associated TAC emissions from operational activities as a result of renewable energy use (Measures ES2 and ES3), decarbonize existing buildings and new development ~~electrification~~ (Measures E1 and E2), and other decarbonization actions (Measure E3) are implemented, with greater reduction in fossil fuel use across horizon years 2030, 2035, and 2045.

Page 3.4-77 Impact 3.4-7 has been revised as follows:

Implementation of the Draft 2045 CAP would substantially reduce fossil fuel use and regional emissions from operational activities as a result of decarbonize existing buildings and new development ~~electrification~~ (Measures E1 and E2) and other decarbonization actions (Measure E3) are implemented.

3.2.4.5 Section 3.5 Biological Resources

Page 3.5-16 to 3.5-17 Section 3.5.2.3 has been revised as follows:

Renewable energy and related infrastructure projects facilitated by Draft 2045 CAP measures and actions toward decarbonization of the energy supply (e.g., Measure ES2: Procure Zero-Carbon Electricity, Measure ES3: Increase Renewable Energy Production, and Measure ES4: Increase Energy Resilience), the electrification of vehicles (e.g., Measure T6: Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales, Measure T7: Electrify County Fleet Vehicles, Measure T8: Accelerate Freight Decarbonization, and Measure T9: Expand Use of Zero-Emission Technologies for Off-Road Vehicles and Equipment) and ~~the electrification of~~ decarbonize existing buildings (Strategy 5, Decarbonize Buildings) are particularly relevant to the analysis of impacts to

biological resources because related development could affect special-status species and habitats, sensitive natural communities, state or federally protected wetlands, interference with species movement or impediment of the use of native wildlife nursery sites, or the conversion of oak woodlands or other unique native woodlands.

Page 3.5-17 Section 3.5.2.3 has been revised as follows:

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~ Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), the County will be developing an offsite GHG emissions reduction program.

Page 3.5-29 Section 3.5.2.4 has been revised as follows:

The Draft 2045 CAP would contribute a significant incremental contribution to this significant cumulative impact that could be mitigated to a level that would be less than cumulatively considerable (i.e., less than significant) by the implementation of Mitigation Measures 3.5-1 and 3.5-3 ~~3.5-4~~.

3.2.4.6 Section 3.6 Cultural Resources

Page 3.6-22 Section 3.6.2.3 has been revised as follows:

These and other relevant measures and actions include the renewable energy and related infrastructure projects that would be facilitated by Draft 2045 CAP measures and actions toward the following categories of strategies: (1) Decarbonization of the energy supply (e.g., Measure ES2, Procure Zero-Carbon Electricity; Measure ES3, Increase Renewable Energy Production; and Measure ES4, Increase Energy Resilience); (2) The electrification of vehicles (e.g., Measure T6, Increase Zero-Emission Vehicle Market Share; Measure T7, Electrify County Fleet Vehicles; Measure T8, Accelerate Freight Decarbonization; and Measure T9, Expand Use of Zero-Emission Technologies for Off-Road Vehicles and Equipment); and (3) ~~The electrification of~~ decarbonize existing buildings (Strategy 5, Decarbonize Buildings).

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~ Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), the County will develop an offsite GHG emissions reduction program.

3.2.4.7 Section 3.7 Energy

Page 3.7-10 Section 3.7.2.3 has been revised as follows:

– (8) Measure E1 and associated Actions E1.1, E1.2, E1.3, E1.4 (which would result in the ~~electrification~~ decarbonization of applicable existing buildings and achieve zero net energy for certain buildings, while taking into

consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face);

– (9) Measure E2 and associated Actions E2.1 and E2.2 (which would require ~~all-electric and~~ zero net GHG emissions ~~energy~~ for all applicable new buildings, while taking into consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face);

Page 3.7-11 Section 3.7.2.3 has been revised as follows:

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~ Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), the County will develop an offsite GHG emissions reduction program.

Page 3.7-12 to 3.7-13 Impact 3.7-1 has been revised as follows:

Further the Draft 2045 CAP would promote adoption of renewable energy production in both new and existing residential and commercial development (Measure ES3), which would decrease grid energy demand and advance the County toward its ~~electrification~~ decarbonization and zero net energy targets (Measures ES2, E1, and E2), all of which would support the state's energy efficiency and renewable energy goals.

Implementation of CAP Measure E1 and associated Actions E1.1, E1.2, E1.3, and E1.4 would result in the ~~electrification~~ decarbonization of applicable existing buildings and achieve zero net energy for certain new buildings. This aligns with building ~~electrification~~ decarbonization as a major focal point of state agencies and electric utilities in reaching the state's renewable energy and GHG reduction goals. According to SCE, approximately one-third of space and water heating in all buildings within SCE's service territory must be electric by 2030 and three-quarters must be electric by 2045 to meet state goals (SCE 2019). Pursuant to SB 1477, the combined CPUC–approved and proposed funding for building ~~electrification~~ decarbonization projects and developments is approximately $435 million through 2024 (CPUC 2020). One of the CPA's three major program measure categories to build and strengthen future local programs is ~~electrification~~ decarbonization, which includes public charging of electric vehicles, building ~~electrification~~ decarbonization code incentives, all-electric post-fire rebuilding, and natural gas appliance replacement (CPA 2020). Therefore, the Draft 2045 CAP would facilitate building ~~electrification~~ decarbonization to support these state goals.

~~electrification~~ Decarbonization may put additional strain on the electricity grid as the demand for electricity increases, including in rural communities and other parts of the County that are already facing grid capacity problems such as blackouts and brownouts. Although the maintenance and improvement of the electricity grid is outside of the jurisdiction of the County, state agencies and electric utilities are working to strengthen and enhance the electricity grid to

increase the supply of renewable electricity along with grid reliability and resilience.

To achieve growth and reliability in the electricity grid, SCE is planning grid investments of up to $75 billion. These investments will be used for multiple purposes: (1) integrate bulk renewable generation and storage and serve the load growth associated with transportation and building ~~electrification~~ decarbonization; (2) provide transmission upgrades for generation interconnections within the state; (3) increase utility-scale storage to balance load and resources and to minimize transmission and distribution upgrades; (4) provide grid upgrades to meet increased demand and peak loads; and (5) modernize the grid to harness the full potential of Distributed Energy Resources (DERs) (SCE 2019). The CPA plans for $200 million in local investment in customer programs and community priorities centered around resiliency and grid management, building and transportation ~~electrification~~ decarbonization, and local renewable energy procurement (CPA 2020).

Page 3.7-14 Impact 3.7-1 has been revised as follows:

In summary, the Draft 2045 CAP's measures and actions regarding building and vehicle ~~electrification~~ decarbonization were developed with the understanding that state agencies and utilities have implementation strategies in place to increase the capacity of the grid and improve its reliability as electricity demand throughout the County increases. Therefore, the Draft 2045 CAP would not result in the inefficient consumption of energy resources related to ~~electrification~~ decarbonization and grid capacity.

The Draft 2045 CAP would also include strategies, with corresponding implementation measures and actions, that would reduce vehicle miles traveled, emissions, and transportation fuel consumption. The CAP includes transportation strategies, measures and actions that would reduce fuel consumption such as: locating development within High Quality Transit Areas; emphasizing non-motorized travel through the County's Pedestrian Action Plan, Bicycle Master Plan, Active Transportation Plans, and Vision Zero Action Plan; expanding the electric vehicle charging infrastructure; and partnering with transit agencies to electrify the County bus and shuttle fleets. For example, the Draft 2045 CAP aims to electrify 100 percent of the County bus fleet by 2035 (Measure T7), in line with Metro's goal of electrification for its fleet.

3.2.4.8 Section 3.8 Geology and Soils

Page 3.8-15 Section 3.8.2.3 has been revised as follows:

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~ Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), the County will develop an offsite GHG emissions reduction program.

3.2.4.9 Section 3.9 Greenhouse Gas Emissions

Page 3.9-36 Section 3.9.2.3 is revised as follows:

Measure E1: ~~Transition~~ Decarbonize Existing Buildings ~~to all Electric~~.

This measure aims to ~~electrify~~ decarbonize applicable existing buildings, while taking into consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face.

Measure E2: Decarbonize ~~Standardize All Electric~~ New Development. This measure aims to ~~electrify~~ decarbonize all applicable new buildings, while taking into consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face.

Page 3.9-37 Section 3.9.2.3 has been revised as follows:

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~ Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), the County will develop an off-site GHG emissions reduction program.

Page 3.9-45 Impact 3.9-2 has been revised as follows:

Further, the County has developed the Draft 2045 CAP CEQA Streamlining ~~Consistency~~ Checklist to assist with determining project consistency with the Draft 2045 CAP for purposes of CEQA streamlining. The Draft 2045 CAP CEQA Streamlining ~~Consistency~~ Checklist provides individual projects the opportunity to demonstrate that they are reducing GHG emissions; it also helps ensure that projects facilitated by the Draft 2045 CAP would achieve their proportion of emissions reductions consistent with the assumptions of the Draft 2045 CAP.

3.2.4.10 Section 3.10 Hazards and Hazardous Materials

Page 3.10-19 Section 3.10.2.3 is revised as follows:

Renewable energy generation and infrastructure projects could also be facilitated by measures and actions associated with Strategy 1, Decarbonize the Energy Supply; Measure ES2, Procure Zero-Carbon Electricity; Measure ES3, Increase Renewable Energy Production; Measures T7, T8, and T9, regarding the electrification of vehicles; and Strategy 5, regarding the ~~electrification~~ decarbonization of buildings.

Page 3.10-20 Section 3.10.2.3 is revised as follows:

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~

Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), the County will develop an offsite GHG emissions reduction program.

3.2.4.11 Section 3.11 Hydrology and Water Quality

Page 3.11-23 Section 3.11.2.3 has been revised as follows:

These and other relevant measures and actions include: Action T6.7,which could facilitate increased use of green hydrogen vehicles throughout the County (hydrogen fuel generation is a water-intensive process [see, for example, Beswick et al. 2021]); and the renewable energy and related infrastructure projects facilitated by Draft 2045 CAP measures and actions toward (a) decarbonization of the energy supply (e.g., Measure ES2, Procure Zero-Carbon Electricity; Measure ES3, Increase Renewable Energy Production; and Measure ES4, Increase Energy Resilience); (b) the electrification of vehicles (e.g., Measure T6, Increase ZEV Market Share; Measure T7, Electrify County Fleet Vehicles; Measure T8, Accelerate Freight Decarbonization; and Measure T9, Expand Use of Zero-Emission Technologies for Off-Road Vehicles and Equipment); and (c) ~~the electrification of~~ decarbonization buildings (Strategy 5, Decarbonize Buildings).

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~ Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), the County will develop an offsite GHG emissions reduction program.

Page 3.11-26 Impact 3.11-2 has been revised as follows:

Water demand could be affected by projects facilitated by Draft 2045 CAP measures and actions toward (a) decarbonization of the energy supply (e.g., Measure ES2, Procure Zero-Carbon Electricity; Measure ES3, Increase Renewable Energy Production; and Measure ES4, Increase Energy Resilience); (b) the electrification of vehicles (e.g., Measure T6, Increase ZEV Market Share; Measure T7, Electrify County Fleet Vehicles; Measure T8, Accelerate Freight Decarbonization; and Measure T9, Expand Use of Zero-Emission Technologies for Off-Road Vehicles and Equipment); and (c) ~~the electrification of~~ decarbonization of buildings (Strategy 5, Decarbonize Buildings)—for example, for periodic solar PV panel washing.

Page 3.11-27 Impact 3.11-2 has been revised as follows:

Some projects facilitated by Draft 2045 CAP measures and actions (including those facilitated by Measure E1, ~~Transition~~ Decarbonize Existing Buildings ~~to all Electric~~, and Measure E4, Improve Energy Efficiency of Existing Buildings) would be limited to redevelopments and reuses of currently developed areas, and so would result in relatively minor increases in impervious areas.

3.2.4.12 Section 3.12 Land Use and Planning

Page 3.12-16 Section 3.12.2.3 is revised as follows:

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~ Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), the County will develop an offsite GHG emissions reduction program.

Page 3.12-19 Impact 3.12-1 is revised as follows:

These relevant measures and actions include Measure ES2, Standardize All-Electric New Development; Measure T7, Electrify County Fleet Vehicles; and Measure E1, ~~Transition~~ Decarbonize Existing Buildings ~~to all Electric~~.

One potential outcome of the ~~electrification~~ decarbonization of residential buildings, as encouraged by Measure E1 under Strategy 5, could be the increased use of candles, generators, grills, hibachis, barbeques, fireplaces, charcoal lighters, and chimneys in rural areas subject to power outages.

Page 3.12-20 to 3.12-29 Table 3.12-2 all mentions of Policy AQ3.5 have been revised as follows:

Policy AQ 3.5: ~~Encourage energy conservation in new development and municipal operations.~~ Require the full ~~electrification~~ decarbonization of new development. Encourage the retrofit of existing development to achieve full ~~electrification~~ decarbonization.

Page 3.12-21 Table 3.12-2 Measure ES5 has been revised as follows:

All new development choosing to streamline their GHG impacts analysis under CEQA is consistent with the Draft 2045 CAP's goals and GHG emissions reduction targets and to develop reach codes, ordinances, and conditions of approval as needed to achieve this objective. ~~All new development not requiring General Plan amendments shall be consistent with the Draft 2045 CAP.~~=

Page 3.12-27 Table 3.12-2 Measure E1 has been revised as follows:

Measure E1: ~~Transition~~ Decarbonize Existing Buildings ~~to all Electric~~.

Page 3.12-28 Table 3.12-2 Measure E2 has been revised as follows:

Measure E2: Decarbonize ~~Standardize All Electric~~ New Development.

3.2.4.13 Section 3.13 Noise

Page 3.13-16 Section 3.13.2.3 is revised as follows:

Further, measures and actions associated with Strategy 1, *Decarbonize the Energy Supply*; Measure ES2, *Procure Zero-Carbon Electricity*; Measure ES3,

Increase Renewable Energy Production; Strategy 4, *Institutionalize Low-Carbon Transportation;* Measure T6, *Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales*, Measure T8, *Accelerate Freight Decarbonization*, and Measure T9, *Expand Use of Zero-Emission Technologies for Off-Road Vehicles and Equipment*, each regarding the electrification of vehicles; and Strategy 5, *Decarbonize Buildings*, regarding the ~~electrification~~ decarbonization of buildings, could facilitate renewable energy generation and infrastructure projects, the development of which could cause noise.

Page 3.13-17 Section 3.13.2.3 is revised as follows:

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~ Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), the County will develop an offsite GHG emissions reduction program.

Page 3.13-18 Impact 3.13-1 is revised as follows:

Measures that would result in construction activities that would require heavy equipment and cause an increase in temporary noise levels in the vicinity of future project sites include expansion of bicycle and pedestrian networks, building ~~electrification~~ decarbonization for existing buildings, new renewable energy facilities, expansion of energy storage, building retrofits for energy efficiency, new or expanded water treatment facilities, new or expanded waste processing facilities, and demolition of impervious surfaces and planting trees.

Page 3.13-21 Impact 3.13-2 is revised as follows:

Measures that would result in construction activities that would require heavy equipment and generate groundborne vibration and groundborne noise include expansion of bicycle and pedestrian networks, building ~~electrification~~ decarbonization for existing buildings, new renewable energy facilities, expansion of energy storage, building retrofits for energy efficiency, new or expanded water treatment facilities, new or expanded waste processing facilities, and demolition of impervious surfaces and planting trees.

3.2.4.14 Section 3.14 Population and Housing

Page 3.14-7 Section 3.14.2.3 is revised as follows:

Decarbonization of energy section measures in the Draft 2045 CAP include: Measure ES2: Procure Zero-Carbon Electricity; Measure ES3: Increase Renewable Energy Production; and Measure ES4: Increase Energy Resilience. Measures that could facilitate the electrification of vehicles include: Measure T6: Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales; Measure T7: Electrify County Fleet Vehicles; Measure T8: Accelerate Freight Decarbonization; and Measure T9: Expand Use of Zero-Emission Technologies for Off-Road Vehicles & Equipment. In addition, Strategy 5, Decarbonize Buildings, could facilitate the ~~electrification~~ decarbonization of buildings.

Page 3.14-8 Section 3.14.2.3 is revised as follows:

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~ Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), the County will develop an offsite GHG emissions reduction program.

3.2.4.15 Section 3.15 Transportation

Page 3.15-20 Section 3.15.2.3 is revised as follows:

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~ Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), the County will develop an offsite GHG emissions reduction program.

3.2.4.16 Section 3.16 Tribal Cultural Resources

Page 3.16-8 Section 3.16.2.3 is revised as follows:

These and other relevant measures and actions include the renewable energy and related infrastructure projects that would be facilitated by Draft 2045 CAP measures and actions toward the following categories of strategies: (1) Decarbonization of the energy supply (e.g., Measure ES2, Procure Zero-Carbon Electricity; Measure ES3, Increase Renewable Energy Production; and Measure ES4, Increase Energy Resilience); (2) The electrification of vehicles (e.g., Measure T6, Increase Zero-Emission Vehicle Market Share; Measure T7, Electrify County Fleet Vehicles; Measure T8, Accelerate Freight Decarbonization; and Measure T9, Expand Use of Zero-Emission Technologies for Off-Road Vehicles and Equipment); and (3) The ~~electrification~~ decarbonization of buildings (Strategy 5, Decarbonize Buildings).

Page 3.16-9 Section 3.16.2.3 is revised as follows:

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~ Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), the County will develop an offsite GHG emissions reduction program.

3.2.4.17 Section 3.17 Utilities and Service Systems

Page 3.17-13 Section 3.17.2.3 is revised as follows:

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~ Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), LA County will develop an offsite GHG emissions reduction program.

3.2.4.18 Section 3.18 Wildfire

Page 3.18-16 Section 3.18.2.3 is revised as follows:

These and other relevant measures and actions include: Measure ES2, Procure Zero-Electricity; Measure ES3, Increase Renewable Energy Production; Measure T1, Increase Density Near High-Quality Transit Areas; Measure T2, Develop Land Use Plans Addressing Jobs-Housing Balance and Increase Mixed Use; Measure T3, Expand Bicycle and Pedestrian Network to Serve Residential, Employment, and Recreational Trips; Measure T4, Broaden Options for Transit, Active Transportation, and Alternative Modes of Transportation; Measure T6, Increase Zero-Emissions Vehicle Market Share and Reduce Gasoline and Diesel Fuel Sales; Measure T7, Electrify County Fleet Vehicles; Measure T9, Expand Use of Zero-Emission Technologies for Off-Road Vehicles and Equipment; Measure E1, ~~Transition~~ Decarbonize Existing Buildings ~~to all Electric~~; and Measure A1, Conserve Forests, Woodlands, Shrublands, Grasslands, Desert, and other Carbon-Sequestering Wildlands and Working Lands.

Page 3.18-17 Section 3.18.2.3 is revised as follows:

CEQA Guidelines Section 15183.5 allows future development projects to streamline their GHG analysis by showing consistency with a qualified CAP. As part of the 2045 Climate Action Plan CEQA Streamlining ~~Consistency Review~~ Checklist provided with the Draft 2045 CAP (Appendix F to the 2045 CAP), the County will develop an offsite GHG emissions reduction program.

Page 3.18-19 Impact 3.18-2 is revised as follows:

One potential outcome of residential building ~~electrification~~ decarbonization, as encouraged by Measure E1 under Strategy 5, could be the increased use of candles, generators, grills, hibachis, barbeques, fireplaces, charcoal lighters, and chimneys in areas subject to frequent power outages.

Page 3.18-20 Impact 3.18-2 is revised as follows:

Additionally, Measure E1 calls for ~~Transition~~ Decarbonization of existing buildings ~~to all Electric energy~~ while taking into consideration the varying climate, geography, infrastructure, and sole-source dependency challenges that rural communities and unique industries may face.

3.2.5 Chapter 4, Alternatives

Page 4.9 Section 4.3.6 is revised and modified as follows:

At the time of RDEIR preparation, the County was conducting an amortization study to determine the fastest possible phase-out timeline for all existing oil wells and production facilities. This study will consider the legal, environmental, political, and cost considerations of the phase-out. The amortization study will guide the strategy to phase out oil and gas extractions and facilities. Without having the results of the amortization study in hand, it is not possible to know

when the earliest complete phase-out could occur, or even whether it is feasible to achieve complete phaseout by 2045. ~~Achieving a complete phase-out by 2045 would be a daunting challenge.~~

The Complete Phase-Out of Oil and Gas Operations by 2030 Alternative was not carried forward for more detailed review for several reasons. First, this alternative would not clearly avoid or substantially lessen any of the potential significant impacts of the Project. It is possible that this alternative could worsen or increase the Project's potential significant impacts, such as short-term localized construction-related air quality and health risk impacts from decommissioning of oil and gas wells and remediation activities at contaminated sites.

Page 4-11 Section 4.4.1 is revised and modified as follows:

~~CEQA Guidelines Section 15126.6(e) requires an EIR to evaluate the impacts of a no project alternative to enable a comparison of the potential environmental consequences that would result with and without the proposed project. In this case,~~ An EIR's discussion of alternatives to the proposed project must include a "no project alternative" to allow a comparison of the environmental impacts of approving the proposed project with the effects of not approving it. (CEQA Guidelines, § 15126.6(e)(1).) ~~t~~ The No Project Alternative examines a scenario in which the County would not approve the 2045 CAP for implementation in the unincorporated areas. Under such a scenario, none of the GHG emissions reduction strategies, measures, or actions outlined in the 2045 CAP would be implemented ~~and none of the benefits and co-benefits identified would be realized~~.

Page 4-12 to 4-13 Section 4.4.1 is revised and modified as follows:

CEQA Guidelines Section 15126.6(e) requires an EIR to evaluate the impacts of a no project alternative to enable a comparison of the potential environmental consequences that would result with and without the proposed project. In this case, the No Project Alternative ~~examines a scenario in which the County~~ would not implement the Project's GHG emission ~~approve the 2045 CAP for implementation in the unincorporated areas. Under such a scenario, none of the emissions~~ reduction strategies, measures, or actions, which would facilitate fewer projects compared with implementation of the Revised Draft ~~outlined in the~~ 2045 CAP. Because the No Project Alternative would facilitate fewer projects, the No Project Alternative would result in fewer adverse physical environmental impacts on the project area and its surrounding environment in comparison to the impacts associated with implementation of the Revised Draft 2045 CAP strategies, measures, and actions. However, in the long-term, the No Project Alternative would result in fewer environmental ~~would be implemented and none of the~~ benefits and co-benefits to the County overall because air pollutant and GHG emissions would be much higher than emissions levels associated with all other alternatives and the Project ~~.~~ The No Project Alternative would result in greater human health risks associated with exposure to toxic air contaminants than all other alternatives and the Project,

because all other alternatives and the Project would substantially reduce toxic air contaminant (TAC) emissions in the County. The No Project Alternative would neither realize the long-term GHG emission reduction benefits associated with implementation of the Revised Draft 2045 CAP (and all the co-benefits that would also occur, such as reduced criteria pollutant and TAC emissions), nor provide a clear pathway for the County to meet and exceed the statewide 2030 GHG reduction goal identified in SB 32 or meet and exceed the 2045 direct emission reduction target and carbon neutrality goal established by AB 1279.

Further, the GHG emissions reduction strategies included in the Air Quality Element of the General Plan—known as the *Unincorporated Los Angeles County Community Climate Action Plan 2020*—expired in 2020. Accordingly, the County would not continue to implement those strategies, which addressed emissions from land use, transportation, building energy, water consumption, and waste generation. The No Project Alternative would not further many County goals and policies. Specifically, the No Project Alternative would not achieve or support the County Board of Supervisors' motions pertaining to supporting the Paris Agreement, equitable energy grid resiliency, zero-emissions medium- and heavy-duty vehicles, climate resilient communities, and equitable decarbonization of buildings.

The No Project Alternative would also include continued implementation of other plans and programs that would have the result of reducing GHG emissions to the extent that such plans and programs were adopted before January 3, 2022, when the Notice of Preparation was published. The No Project Alternative is essentially captured in the 2045 CAP's Adjusted business-as-usual forecast, which accounts for future growth under business-as-usual conditions[3] but adjusts for federal, state, and County legislation and regulations that were implemented before development of the Draft 2045 CAP.[4] Further, efforts to reduce GHG emissions would continue outside the study area—for example, in incorporated areas of Los Angeles County, in adjacent jurisdictions, and in other locations outside the County where land use and related activities are governed by regional, state, or federal agencies, such as the Southern California Association of Governments, California Air Resources Board, U.S. Forest Service, and National Park Service. This alternative would not provide a clear pathway for the County to meet and exceed the statewide 2030 GHG emissions reduction goal identified in Senate Bill (SB) 32 or to meet the 2045 carbon neutrality goal established by Assembly Bill (AB) 1279.

3 The "business-as-usual" forecast assumes no action is taken to reduce GHG emissions in the County. 2018 emissions are projected forward using growth indicators such as population, housing, and employment.

4 These adjustments include implementation of the California Energy Commission's 2019 and 2023 Title 24 building energy efficiency requirements, the Renewable Portfolio Standards (SB 350), the California Department of Resources Recycling and Recovery 75 percent waste diversion initiative (AB 341), the Pavley and Advanced Clean Car Standards (AB 1493), and the Low Carbon Fuel Standards (Executive Order S-01-07).

~~In addition~~ Importantly, the No Project Alternative would not ~~meet~~ achieve any of the Project's basic objectives. ~~For example~~ Specifically, the No Project Alternative would not implement the climate action policies of the General Plan (Objective 1); would not identify GHG emissions reduction targets tailored to the unincorporated County that closely align with state and County climate goals (Objective 2); would not provide a road map to achieve GHG reductions to meet the GHG emission reduction targets (Objective 3); would not encourage sustainable housing production (Objective 4); and would not demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide CEQA streamlining for development projects ("qualified CAP") (Objective 5). Nonetheless, as required by CEQA, the No Project Alternative has been carried forward for more detailed review. See **Table 4-1**, *Screening Summary: No Project Alternative*.

Page 4-14 Section 4.4.2 has been revised and modified as follows:

Implementation of Alternative 1 would generally result in the same environmental impacts as the Project but would result in greater environmental impacts associated with hazards and hazardous materials as well as utilities and service systems. Implementation of Alternative 1 would facilitate projects that include wind projects with wind turbines that could result in a safety hazard for people residing or working in the project area due to collision risk, interference with radar or other air navigation tools, and other hazards related to air navigation. Additionally, implementation of this alternative would facilitate projects that would not encourage the reduction of solid waste like those facilitated by the Project, and instead would focus on the purchase of carbon offsets. As such, some of the adverse impacts caused by projects facilitated by Alternative 1, as compared to impacts under the Revised Draft 2045 CAP, would occur outside the County and so would not be subject to the same local thresholds that apply to the Project, such as thresholds established in the County General Plan or by the South Coast Air Quality Management District. Alternative 1 would result in fewer environmental benefits to the County overall because the reductions in air pollutant and GHG emissions could be realized elsewhere in Southern California, the State, or the Pacific Southwest, and because greater environmental impacts could result from wind projects facilitated by the purchase of carbon offsets.

Importantly, Alternative 1 would not provide a clear pathway for the County to meet and exceed the statewide 2030 GHG reduction goal identified in SB 32 or meet the 2045 direct emission reduction target established by AB 1279. This is because CARB's statewide targets are to reduce direct emissions occurring within state boundaries, and do not allow for carbon offsets occurring outside of the state to contribute to these targets (for example, AB 1279 states that it is "the policy of the state… to ensure that by 2045, statewide anthropogenic greenhouse

gas emissions are reduced to at least 85% below the 1990 levels"). Only the state's 2045 net zero GHG emissions target appears to allow offsets. Similarly, Alternative 1 would not provide a clear pathway for the County to meet the County's local GHG reduction targets identified in the Revised Draft 2045 CAP. Specifically, the Revised Draft 2045 CAP's GHG reduction targets for 2030, 2035, and 2045 are to reduce direct, in-boundary county emissions to specific levels below 2015 emissions. Carbon offsets would likely not produce emission reductions within unincorporated county boundaries because there likely aren't enough offsets within the County to achieve these GHG targets. As such, Alternative 1 may not achieve Project Objective 2.

Alternative 1 would also likely not achieve Project Objective 5 to allow CEQA streamlining for future development projects because the Revised Draft 2045 CAP's GHG emission reduction targets apply to GHG emissions associated with activities occurring within unincorporated county boundaries, reducing emissions outside of county boundaries for activities not covered by the plan through the use of carbon offsets would not contribute toward meeting the represent Revised Draft 2045 CAP's GHG emission reduction targets.

Page 4-15 Section 4.4.3 has been revised and modified as follows:

Implementation of Alternative 2 would also result in greater transportation impacts compared with the Project, as construction of ZNE buildings would increase the amount of heavy-duty construction vehicles on roadways, which could substantially increase hazards due to incompatible uses with normal vehicles on roadways. Alternative 2 would create safety and mobility concerns for motorists, transit operators, bicyclists, and/or pedestrians during construction activities and result in a greater impact than the Project. This alternative would also contribute to a greater impact on utilities and service systems because projects facilitated by Alternative 2 would not encourage the reduction of solid waste like those facilitated by the Project, and instead would focus on water and energy efficiencies.

Page 4-17 Section 4.4.4 has been revised and modified as follows:

For example, Measure T6, Increase ZEV Market Share, has a 2030 performance goal of a 30 percent ZEV fleetwide percentage for light-duty vehicles in the County; under Alternative 3, this performance objective ~~could~~ would likely be reduced to a 10 percent ZEV market share (or lower)

Page 4-18 Section 4.4.4 has been revised and modified as follows:

For example, many of the Draft EIR's potential significant and unavoidable impacts arise from the construction and operation of utility-scale solar projects

that may be facilitated by Measure ES2, *Procure Zero Carbon Electricity*.[5] However, reducing the performance objectives of Measure ES2 toward reducing indirect impacts of utility-scale solar projects facilitated by the Draft 2045 CAP would, for purposes of the analysis, conflict with General Plan Policy AQ 3.9 to "Ensure the availability of zero-carbon electricity to serve unincorporated Los Angeles County." Inconsistency with General Plan Policy AQ 3.9 would mean that Alternative 3 would not meet Objective 1 of the Project. Measure ES2 is one of the five core measures necessary to meet the Project's targets for 2030 and 2035. Reducing Measure ES2's performance objectives would inhibit the County's ability to exceed the 2030 target by more than 160,000 MTCO2e and the 2035 target by more than 230,000 MTCO2e, which would occur under implementation of the Project. ~~Thus, the County would need to reduce Alternative 3 performance goals for other measures and actions for the alternative to be consistent with most of the basic Project objectives.~~

While Alternative 3's reduced performance objectives would facilitate fewer projects in the short-term for years 2030 through 2035 compared to the Project, it would likely facilitate the same number of projects through 2045, resulting in the same environmental impacts through 2045 compared to the Project. However, implementation of Alternative 3 would more likely facilitate a greater number of projects in the 2035 to 2045 period than the Project. Consequently, Alternative 3 would delay the realization of its environmental impacts but would not lessen or eliminate these adverse environmental impacts entirely and would likely worsen environmental impacts during the 2035 to 2045 timeframe compared to the Project.

Alternative 3 would result in similar but lesser impacts than the Project on the following resource areas: aesthetics, agriculture and forestry resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, transportation, and wildfire. However, Alternative 3 would result in greater impacts than the Project for energy, GHG emissions, air quality, and utilities and service systems. Alternative 3 would result in greater energy impacts than the Project because Alternative 3 would facilitate fewer projects that would reduce Countywide energy use compared to the Project, resulting in greater energy consumption than the Project. Alternative 3 would result in greater GHG emissions impacts than the Project because Alternative 3 would not reduce Countywide GHG emissions as compared to the Project through 2030 and 2035, producing much greater GHG emissions than the Project. Additionally, implementation of Alternative 3 would result in greater air quality impacts than the Project for operational impacts because Alternative 3 would facilitate fewer projects through 2030 and 2035, resulting in much greater emissions of criteria pollutants and TACs throughout

[5] Even though the construction of new utility-scale solar projects would not be required to achieve Project targets as proposed, this EIR conservatively assumes that new utility-scale solar projects nonetheless would be facilitated by the 2045 CAP.

the county for these years, resulting in greater human health risks as compared to the Project. Finally, Alternative 3 would result in greater utilities and service systems because projects facilitated by Alternative 3 would lead to increased use of recycled and gray water systems compared to the Project, increasing the amount of wastewater requiring treatment by wastewater treatment providers, and thus, would require the development of new water recycling and direct potable reuse facilities.

Additionally, the 2030 target of 40 percent below 1990 levels is ~~quite~~ far off the emissions reduction trajectory needed to achieve emissions of 83 percent below 2015 levels by 2045, which ~~may~~ likely means that Alternative 3 does not align with either County or state emission reduction goals (Recirculated Draft PEIR, pp. 4.18 to 4.19). ~~This is because~~ Specifically, CARB projects that a 48 percent reduction in 1990 emissions levels by 2030 is needed: "The Scoping Plan Scenario achieves the AB 1279 target of 85 percent below 1990 levels by 2045 and identifies a need to accelerate the 2030 target to 48 percent below 1990 levels" (CARB 2022b). This is far beyond the 40 percent reduction required by SB 32. The Project's 2030 target of 40 percent below 2005 levels is equivalent to 48 percent below 1990 levels, which aligns the Project much more closely with state goals and the 2022 Scoping Plan, which ~~than~~ Alternative 3 would not do. Additionally, Alternative 3 does not align with the statewide targets codified in AB 1279, which establishes the state policy to achieve net zero GHG emissions as soon as possible but no later than 2045 and to achieve and maintain net negative GHG emissions thereafter. AB 1279 also mandates that by 2045, statewide anthropogenic GHG emissions are to be reduced at least 85 percent below 1990 levels.

Alternative 3 may also not meet Project Objective 5 (demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide CEQA streamlining for development projects via the Checklist) because Alternative 3's lower targets may not meet CEQA standards for a level of GHG emissions that would not be cumulatively considerable for future environmental review of projects, given that Alternative 3's targets do not align with state goals and consistency with state goals is the criteria for whether the targets represent a level of GHG emissions that would have a less than cumulatively considerable GHG impact for future environmental review projects.

Pages 4-20 to 4-21 Section 4.6 has been revised and modified as follows:

~~The CEQA Guidelines define the *environmentally superior alternative* as that alternative with the least adverse impacts on the project area and its surrounding environment. For this Project, the No Project Alternative is considered the environmentally superior alternative for CEQA purposes because it would avoid all impacts of the Project even though air quality and GHG emissions would be~~

~~the worst among all alternatives under the No Project Alternative. However, the No Project Alternative would fail to meet the basic objectives of the Project. Additionally, selection of the No Project Alternative would result in realization of none of the benefits identified in the Draft 2045 CAP. Because the environmentally superior alternative is the No Project Alternative, the EIR also must identify an environmentally superior alternative from among the other alternatives. (CEQA Guidelines Section 15126.6(e)(2).)~~

An EIR's discussion of alternatives to the proposed project must include a "no project alternative" to allow a comparison of the environmental impacts of approving the proposed project with the effects of not approving it. (CEQA Guidelines, § 15126.6(e)(1).). CEQA requires an EIR to identify the "environmentally superior alternative" if the no project alternative is environmentally superior. (CEQA Guidelines, § 15126.6 (e)(2).).

The EIR No Project Alternative evaluates the scenario where the County would not approve the Revised Draft 2045 CAP for implementation such that no GHG emissions reduction strategies, measures, or actions identified by the Revised Draft 2045 CAP would be implemented. This would avoid adverse impacts caused by projects facilitated by the Revised Draft 2045 CAP, as compared to impacts under the Revised Draft 2045 CAP. Because the No Project Alternative would not facilitate projects, there would be no project-related impacts when compared to implementation of the Revised Draft 2045 CAP (see Table 4-6, which provides a comparative summary), and thus, the No Project Alternative is identified as the environmentally superior alternative.

However, in the long-term, the No Project Alternative would result in substantially fewer environmental benefits to the County overall for several reasons. First, air pollutant (criteria pollutants and toxic air contaminants) and GHG emissions would be much higher under the No Project Alternative than air pollutant and GHG emissions under with all other alternatives and the Project. This is because the Project would substantially reduce countywide GHG emissions, and many of these emission reductions would produce parallel reductions in criteria pollutants and toxic air contaminants primarily by reducing fuel combustion. The No Project Alternative would result in greater human health risks associated with exposure to toxic air contaminants than all other alternatives and the Project, because all other alternatives and the Project would substantially reduce TAC emissions in the County. The No Project Alternative would neither realize the long-term GHG emission reduction benefits associated with implementation of the Revised Draft 2045 CAP (and all the co-benefits that would also occur, such as reduced criteria pollutant and TAC emissions), nor provide a clear pathway for the County to meet and exceed the statewide 2030 GHG reduction goal identified in SB 32 or meet and exceed the 2045 direct emission reduction target and carbon neutrality goal established by AB 1279. Lastly, the No Project Alternative would not meet any of the Project objectives

and the County is not obligated to select the environmentally superior alternative for implementation if it would not accomplish the basic project objectives. (See CEQA Guidelines, § 15126.6(a), (c), (f).)

CEQA Guidelines Section 15126.6(e)(2) states, "[i]f the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

~~For purposes of this EIR,~~ Of Alternatives 1-3, Alternative 3 would reduce adverse environmental impacts compared to the Project to the greatest extent in the short-term because it would result in fewer facilitated projects compared with the Revised Draft 2045 CAP. Alternative 3 ~~is considered the environmentally superior alternative for CEQA purposes because it~~ would result in similar but lesser impacts on ~~11 resource areas relative to~~ the following resource areas: ~~Project (i.e., for~~ aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, transportation, ~~utilities and service systems,~~ and wildfire.~~) and~~ However, Alternative 3 would result in greater impacts than the Project ~~in two resource areas (i.e.,~~ for energy~~, and~~ GHG emissions, air quality, and utilities and service systems~~)~~. Alternative 3 would have same impacts as the Project with respect to the remaining resources. See Table 4-6 for details.

However, ~~it should be noted that~~ Alternative 3 would likely only delay these impacts as compared to the Project ~~versus~~ rather than lessen~~ing these impacts~~ or eliminate ~~ing~~ these ~~m~~ impacts entirely~~. This is~~ because Alternative 3 has lower GHG emissions reduction targets ~~only~~ for ~~the~~ years 2030 and 2035 compared to the Project~~;~~ (it has the same targets for the year 2045). This means that Alternative 3 would likely facilitate fewer projects through 2030 and 2035 to achieve the lower ~~lesser~~ targets, resulting in reduced adverse environmental impacts for these years. ~~But~~ However,~~-~~Alternative 3 would likely facilitate the same number of projects through 2045, resulting in the same environmental impacts through 2045 compared to the Project, and it would likely facilitate more projects in the 2035 to 2045 period than the Project, worsening environmental impacts during the 2035 to 2045 timeframe compared to the Project. Consequently, Alternative 3 would delay the realization of its environmental ~~potential~~ impacts but would not ~~completely~~ lessen or eliminate ~~or permanently lessen~~ these adverse environmental impacts entirely, and could increase or create certain environmental impacts compared to the Project.

Additionally,~~ It should be noted that~~ Alternative 3 has ~~does have~~ some drawbacks compared to the Project. As discussed previously in the description of Alternative 3 (Section 4.4.4), ~~its ability to~~ it would not meet Project Objectives 1, 2, and 5 ~~would be limited compared to the Project~~. Alternative 3 would not meet Project Objective 1 (identify detailed programs, actions, and performance goals to

achieve the climate policies of the General Plan) because implementation would result in an inconsistency with the County's General Plan Policy AQ 3.9 ("Ensure the availability of zero-carbon electricity to serve unincorporated Los Angeles County."). Additionally, the 2030 target of 40 percent below 1990 levels is ~~quite~~ far off the emissions reduction trajectory needed to achieve emissions of 83 percent below 2015 levels by 2045, which ~~may~~ likely means that Alternative 3 does not align with either County or state emissions reduction goals.

Alternative 3 does not align with County or state goals, including AB 1279, which establishes the state policy to achieve net zero GHG emissions as soon as possible but no later than 2045 and to achieve and maintain net negative GHG emissions thereafter. AB 1279 also mandates that by 2045, statewide anthropogenic GHG emissions are to be reduced at least 85 percent below 1990 levels. Finally implementation of Alternative 3 ~~may~~ would likely exclude several recommended priority local GHG emissions reduction strategies recommended by the 2022 Scoping Plan to ensure alignment with State climate goals.

Alternative 3 would also not meet Project Objective 5 (demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide CEQA streamlining for development projects via the Checklist) because Alternative 3's lower targets would not meet CEQA standards for a level of GHG emissions that would not be cumulatively considerable for future environmental review of projects, given that Alternative 3's targets do not align with state goals and consistency with state goals is the criteria for whether the targets represent a level of GHG emissions that would have a less than cumulatively considerable GHG impact for future environmental review projects. Nevertheless, in balancing both Alternative 3's reduction in adverse environmental impacts and long-term beneficial effects compared to the Project, the County has determined that Alternative 3 is the environmentally superior alternative.

3.2.6 Chapter 5, Other CEQA Considerations

No text changes have been made to Chapter 5, *Other CEQA Considerations*.

3.2.7 Chapter 6, Report Preparation

No text changes have been made to Chapter 6, *Report Preparation*.

Appendix A
Public Notices

ESA

AMY J. BODEK, AICP
Director,
Regional Planning

DENNIS SLAVIN
Chief Deputy Director,
Regional Planning

NOTICE OF AVAILABILITY

RECIRCULATED DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT FOR THE LOS ANGELES COUNTY 2045 CLIMATE ACTION PLAN

PROJECT TITLE: Los Angeles County 2045 Climate Action Plan

PROJECT LOCATION: Unincorporated areas of Los Angeles County

The Los Angeles County Department of Regional Planning (County), acting as the lead agency pursuant to the California Environmental Quality Act (CEQA), completed a Draft Program Environmental Impact Report (PEIR) for the Los Angeles County 2045 Climate Action Plan (2045 CAP) in May 2022. After the July 2022 conclusion of the comment period for the Draft PEIR, the County elected to revise the Draft 2045 CAP in response to public and other input received, and to transition the 2045 CAP's aspirational goal of carbon neutrality by 2045 into a target consistent with new legislation, Assembly Bill (AB) 1279, which was enacted in September 2022 after the close of the Draft PEIR comment period. The County prepared a Recirculated Draft PEIR, which analyzes changes in the project made after the issuance of the Draft PEIR and which wholly replaces the Draft PEIR that was issued in May 2022.

The County has prepared this Notice of Availability (NOA) to consult with and request comments from responsible agencies, trustee agencies, and other interested parties regarding the environmental analyses presented in the Recirculated Draft PEIR.

PROJECT LOCATION

Unincorporated areas of Los Angeles County.

PROJECT SUMMARY

The Draft 2045 CAP (Project) is the County's plan towards meeting greenhouse gas (GHG) emissions reduction targets for unincorporated Los Angeles County by the years of 2030, 2035, and 2045. It was developed with the goals of implementing the GHG emissions reduction policies of the General Plan Air Quality Element and ensuring that the County contributes its fair share to statewide GHG emissions reductions.

With these goals in mind, the objectives of the Draft 2045 CAP are as follows:

(1) Identify detailed programs, actions, and performance goals to achieve the climate action policies of the General Plan.

(2) Identify GHG emissions reduction targets tailored to the unincorporated County that closely align with state and County climate goals.

(3) Provide a road map for reducing GHG emissions to achieve the County's GHG emissions reduction targets.

(4) Encourage sustainable housing production at all levels of affordability, including increasing housing densities near transit to the extent allowed in the General Plan.

(5) Demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide CEQA streamlining for development projects (serve as a "qualified CAP") via the2045 CAP Consistency Review Checklist.

The Draft 2045 CAP includes the following:

- A greenhouse gas (GHG) emissions inventory for 2018.
- Emissions forecasts for 2030, 2035, and 2045.
- GHG emissions targets for 2030, 2035, and 2045.
- A long-term aspirational goal for carbon neutrality by 2045.
- A suite of GHG emissions reduction strategies, measures, and actions to reduce GHG emissions from major sectors.
- A technical modeling appendix to explain the Draft 2045 CAP's GHG emissions reduction estimates.
- A consideration of environmental justice and equity concerns.
- Implementation and monitoring measures to ensure successful climate action.
- A new development review consistency checklist to allow future projects to streamline GHG emissions analyses pursuant to the California Environmental Quality Act (CEQA) as anticipated by CEQA Guidelines Section 15183.5 by using the 2045 CAP.

Approval of the Draft 2045 CAP would require an amendment to the General Plan to replace the *Unincorporated Los Angeles County Community Climate Action Plan 2020* (2020 CCAP), an implementing component of the General Plan's Air Quality Element.

LIST OF SIGNIFICANT ENVIRONMENTAL EFFECTS ANTICIPATED AS A RESULT OF THE PROJECT

No changes to General Plan land use designations, zoning, or specific development projects are proposed as part of the Draft 2045 CAP. However, projects facilitated by Draft 2045 CAP measures and actions would have the following significant impacts:

- **Aesthetics:** The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions would: have a substantial adverse effect on a scenic vista; be visible from or obstruct views from a regional riding, hiking, or multiuse trail; substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway; substantially degrade the existing visual character or quality of public views of the site and its surroundings because of height, bulk, pattern, scale, character, or other features and/or conflict with applicable zoning and other regulations governing scenic quality; and create a new source of substantial shadows, light, or glare, which would adversely affect day or nighttime views in the area. The Project would also cause significant cumulative impacts to aesthetics resources.

- **Agriculture and Forestry**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use; conflict with existing zoning for agricultural use, with a designated Agricultural Resource Area, or with a Williamson Act contract; and involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forest land to non-forest use. The Project would also cause significant cumulative impacts to agriculture and forestry resources.

- **Air Quality**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: conflict with or obstruct implementation of the applicable air quality plan; result in a cumulatively considerable net increase of a criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard; expose sensitive receptors to substantial pollutant concentrations for localized air pollutants and TAC emissions; and contribute to a significant cumulative impact to air quality associated with toxic air contaminant emissions.

- **Biological Resources**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: have a substantial adverse indirect impact (i.e., through habitat modifications) on one or more species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS; have a substantial adverse impact on sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations or by CDFW or USFWS; have a substantial adverse impact on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means; and interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; and convert oak woodlands or other unique native woodlands. The Project would also cause significant cumulative impacts to biological resources.

- **Cultural Resources**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5; cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines Section 15064.5; directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; and disturb any human remains, including those interred outside of dedicated cemeteries. The Project would also cause significant cumulative impacts to cultural resources.

- **Hazards and Hazardous Materials**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment; emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25-mile of sensitive land uses; and impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. The Project would also cause significant cumulative impacts to hazards and hazardous materials resources.

- **Hydrology and Water Quality**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project

inundation. The Project would also cause significant cumulative impacts to hydrology and water quality resources.

- **Noise**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; and generate excessive groundborne vibration or groundborne noise levels. The Project would also cause significant cumulative impacts on noise.

- **Transportation**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: conflict with an applicable program plan, ordinance or policy addressing the circulation system; and substantially increase hazards due to a road design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). The Project would also cause significant cumulative impacts to transportation resources.

- **Tribal Cultural Resources**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: cause a substantial adverse change in the significance of a tribal cultural resource, or of a resource determined by the County, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Public Resources Code Section 5024.1(c). The Project would also cause significant cumulative impacts to tribal cultural resources.

- **Utilities and Service Systems**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects; and result in a determination by the wastewater treatment provider which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. The Project would also cause significant cumulative impacts to utilities and service systems.

- **Wildfire**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: substantially impair an adopted emergency response plan or emergency evacuation plan; require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; and expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. The Project would also cause significant cumulative wildfire impacts.

HAZARDOUS MATERIALS RELEASE SITES

Various sites in unincorporated Los Angeles County are identified on lists enumerated under Section 65962.5 of the Government Code, including known contamination sites identified in the EnviroStor database that need further investigation (i.e., 149 school investigation and school cleanup sites, 165 state response sites, 18 federal Superfund sites, and 370 voluntary cleanup sites) and hazardous materials sites identified in the GeoTracker database as having the potential to affect groundwater quality (i.e., 7,528 leaking underground storage tank sites).

PUBLIC REVIEW PERIOD

In accordance with Section 15105 of the State CEQA Guidelines, the County has scheduled a 45-day public review period for the Recirculated Draft PEIR. **The formal public review will start on March 30, 2023, and end on May 15, 2023.**

PUBLIC COMMENTS

The Recirculated Draft PEIR wholly replaces the Draft PEIR that was issued in May 2022. **Public comments on the May 2022 Draft PEIR will not be responded to in the Final PEIR. New public comments are requested on the Recirculated Draft PEIR, and only these will be responded to in the Final PEIR**. Please submit written comments on the Recirculated Draft PEIR no later than 5:00 p.m. on May 15, 2023.

Please send by mail to the following address:
Los Angeles County Department of Regional Planning
Attn: Thuy Hua
320 W. Temple Street, 13th Floor
Los Angeles, CA 90012

For email submittal of your comment letter, send to: climate@planning.lacounty.gov

All written comment letters/emails regarding the Recirculated Draft PEIR will be included in an appendix in the Final EIR and responded to in the Response to Comments section of the final document.

AVAILABILITY OF MATERIALS

A digital copy of the Recirculated Draft PEIR is available on the project website at https://planning.lacounty.gov/long-range-planning/climate-action-plan/documents/. A printed copy of the Recirculated Draft PEIR is available for public review by appointment during normal business hours at the Los Angeles County Department of Regional Planning's headquarter office (320 W. Temple Street, Los Angeles, CA 90012) starting March 30, 2023.

To ensure additional public access to the Recirculated Draft PEIR, printed copies of the document (with electronic copies of all appendices) are available for review during normal hours starting March 30, 2023 at the following County libraries:

- AC Bilbrew Library
  150 E El Segundo Blvd
  Los Angeles, CA 90061

- Acton Agua Dulce Library
  33792 Crown Valley Rd
  Acton, CA 93510

- Charter Oak Library
  20540 E Arrow Highway Suite K
  Covina, CA 91724

- East Los Angeles Library
  4837 E 3rd St
  Los Angeles, CA 90022

- Hacienda Heights Library
  16010 La Monde St
  Hacienda Heights, CA 91745

- La Crescenta Library
  2809 Foothill Blvd
  La Crescenta, CA 91214

- Stevenson Ranch Library
  25950 The Old Road
  Stevenson Ranch, CA 91381

- Topanga Library
  122 N Topanga Canyon Blvd
  Topanga, CA 90290

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2021120568

Project Title: 2045 Los Angeles County Climate Action Plan

Lead Agency: Los Angeles County Department of Regional Planning | Contact Person: Thuy Hua

Mailing Address: 320 W. Temple Street 13th Floor | Phone: 213-974-6461

City: Los Angeles | Zip: 90012 | County: Los Angeles

Project Location: County: Los Angeles | City/Nearest Community: Unincorporated Countywide

Cross Streets: N/A | Zip Code: N/A

Longitude/Latitude (degrees, minutes and seconds): N/A ° N/A ′ N/A ″ N / N/A ° N/A ′ N/A ″ W | Total Acres: N/A

Assessor's Parcel No.: N/A | Section: N/A | Twp.: N/A | Range: N/A | Base: N/A

Within 2 Miles: State Hwy #: N/A | Waterways: N/A

Airports: N/A | Railways: N/A | Schools: N/A

Document Type:

CEQA: ☐ NOP ☐ Early Cons ☐ Neg Dec ☐ Mit Neg Dec ☒ Draft EIR ☐ Supplement/Subsequent EIR (Prior SCH No.) ____ Other: Recirculated Draft EIR

NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI

Other: ☐ Joint Document ☐ Final Document ☐ Other: ____

Local Action Type:

☐ General Plan Update ☒ General Plan Amendment ☒ General Plan Element ☐ Community Plan
☐ Specific Plan ☐ Master Plan ☐ Planned Unit Development ☐ Site Plan
☐ Rezone ☐ Prezone ☐ Use Permit ☐ Land Division (Subdivision, etc.)
☐ Annexation ☐ Redevelopment ☐ Coastal Permit ☐ Other: ____

Development Type:

☐ Residential: Units ____ Acres ____
☐ Office: Sq.ft. ____ Acres ____ Employees ____
☐ Commercial: Sq.ft. ____ Acres ____ Employees ____
☐ Industrial: Sq.ft. ____ Acres ____ Employees ____
☐ Educational: ____
☐ Recreational: ____
☐ Water Facilities: Type ____ MGD ____
☐ Transportation: Type ____
☐ Mining: Mineral ____
☐ Power: Type ____ MW ____
☐ Waste Treatment: Type ____ MGD ____
☐ Hazardous Waste: Type ____
☐ Other: ____

Project Issues Discussed in Document:

☒ Aesthetic/Visual
☒ Agricultural Land
☒ Air Quality
☒ Archeological/Historical
☒ Biological Resources
☐ Coastal Zone
☒ Drainage/Absorption
☐ Economic/Jobs
☐ Fiscal
☒ Flood Plain/Flooding
☒ Forest Land/Fire Hazard
☒ Geologic/Seismic
☒ Minerals
☒ Noise
☒ Population/Housing Balance
☒ Public Services/Facilities
☒ Recreation/Parks
☐ Schools/Universities
☐ Septic Systems
☒ Sewer Capacity
☒ Soil Erosion/Compaction/Grading
☒ Solid Waste
☒ Toxic/Hazardous
☒ Traffic/Circulation
☒ Vegetation
☒ Water Quality
☒ Water Supply/Groundwater
☐ Wetland/Riparian
☒ Growth Inducement
☒ Land Use
☒ Cumulative Effects
☒ Other: Energy, GHG, Tribal

Present Land Use/Zoning/General Plan Designation:

Throughout unincorporated Los Angeles County

Project Description: *(please use a separate page if necessary)*

See attachment

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "**X**".
If you have already sent your document to the agency please denote that with an "**S**".

X	Air Resources Board	S	Office of Historic Preservation
	Boating & Waterways, Department of		Office of Public School Construction
	California Emergency Management Agency	S	Parks & Recreation, Department of
	California Highway Patrol	S	Pesticide Regulation, Department of
S	Caltrans District # 7	S	Public Utilities Commission
	Caltrans Division of Aeronautics	S	Regional WQCB # 4, 6
S	Caltrans Planning	X	Resources Agency
	Central Valley Flood Protection Board	S	Resources Recycling and Recovery, Department of
	Coachella Valley Mtns. Conservancy		S.F. Bay Conservation & Development Comm.
S	Coastal Commission	S	San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
	Colorado River Board		San Joaquin River Conservancy
X	Conservation, Department of	S	Santa Monica Mtns. Conservancy
	Corrections, Department of	S	State Lands Commission
	Delta Protection Commission		SWRCB: Clean Water Grants
	Education, Department of		SWRCB: Water Quality
S	Energy Commission		SWRCB: Water Rights
X	Fish & Game Region # 5		Tahoe Regional Planning Agency
S	Food & Agriculture, Department of	S	Toxic Substances Control, Department of
S	Forestry and Fire Protection, Department of	S	Water Resources, Department of
S	General Services, Department of		
	Health Services, Department of	S	Other: SCAG
S	Housing & Community Development		Other:
S	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date March 30, 2023 Ending Date May 15, 2023

Lead Agency (Complete if applicable):

Consulting Firm: Environmental Science Associates
Address: 626 Wilshire Boulevard Suite 1100
City/State/Zip: Los Angeles, CA 90017
Contact: Meryka Dirks
Phone: (408) 660-4003

Applicant:
Address:
City/State/Zip:
Phone:

Signature of Lead Agency Representative: Digitally signed by Thuy Hua Date: 2023.03.23 16:39:33 -07'00' **Date:** March 23, 2023

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

PROJECT DESCRIPTION

The Draft 2045 Los Angeles County Climate Action Plan (2045 CAP or Project) is the County's plan towards meeting greenhouse gas (GHG) emissions reduction targets for unincorporated Los Angeles County by the years of 2030, 2035, and 2045. It was developed with the goals of implementing the GHG emissions reduction policies of the General Plan Air Quality Element and ensuring that the County contributes its fair share to statewide GHG emissions reductions.

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(1) Identify detailed programs, actions, and performance goals to achieve the climate action policies of the General Plan.

(2) Identify GHG emissions reduction targets tailored to the unincorporated County that closely align with state and County climate goals.

(3) Provide a road map for reducing GHG emissions to achieve the County's GHG emissions reduction targets.

(4) Encourage sustainable housing production at all levels of affordability, including increasing housing densities near transit to the extent allowed in the General Plan.

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- GHG emissions targets for 2030, 2035, and 2045.
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- A technical modeling appendix to explain the Draft 2045 CAP's GHG emissions reduction estimates.
- A consideration of environmental justice and equity concerns.
- Implementation and monitoring measures to ensure successful climate action.
- A new development review consistency checklist to allow future projects to streamline GHG emissions analyses pursuant to the California Environmental Quality Act (CEQA) as anticipated by CEQA Guidelines Section 15183.5 by using the 2045 CAP.

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- **Agriculture and Forestry**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use; conflict with existing zoning for agricultural use, with a designated Agricultural Resource Area, or with a Williamson Act contract; and involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forest land to non-forest use. The Project would also cause significant cumulative impacts to agriculture and forestry resources.

- **Air Quality**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: conflict with or obstruct implementation of the applicable air quality plan; result in a cumulatively considerable net increase of a criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard; expose sensitive receptors to substantial pollutant concentrations for localized air pollutants and TAC emissions; and contribute to a significant cumulative impact to air quality associated with toxic air contaminant emissions.

- **Biological Resources**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: have a substantial adverse indirect impact (i.e., through habitat modifications) on one or more species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS; have a substantial adverse impact on sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations or by CDFW or USFWS; have a substantial adverse impact on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means; and interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; and convert oak woodlands or other unique native woodlands. The Project would also cause significant cumulative impacts to biological resources.

- **Cultural Resources**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5; cause a substantial

adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines Section 15064.5; directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; and disturb any human remains, including those interred outside of dedicated cemeteries. The Project would also cause significant cumulative impacts to cultural resources.

- **Hazards and Hazardous Materials**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment; emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25-mile of sensitive land uses; and impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. The Project would also cause significant cumulative impacts to hazards and hazardous materials resources.

- **Hydrology and Water Quality**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation. The Project would also cause significant cumulative impacts to hydrology and water quality resources.

- **Noise**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; and generate excessive groundborne vibration or groundborne noise levels. The Project would also cause significant cumulative impacts on noise.

- **Transportation**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: conflict with an applicable program plan, ordinance or policy addressing the circulation system; and substantially increase hazards due to a road design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). The Project would also cause significant cumulative impacts to transportation resources.

- **Tribal Cultural Resources**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: cause a substantial adverse change in the significance of a tribal cultural resource, or of a resource determined by the County, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Public Resources Code Section 5024.1(c). The Project would also cause significant cumulative impacts to tribal cultural resources.

- **Utilities and Service Systems**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects; and result in a determination by the wastewater treatment provider which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. The Project would also cause significant cumulative impacts to utilities and service systems.

- **Wildfire**: The Project, as a result of projects facilitated by Draft 2045 CAP measures and actions, would: substantially impair an adopted emergency response plan or emergency evacuation plan; require the installation or maintenance of associated infrastructure (such as

roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; and expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. The Project would also cause significant cumulative wildfire impacts.

Appendix B

Appendix F of the Revised Draft 2045 CAP

ESA

APPENDIX F

2045 Climate Action Plan CEQA Streamlining Checklist

Purpose

~~The *2045 Los Angeles County Climate Action Plan* (2045 CAP) helps the County of Los Angeles (County) comply with various local, regional, state, and federal regulations to significantly reduce greenhouse gas (GHG) emissions. The County is obligated under the California Environmental Quality Act (CEQA), Assembly Bill (AB) 32 (the California Global Warming Solutions Act of 2006), Senate Bill (SB) 375 (the Sustainable Communities and Climate Protection Act of 2008), and various California executive orders to do its part to reduce GHG emissions in the state. Generally, statewide targets aim to reduce emissions to 1990 levels by 2020 (AB 32), to 40 percent below 1990 levels by 2030 (SB 32), and to 85 percent (anthropogenic) below 1990 levels by 2045 (AB 1279). CEQA Guidelines Section 15183.5 allows public agencies to analyze and mitigate GHG emissions as part of a larger plan for the reduction of GHGs. The 2045 CAP itself, the 2045 CAP CEQA Streamlining Checklist (this document), and the certified Final Program Environmental Impact Report (PEIR) (State Clearinghouse #2021120568) for the 2045 CAP together meet all requirements of Section 15183.5(b) of the CEQA Guidelines. Accordingly, the 2045 CAP represents the County's qualified climate action plan (CAP) in compliance with CEQA.~~

~~The 2045 CAP includes 10 strategies, 25 measures, and 95 actions that shall be implemented by the County to achieve its proportional share of state GHG emissions reductions for the target year 2030. These strategies, measures, and actions are organized into four sectors: (1) transportation; (2) stationary energy; (3) waste (including wastewater); and (4) agriculture, forestry, and other land use (AFOLU). The 2045 CAP does not include any strategies, measures, or actions to reduce emissions from the fifth sector of the County's GHG inventory, industrial processes and product use (IPPU), given data and modeling limitations for this sector.~~

The 2045 Climate Action Plan CEQA Streamlining Checklist (referred to herein as the ~~*2045 CAP Checklist*~~*2045 CAP CEQA Streamlining Checklist*) can be used ~~applies to~~ **~~discretionary~~ projects that are subject to and not exempt from CEQA, including both new projects and expansion of existing land uses, and including agency and public projects, that intend to streamline the environmental review of their GHG impacts pursuant to CEQA** ~~(referred to herein as *projects*). The purpose of the 2045 CAP Checklist is to~~ :

~~(1) Implement relevant GHG emissions reduction actions from the 2045 CAP for projects.~~

~~(2)P~~provide a voluntary streamlined review process for analyzing the impacts of GHG emissions resulting from proposed discretionary projects that are subject to CEQA.

The ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist may be updated administratively to incorporate new GHG emissions reduction techniques or to comply with later amendments to the 2045 CAP or local, state, or federal law ~~without the need for an amendment to the *Los Angeles County General Plan 2035* (General Plan)~~.

Appendix F Organization

This appendix is organized into the following four sections:

Section F.1: ~~CEQA Compliance and~~ Background ~~Information~~

This section describes the rationale for the checklist and explains how it provides the mechanism for projects that wish to streamline environmental review of their GHG impacts using the 2045 CAP's PEIR pursuant to CEQA Guidelines Section 15183.5(b).

Section F.2: Checklist Instructions

This section includes the submittal requirements for applicants, the applicability of the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist, and instructions for completing the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist.

Section F.3: ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist

This section includes the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist itself along with a table for reporting and documenting alternative project emissions reduction measures and additional GHG reductions.

Section F.4: Offsite GHG Reduction Program Framework

This section includes a framework for the County's forthcoming Offsite GHG Reduction Program. This program will be available for project applicants to use as an alternative GHG reduction measure to the CEQA streamlining requirements, by allowing applicants to fund or implement local projects that reduce GHG emissions within unincorporated Los Angeles County.

F.1 ~~CEQA Compliance and~~ Background ~~Information~~

~~The 2045 CAP's GHG reductions will occur through a combination of County initiatives, as represented by various plans and policies that will provide reductions from both new developments and the expansion of existing developments. The 2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist ~~specifically applies to proposed discretionary projects that require environmental review pursuant to CEQA and intend to streamline the environmental review of their GHG impacts. Therefore, the 2045 CAP Checklist is a critical implementation tool in the County's overall strategy to reduce GHG emissions. Implementing applicable 2045 CAP measures and actions in new developments and expanding existing development projects will help the County achieve incremental reductions toward its 2030, 2035, and 2045 targets.~~

The growth projections outlined in the General Plan's Land Use and Housing Elements were used in the 2045 CAP to estimate unincorporated Los Angeles County's future emissions. Therefore, projects can use the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist if they are consistent with the Land Use Element. This consistency allows a project to streamline its analysis of GHG impacts by using the existing programmatic environmental review contained in the certified Final PEIR for the 2045 CAP. In doing so, pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to climate change resulting from the project's GHG emissions may be determined not to be cumulatively considerable. This approach is consistent with the recommendations of the California Air Resources Board (CARB) in the *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) that "CEQA-qualified CAPs" can allow eligible projects to streamline their determination of significance for GHG emissions.[1] It is also consistent with the Association of Environmental Professionals Climate Change Committee's best practices for tiering from qualified GHG reduction plans that demonstrate substantial progress toward meeting the next milestone

[1] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in January 2023.

statewide planning reduction target (i.e., a 40 percent reduction below 1990 levels by 2030 as set forth by SB 32).[2]

This ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist provides a mechanism for projects to specifically identify "those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project" per Section 15183.5(b)(2) of the CEQA Guidelines.

GHG emissions associated with the construction of projects, including demolition and decommissioning activities, are generally orders of magnitude lower than operational GHG emissions. This is primarily because construction emissions are typically short in duration compared to the project's overall lifetime. Typically, construction GHG emissions are amortized over 30 years and added to a project's 30-year lifetime emissions total; after this amortization, construction GHG emissions usually represent a small fraction of a project's total annual emissions. It is generally difficult to enforce low-emission construction equipment because of the limited availability of zero-emission and near-zero-emission construction equipment, along with contracting requirements. In addition, the 2045 CAP quantifies GHG emissions from off-road construction activity at the unincorporated Los Angeles County level; these emissions are accounted for in the 2045 CAP's ability to achieve the 2030, 2035, and 2045 targets.

The ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist also requires the use of electric and zero-emission construction equipment during project construction to the maximum extent feasible, to align with Measure T9. Therefore, construction emissions can be assessed qualitatively as part of related CEQA GHG emissions analysis. However, some projects may have long construction periods or entail substantial excavation and grading that could result in construction-related GHG emissions that may be considered significant. Thus, the County retains the discretion on a project-by-project basis to consider whether a project's construction-related GHG emissions could be cumulatively considerable and require a more detailed quantitative CEQA analysis and mitigation of GHG emissions.

Projects that elect not to use the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist for CEQA streamlining must prepare a comprehensive project-specific analysis of GHG emissions. The analysis must quantify existing and projected GHG emissions and it is strongly encouraged that the project incorporate all ~~the~~ CEQA streamlining requirements in this ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist, although this is not required. The ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist may be updated to incorporate new GHG emissions reduction techniques or to comply with later amendments to the 2045 CAP or to local, state, or federal law.

2045 CAP Appendix B, *Emissions Forecasting and Reduction Methods*, provides the quantitative basis for CEQA streamlining requirements. This document demonstrates how, based on substantial

[2] Association of Environmental Professionals. 2016. *Final White Paper Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California.* October 18, 2016. Available: https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf.

evidence,[3] implementing these CEQA streamlining requirements on a project-by-project basis will collectively achieve the 2045 CAP's target emissions level for projects by 2030 and 2035, as required by CEQA Guidelines Section 15183.5(b)(1)(D).

Alignment with the 2022 Scoping Plan

Appendix D of CARB's 2022 Scoping Plan provides guidance for local governments and lead agencies for how local climate action planning can support the State of California's climate goals.[4] CARB reiterates that a CAP that has been adopted through the CEQA review process and meets the criteria specified in CEQA Guidelines Section 15183.5(b) for a "plan for the reduction of greenhouse gas emissions"—such as the 2045 CAP—is a "CEQA-qualified CAP" that can allow eligible projects to streamline their determination of significance for GHG emissions.

Streamlining CEQA GHG analysis for future projects by demonstrating consistency with a CAP involves evaluating whether a project demonstrates consistency with "all applicable GHG reduction measures identified in the CAP." CARB notes that such consistency can be determined by using CAP compliance checklists, which can be "included as part of the proposed project's CEQA analysis documenting the project's consistency with the CEQA-qualified CAP."

The ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist is therefore consistent with CARB's guidance in the 2022 Scoping Plan as a valid way for discretionary projects to streamline their analysis of GHG impacts.

Recommended Project Attributes for Residential and Mixed-Use Projects

Appendix D of the 2022 Scoping Plan includes a list of "key project attributes" for residential and mixed-use projects. CARB states that if a project incorporates these attributes, the project would "accommodate growth in a manner consistent with State GHG reduction and equity prioritization goals" and would be "***clearly*** consistent with the State's climate goals." Further, such projects would be "consistent with the Scoping Plan or other plans, policies, or regulations adopted for the purposes of reducing GHGs" and that therefore, "the GHG emissions associated with such projects may result in a less-than-significant GHG impact under CEQA."

Alternative Project Emissions Reduction Measures and Offsite GHG Reduction Programs

As discussed below under *Step 4: Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions*, project applicants may employ alternative GHG emissions reduction measures to serve as replacements for any CEQA streamlining requirement not feasible to implement at the project-level. Such replacement measures must meet specific criteria and be

[3] CEQA Guidelines Section 15384 defines *substantial evidence* as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. Whether a fair argument can be made that the project may have a significant effect on the environment is to be determined by examining the whole record before the lead agency. Argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly erroneous or inaccurate, or evidence of social or economic impacts which do not contribute to or are not caused by physical impacts on the environment does not constitute substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts."

[4] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in January 2023.

supported by substantial evidence that the measure would achieve the same or greater level of GHG emissions reductions as the ~~2045 CAP~~ CEQA streamlining requirement that it replaces.

CARB supports the idea of "off-site GHG mitigation" in Appendix D of the 2022 Scoping Plan for projects that have maxed out their on-site GHG reduction actions: "If implementation of all feasible on-site GHG reduction measures is insufficient to reduce a project's impact to a less-than-significant level, the State recommends that the lead agency next explore options to fund or implement ***local***, off-site direct GHG reduction strategies."[5]

As discussed further below, Action ES5.4 of the 2045 CAP would establish an Offsite GHG Reduction Program for new development to use as a GHG reduction or mitigation pathway for 2045 CAP compliance and to fund programs for reducing GHG emissions in the built environment.

CARB cautions that such off-site measures must directly "offset" a project's GHG emissions and must not be unrelated off-site measures that would occur independently of the proposed project. Lead agencies and project applicants must provide substantial evidence that a specific off-site mitigation measure is not otherwise required by law or regulation and would not have occurred "***but for*** the requirement to mitigate a project's GHG impacts." CARB goes on to state the following:

> There has been concern that GHG emission reductions from off-site GHG mitigation measures… may double count GHG emission reductions from California's Cap-and-Trade program. However, off-site mitigation measures, such as EV [electric vehicle] charging or building efficiency retrofits, are viable options for mitigation under CEQA and would not be double counted, provided they are not otherwise required by law or regulation and would not have happened but for the mitigation requirements of the project. If the mitigation would have been implemented or required through another statute, regulation, existing local program, or requirement other than the project it is mitigating, then the project being mitigated may not also claim credit for the reductions.

F.2 Checklist Instructions

~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist Submittal Requirements

The ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist shall accompany the project application for all projects and plans proposed within unincorporated Los Angeles County's land use authority that are subject to CEQA~~, whether supported by private or government (local or state) funding~~. The ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist is designed to assist ~~the project applicant~~ in identifying the GHG emissions reduction actions and other applicable sustainability-focused requirements specific to a proposed project~~.~~. However, it may be necessary to supplement the completed ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist with supporting materials, calculations, or certifications to demonstrate compliance with all the applicable CEQA streamlining ~~requirements provisions~~ requirements in the ~~2045 CAP~~

[5] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in January 2023.

~~Checklist~~2045 CAP CEQA Streamlining Checklist. The ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist shall be included in the respective project conditions of approval.

~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist Applicability

The ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist allows for streamlined project-specific CEQA GHG analysis. The ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist is only required if a project applicant wants to use CEQA streamlining for GHG impacts; it is not required if a project-level environmental analysis of GHG impacts is conducted. As such, the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist is voluntary. The ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist cannot be used for projects requiring a General Plan amendment associated with land use density increases. Ministerial projects and projects that otherwise are exempt from CEQA are deemed to be consistent with the 2045 CAP, and no further review is necessary, with the exception of the residential infill categorical exemption (CEQA Guidelines Section 15195), for which projects are required to demonstrate consistency with the 2045 CAP through the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist if the applicant elects to use CEQA streamlining for GHG impacts. All projects using the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist for CEQA streamlining must demonstrate consistency with the General Plan growth projections. **If a project is not consistent with the General Plan growth projections, then the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist may not be used for CEQA streamlining.**

~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist Instructions

Project applicants shall complete the following **four steps** to demonstrate ~~conformance~~ compliance with the 2045 CAP for a proposed project.

Step 1. Demonstrate consistency with the General Plan g~~G~~rowth p~~P~~rojections (**Table F-1**).

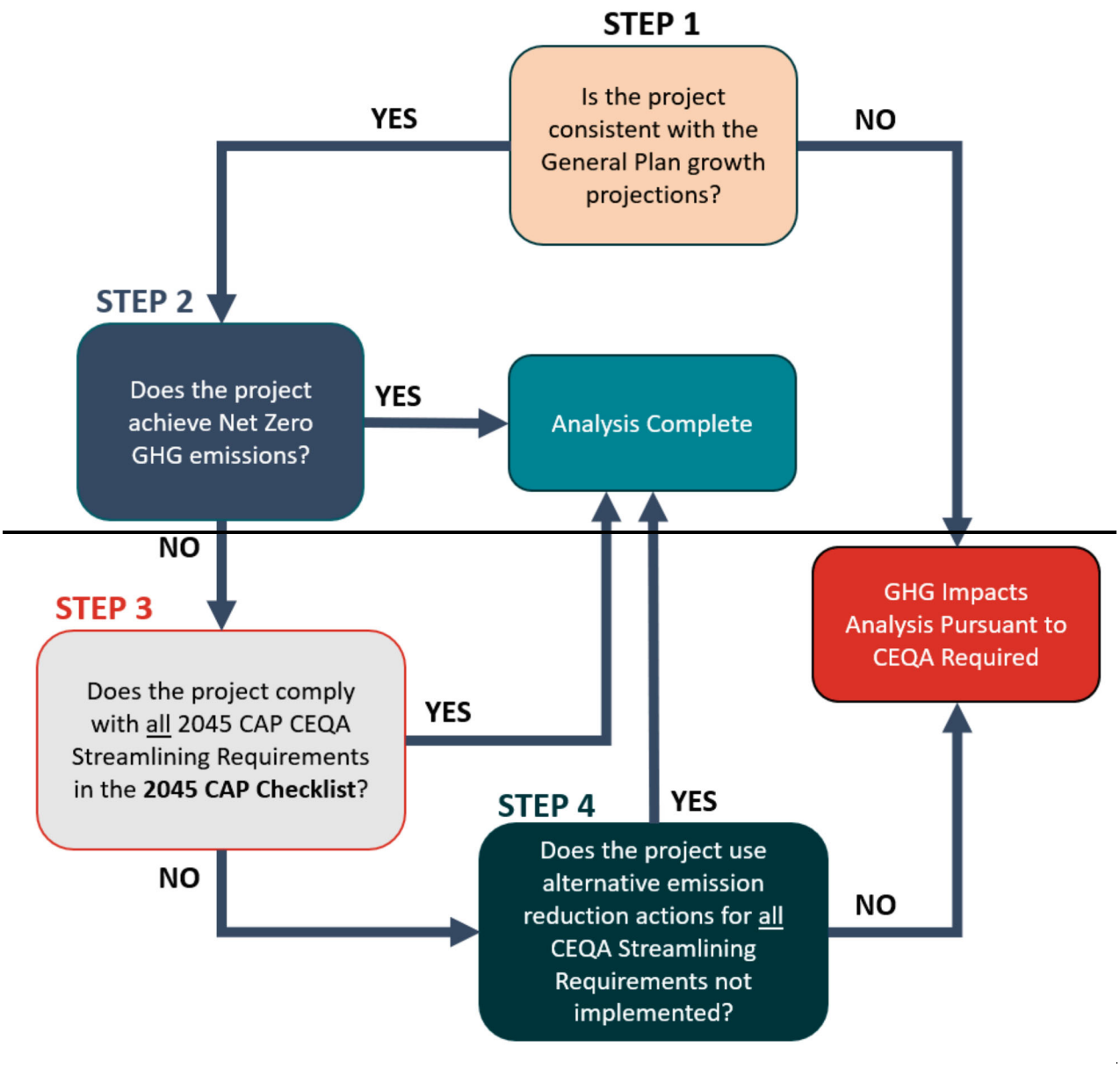
Step 2. Determine whether the project screens out of certain CEQA streamlining requirements (Table F-1).

Step 3. ~~Demonstrate compliance with~~Complete the 2045 CAP CEQA ~~streamlining requirements~~Streamlining Checklist (Table F-1).

Step 4. Identify alternative project emissions reduction measures and additional GHG reductions (**Table F-2**), as needed.

All projects must complete ***Step 1:*** *Demonstrate Consistency with the General Plan Growth Projections* and ***Step 2:*** *Determine Whether the Project Screens Out of Certain CEQA Streamlining Requirements*. Projects that do not meet the screening criteria must complete ***Step 3:*** *~~Demonstrate Compliance with~~Complete the 2045 CAP CEQA Streamlining Requirements*. Projects that cannot meet all CEQA streamlining requirements shown in Table F-1 must also complete ***Step 4:*** *Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions* (Table F-2) to describe alternative GHG emissions reduction measures that serve as replacements to any CEQA streamlining requirements not met by the project.

The following ~~proces~~8rocesss, illustrated in **Figure F-1**, explains how to demonstrate consistency of a project with the 2045 CAP's GHG emissions reduction measures and actions, and thereby streamline the project's GHG impacts analysis by tiering from the certified Final PEIR for the 2045 CAP.


STEP 1
Is the project consistent with the General Plan growth projections?
YES
NO
STEP 2
Does the project achieve Net Zero GHG emissions?
YES
Analysis Complete
NO
STEP 3
Does the project comply with all 2045 CAP CEQA Streamlining Requirements in the 2045 CAP Checklist?
YES
NO
STEP 4
Does the project use alternative emission reduction actions for all CEQA Streamlining Requirements not implemented?
YES
NO
GHG Impacts Analysis Pursuant to CEQA Required

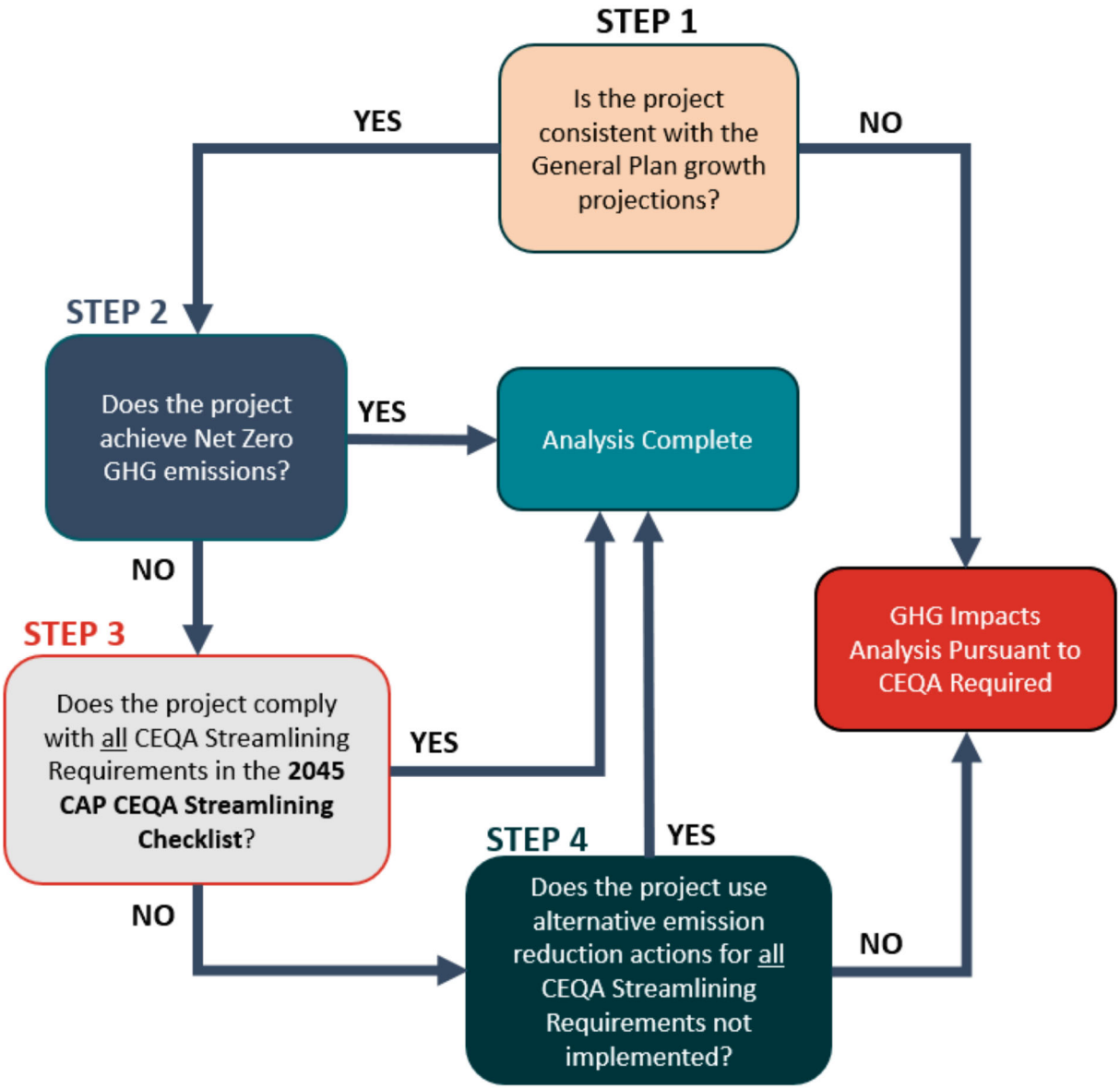


Figure F-1: Determining Consistency with the 2045 CAP for CEQA Streamlining

Step 1: Demonstrate Consistency with the General Plan Growth Projections

All projects must demonstrate consistency with the General Plan growth projections. **If a project is not consistent with the General Plan growth projections, then the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist may not be used for CEQA streamlining.** Complete the *General Plan Consistency* section of **Table F-1,** *General Plan and CEQA Streamlining Requirement Checklist*, below.

The options for determining General Plan consistency (included in Table F-1) are as follows:

- Is the proposed project consistent with the General Plan growth projections? If yes, move to **Step 2** below. If no, the proposed project may not streamline its GHG impacts analysis by using the 2045 CAP's EIR, and instead must prepare a comprehensive project-specific

analysis of GHG emissions and impacts pursuant to CEQA. Such projects are also encouraged to incorporate all the CEQA streamlining requirements in the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist.

Step 2: Determine Whether the Project Screens Out of Certain CEQA Streamlining Requirements

Certain projects may screen out of compliance with certain CEQA streamlining requirements contained in Table F-1 if such projects meet specific criteria. These criteria are designed to ensure high efficiency and low GHG emissions and describe projects that would generally comply with the 2045 CAP.

~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist Screening Criteria: Projects may skip the *Demonstrate Compliance with the CEQA Streamlining Requirements* section of Table F-1 below if they meet the following criteria:

- If the project would achieve **~~net~~ net zero GHG emissions** ~~for project operations at full buildout,~~ the project is considered to comply with the 2045 CAP and the analysis is complete.

~~Net z~~Net Zzero GHG emissions ~~for the project operations at full buildout~~ means that the project's GHG emissions from construction and operational activities occurring at full buildout would result in zero total GHG emissions on an annual basis. In other words, all GHGs emitted the atmosphere during construction and operation by a project are balanced completely by GHG sequestration and removal over each calendar year period. Construction GHG emissions should be amortized for the project (typically 30 or 40 years) and added to the annual full buildout operational emissions to determine total annual emissions. Net z~~In other words, either a project would produce zero total GHG emissions from all sources, or all GHG emissions produced by a project at full buildout operations are balanced completely by carbon sequestration and removal, for each year of operation. Z~~ero GHG emissions for a project does not consider ~~total net~~ GHG emissions ~~from construction and operation of the proposed project is zero~~ from existing conditions or existing uses at the project site.~~. In other words, all emissions of GHGs emitted the atmosphere during construction and operation are balanced by removals of GHG emissions over each calendar year period. For example, if the project emits 3,000 $MTCO_2e$ per year through both construction and operations but removes or sequesters 3,000 $MTCO_2e$ per year, the project would achieve net zero GHG emissions.~~ For example, if a project ~~implements GHG-reducing technologies to reduce its full-buildout operational emissions to~~ emits 1,500 $MTCO_2e$ per year for both construction and operations~~,~~ but includes the planting of enough new trees to sequester 1,500 $MTCO_2e$ per year, the project would achieve net zero GHG emissions. ~~This zero GHG requirement does not include GHG emissions from construction activities.~~

To demonstrate that the project achieves net ~~net~~ zero GHG emissions, the applicant must submit a comprehensive quantitative project-specific analysis of all GHG emissions, sinks, and removals~~, sinks, and removals from construction and operations, consistent with all CEQA guidelines and standard practice for modeling GHG emissions~~ from construction and full buildout ~~full buildout for projects~~operations, consistent with CEQA guidelines and standard practice for modeling GHG emissions for projects. If the project meets thi~~se~~s ~~criteria~~criterion~~a~~, the project does not need to complete **Table F-1** below and the analysis is complete.

Transportation Screening Criteria: Projects may skip CEQA streamlining requirements #3, #4, #5, #11, and #12 of the *Demonstrate Compliance with the CEQA Streamlining Requirements* section of Table F-1 below if they meet the following criteria (based on the 2020 Los Angeles County Department of Public Works Transportation Impact Analysis Guidelines):[6]

1. For development projects:[7]
    a. If the project does not have a retail component, and the project generates a net increase of less than 110 daily vehicle trips,[8] then it screens out.
    b. If the project has a retail component, and it contains retail uses that do not exceed 50,000 square feet of gross floor area,[9] then it screens out.
    c. If the project has a residential component, and 100 percent of the units, excluding manager's units, are set aside for lower income households,[10] then it screens out.
    d. If the project is located within a one-half mile radius of a major transit stop or an existing stop along a high-quality transit corridor[11] and meets all of the following criteria, then it screens out:
        i. Has a Floor Area Ratio greater than 0.75. [12]
        ii. Provides less parking than required by the Los Angeles County Code.[13]
        iii. Is consistent with the Southern California Associated of Governments' Regional Transportation Plan/Sustainable Communities Strategy.[14]
        iv. Does not replace residential units set aside for lower income households with a smaller number of market-rate residential units.
2. For transportation projects:[15]
    a. If the project would not include the addition of through traffic lanes on existing or new highways, including general-purpose lanes, high-occupancy vehicle lanes, peak-period lanes, auxiliary lanes, and lanes through grade-separated interchanges (except

[6] Los Angeles County Department of Public Works. 2020. *Transportation Impact Analysis Guidelines*. July 2020. Available: https://dpw.lacounty.gov/traffic/trafficreportmsg.cfm. Accessed February 2022.
[7] The Transportation Impact Analysis (TIA) Guidelines provide a list of development project types, which include residential, office, manufacturing, institutional, and retail project types. For a complete list, see page 11 of the TIA Guidelines.
[8] As referenced in: Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.
[9] Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA.* December 2018.
[10] Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA.* December 2018.
[11] Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.
[12] Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.
[13] Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.
[14] Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.
[15] The TIA Guidelines describe transportation projects as projects that would increase vehicular/roadway capacity.

managed lanes, transit lanes, and auxiliary lanes of less than 1 mile in length designed to improve roadway safety),[16] then it screens out.

b. If the project would reduce roadway capacity and VMT, [17] then it screens out.

If the project meets the above criteria, it may skip certain transportation portions of the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist (see Table F-1 for details).

Step 3: Demonstrate Compliance with the 2045 CAP CEQA Streamlining Requirements

Table F-1 identifies the CEQA streamlining requirements for projects. Projects must demonstrate compliance with the 2045 CAP CEQA streamlining requirements listed in Table F-1 or document why the requirements are not applicable or are infeasible.[18] The corresponding 2045 CAP measures and actions are indicated in the table to provide additional context. The full text of the 2045 CAP measures and actions is provided in the 2045 CAP (see Chapter 3 and Appendix E).

All applicants shall complete the following steps for the *Transportation, Building Energy and Water, Waste*, and *Agriculture, Forestry, and Other Land Use (AFOLU)* sections of **Table F-1** below (unless the project meets the transportation screening criteria identified in Step 1 above, in which case the project may skip completion of certain sections of the *Transportation* section of Table F-1):

Step 3a. Review the ~~project~~ CEQA streamlining requirements described in the column titled "2045 CAP Streamlining Requirement."

Step 3b. Use the check boxes in the column titled "Project Complies" to indicate whether the "Project Complies," the requirement is "Not Applicable," or the "Project Does Not Comply and Alternative Measure Proposed."

Step 3c. Provide a qualitative analysis of the proposed project's compliance with the ~~2045 CAP~~ CEQA streamlining requirements in the column titled "Description of Project Measure(s)/Documentation of Compliance." This will be the basis for the CEQA analysis to demonstrate compliance with the 2045 CAP, and by extension, with SB 32. The qualitative analysis should provide:

i. A description of which streamlining requirements are included as part of the proposed project; or

ii. A description of why the streamlining requirement is not applicable to the proposed project; or

iii. A description of why the streamlining requirements are infeasible. If applicants select "Project Does Not Comply" or "Alternative Measure Proposed," they must complete Table F-2 to document what alternative project measures will be implemented to achieve a similar level of GHG reduction and how those GHG emissions reduction estimates were calculated.

[16] As noted above, the TIA Guidelines describe transportation projects as projects that would increase vehicular/roadway capacity.

[17] A list of transportation projects that are not likely to lead to a substantial or measurable increase in vehicle miles travelled are included in the County's TIA Guidelines, pp. 17–19.

[18] Please note that the ~~2045 CAP~~ CEQA streamlining requirements are not mitigation measures as defined by CEQA.

Step 3d. Provide specific project design criteria and/or reporting metrics to support the proposed project's compliance with each ~~2045 CAP~~ CEQA streamlining requirement. Specific information is requested for each respective item in the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist.

Regarding item #2 above, the project applicant can only select "Not Applicable" if the requirement is not relevant to the project. The project applicant should only select "Project Does Not Comply and Alternative Measure Proposed" if it is infeasible, as defined by the CEQA Guidelines, for the project to comply with the checklist requirement. Sufficient documentation of such infeasibility must be supplied to the County to support such a determination. The County retains ultimate discretion for determining the feasibility of the checklist requirement for the proposed project. Further, if "Project Does Not Comply and Alternative Measure Proposed" is selected for a specific checklist requirement, then the project applicant **must** identify an alternative measure to achieve the same or greater level of GHG emissions reduction as the CEQA streamlining requirement with which the project does not comply.

If the project applicant cannot fully complete these requirements, then the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist may not be used for CEQA streamlining of GHG emissions impacts. See the *Projects That ~~Cannot Comply~~Are Not Eligible for ~~with the~~ CEQA Streamlining ~~Requirements~~* section for additional instructions.

The 2045 CAP CEQA streamlining requirements are listed as either "Tier 1" or "Tier 2." These two levels are defined as follows:

Tier 1: Required for all discretionary projects in order to use CEQA streamlining for GHG impacts.

Tier 2: Encouraged for all discretionary projects. Although these measures are not required, projects are strongly encouraged to implement them. In Table F.1 below, these voluntary items are colored with gray shading.

In general, Tier 1 requirements were quantified in the 2045 CAP for GHG emissions reductions needed to achieve the 2030, 2035, and 2045 emissions reduction targets. Because these measures were quantified, they would be required for the 2045 CAP to achieve its full emissions reduction potential. Some Tier 1 measures were not quantified, but they either are required through other code or ordinance (such as compliance with the Transportation Demand Management Ordinance) or are deemed essential for the overall success of the 2045 CAP. Tier 2 requirements were identified as supporting actions but are not deemed essential for the overall success of the 2045 CAP.

Some Tier 1 and Tier 2 requirements point to future County regulations or ordinances that have not yet been developed, such as the forthcoming building decarbonization ordinance. In these instances, projects using the Checklist must only comply with currently adopted ordinances and requirements at the time of project approval.

The ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist includes the following Tier 1 and Tier 2 requirements, organized by strategy area:

Energy Supply

1. Tier 1: Sunset Oil and Gas Operations

2. Tier 1: Utilize 100% Zero-Carbon Electricity

Transportation

3. Meets Transportation Screening Criteria
4. Tier 1: Increase Density Near High-Quality Transit Areas
5. Tier 1: Incorporate Bicycle and Pedestrian Infrastructure
6. Tier 1: Comply with the County Transportation Demand Management (TDM) Ordinance
7. Tier 1: Comply with the County's Transportation Impact Guidelines
8. Tier 1: Incorporate Electric Vehicle Charging Infrastructure
9. Tier 1: Decarbonize Trucks
10. Tier 1: Incorporate Zero-Emission Technologies for Off-Road Vehicles & Equipment
11. Tier 1: Electrify County Fleet Vehicles (for municipal projects only)
12. Tier 2: Achieve a High Jobs/Housing Balance
13. Tier 2: Encourage Transit, Active Transportation, and Alternative Modes of Transportation
14. Tier 2: Implement Parking Limitations

Building Energy and Water

15. Tier 2: Decarbonize Existing Buildings
16. Tier 2: Decarbonize New Buildings
17. Tier 1: Increase Building Energy Efficiency
18. Tier 1: Implement Water Use Efficiency and Water Conservation
19. Tier 2: Reduce the Life-Cycle Carbon Intensity of Building Materials and Phase Out the Use of High-Global Warming Potential (GWP) Refrigerants
20. Tier 2: Use Energy Storage and Microgrids
21. Tier 2: Use Recycled Water and Graywater for Non-potable Uses and Include Rainfall Capture

Waste

22. Tier 1: Compost Organic Materials
23. Tier 1: Recycle Recyclable Materials
24. Tier 2: Incorporate On-site Composting, Mulching, and/or Anaerobic Digestion

Agriculture, Forestry, and Other Land Use

25. Tier 1: Incorporate Tree Plantings and Expand Urban Forest Cover
26. Tier 2: Conserve Forests, Woodlands, Shrublands, Grasslands, Desert, and other Carbon-Sequestering Wildlands and Working Lands
27. Tier 2: Implement Regenerative Agricultural Practices

2045 CAP Appendix B, *Emissions Forecasting and Reduction Methods*, provides the quantitative basis for the CEQA streamlining requirements.

Step 4: Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions

Projects that propose alternative GHG emissions reduction measures to those identified in Table F-1 or propose to include additional GHG emissions reduction measures beyond those described in Table F-1 shall provide a summary explanation of the proposed measures and demonstrate GHG reductions achievable though the proposed measures.[19] Documentation for these alternative or additional project measures shall be documented in **Table F-2,** *Applicant Proposed Alternative Project Emissions Reduction Measures*. Any applicants who select "Project Does Not Comply and Alternative Measure Proposed" in Table F-1 must complete the following steps for Table F-2.

Step 4a. In the column titled "Description of Alternative Measure," provide a qualitative description of what measure will be implemented, why it is proposed, and how it will reduce GHG emissions.

Step 4b. In the column titled "Description of GHG Reduction Estimate," demonstrate how the alternative project measure would achieve the same or greater level of GHG emissions reductions as the ~~2045 CAP~~CEQA streamlining requirement that it replaces. Documentation and calculation files must be attached separately.

An example alternative project measure may be installing additional EV charging infrastructure beyond what is required by the California Green Building Standards Code (CALGreen Code), County ordinance, or requirements in the forthcoming Zero Emission Vehicle Master Plan, to support zero-emission vehicles beyond what is specified in the 2045 CAP's performance objectives for Measure T6 (Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales). The applicant would then demonstrate how this would achieve the same or greater level of GHG emissions reductions as the checklist requirement for which it serves as an alternative.

Carbon offset credits are not permitted to be used as alternative project emissions reduction measures.

Guidance for Quantifying GHG Reductions from Alternative Measures

In order to use alternative GHG emissions reduction measures to replace a CEQA streamlining requirement in Table F-1 below, project applicants must use the three-step process outlined below to quantitatively demonstrate how the alternative project measure would achieve the same or greater level of GHG emissions reductions as the CEQA streamlining requirement (or requirements) that it replaces.

Project applicants should follow these three steps:

Step 4c. Prepare a detailed quantified GHG emissions inventory for the project taking into consideration all GHG-reducing project features and ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist items included as part of the project (including proposed mitigation measures, project design features, strategies being implemented, and other County requirements).

[19] Please note that the alternative GHG emissions reduction measures are not mitigation measures as defined by CEQA.

Project applicants shall prepare a detailed quantified GHG emissions inventory for the project taking into consideration all GHG-reducing project features and CEQA streamlining requirements included as part of the project (including proposed mitigation measures, project design features, strategies being implemented, and other County requirements), ***except*** for the alternative GHG emissions reduction measures proposed by the applicant to replace any Tier 1 CEQA streamlining requirement (as described in Step 4e). Applicants should use CalEEMod, CARB's Emission FACtor model (EMFAC),[20] the CAPCOA Handbook, and other commonly accepted GHG modeling methods and protocols.

Step 4d. For each Tier 1 ~~Checklist~~ CEQA streamlining requirement that the project will not meet, include a quantified calculation of the additional GHG emission reductions that would have occurred had the project implemented the Tier 1 Checklist streamlining requirement.

Project applicants shall, for all Tier 1 CEQA streamlining requirements that the project will not meet, a quantified calculation of the additional GHG emission reductions that would have occurred had the project implemented those Tier 1 CEQA streamlining requirements. In order to do this, applicants shall prepare a project model run assuming the implementation of all Tier 1 CEQA streamlining requirement that the project will not meet. Applicants should then compare the project's GHG emissions from this scenario with the project's GHG emissions from Step 4c above. The difference in GHG emissions between the two scenarios represents the GHG emission reductions that would have occurred had the project implemented all Tier 1 CEQA streamlining requirements; this is the amount of GHG emissions required to be reduced in total by the alternative GHG emissions reduction measures.

Step 4e. Propose an alternative measure (or set of measures) and demonstrate quantitatively that the alternative measures would achieve a GHG emission reduction equivalent to the GHG emission reduction that would have resulted from complying with the Tier 1 ~~Checklist~~ CEQA streamlining requirement.

Project applicants shall provide a quantified measure or set of measures that closes the gap between the two scenarios as quantified in Step 4c and Step 4d. In order to do this, applicants shall prepare a project model similar to Step 4c but include all alternative GHG emissions reduction measures proposed by the applicant. The resulting GHG emissions from this model run must equal or be less than the GHG emissions resulting from the project model run in Step 4d above which assumes the implementation of all Tier 1 CEQA streamlining requirements. In other words, the GHG emission reductions achieved by the alternative measures must meet or exceed the GHG emission reductions achieved by the Tier 1 CEQA streamlining requirements.

Project applicants shall submit documentation to the City demonstrating all three steps above. This can include model run inputs and/or outputs, excel calculation files, or other documentation of the emission calculations.

[20] California Air Resources Board. 2022. EMFAC2021 Model. Version v1.0.2. Available: https://arb.ca.gov/emfac/. Accessed June 2023.

Potential alternative GHG emissions reduction measures to be considered include, but are not be limited to, measures recommended in the South Coast Air Quality Management District's latest CEQA Air Quality Guidelines, the California Air Resources Board Scoping Plan (December 2022, as may be revised),[21] the California Air Pollution Control Officers Association (CAPCOA) *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* (December 2021, as may be revised),[22] the CAPCOA California Emissions Estimator Model (CalEEMod),[23] the California Attorney General's *Mitigation for Greenhouse Gas Emissions* guidance,[24] and Reference Guides on Leadership in Energy and Environmental Design (LEED) published by the U.S. Green Building Council.[25]

As for any project design features or mitigation measures implemented via the County's project approval and CEQA review process, the project applicant shall implement all alternative GHG emissions reduction measures proposed. For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits and implemented during construction. For operational GHG reduction measures to be incorporated into the project, the measures shall be implemented on ongoing basis.

~~Offsite GHG Reduction Program~~

~~Action ES5.4 of the 2045 CAP would establish an Offsite GHG Reduction Program for new development to use as a GHG reduction or mitigation pathway for 2045 CAP compliance and to fund programs for reducing GHG emissions in the built environment. This program would allow new development to fund decarbonization programs for existing development to accelerate 2045 CAP measures and actions or go beyond 2045 CAP measures and actions. The Offsite GHG Reduction Program could be used for projects that propose alternative GHG emissions reduction measures to those identified in Table F-1, or that propose to include additional GHG emissions reduction measures beyond those described in Table F-1. Once the Offsite GHG Reduction Program has been instituted by the County, project applicants will be able to use the program to complete Table F-2. Once established, the Offsite GHG Reduction Program should only be used after all feasible on-site GHG reduction measures are implemented at the project site to demonstrate compliance with the CEQA streamlining requirements. See Section F.4 for additional details.~~

Projects That ~~Cannot Comply with~~Are Not Eligible for ~~the~~ CEQA Streamlining ~~Requirements~~

In some cases, a project may not be able to comply with ~~demonstrate compliance with all~~meet all of the 2045 CAP CEQA ~~GHG~~ streamlining requirements. This may be because the project is inconsistent with the General Plan's growth projections as described in Step 1. Or a project may not be able to feasibly incorporate all CEQA streamlining requirements as identified in Table F-1 and discussed in Step 3; such a project may further be unable to adequately identify alternative project measures to achieve a similar level of GHG reduction to ~~infeasible~~ each CEQA streamlining requirement~~s~~ which a project cannot comply with. Such projects are not eligible to

streamline environmental review of their GHG impacts using the 2045 CAP's PEIR and ~~must~~ may be required to prepare a comprehensive project-specific analysis of GHG emissions pursuant to CEQA Guidelines (including the CEQA Guidelines Appendix G Environmental Checklist).

A comprehensive project-specific analysis of GHG emissions must be prepared for any project that elects not to use the Checklist for CEQA streamlining by completing Table F-1 and (if applicable) Table F-2. Such an analysis shall quantify existing and projected GHG emissions and evaluate potential impacts pursuant to the CEQA Guidelines (including the CEQA Guidelines Appendix G Environmental Checklist). It is strongly encouraged that the project incorporate all the CEQA streamlining requirements in the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist, though this is not required.

F.3 2045 CAP CEQA Streamlining Checklist

Table F-1, *General Plan and 2045 CAP CEQA Streamlining ~~Requirement~~ Checklist,* allows the applicant to demonstrate compliance with the 2045 CAP's GHG emissions reduction measures and actions. This table addresses ***Step 1:*** *Demonstrate Consistency with the General Plan Growth Projections*; ***Step 2:*** *Determine Whether the Project Screens Out of Certain CEQA Streamlining Requirements*; and ***Step 3:*** *Demonstrate Compliance with the CEQA Streamlining Requirements*. This checklist must be completed for all applicable projects electing to streamline their CEQA GHG analysis.

Table F-2, *2045 CAP Greenhouse Gas Emissions Reduction Alternative Measures*, allows the project applicant to document alternative GHG emissions reduction measures used to demonstrate compliance with the Table F-1 CEQA streamlining requirements. This table addresses ***Step 4:*** *Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions*. This checklist is required only for projects that propose to use alternative GHG emissions reduction measures.

Table F-1: General Plan and 2045 CAP CEQA Streamlining ~~Requirement~~ Checklist

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
Step 1: Demonstrate Consistency with the General Plan Growth Projections		
1. The Project is Consistent with the General Plan Growth Projections The growth projections included in the General Plan were used in the 2045 CAP to estimate unincorporated Los Angeles County GHG emissions over time. Therefore, projects must be consistent with the General Plan to comply with the CEQA streamlining requirements. To determine a project's consistency with the General Plan growth projections, please answer the following question and provide an explanation with supporting documentation. **Is the proposed project consistent with the existing land use designation of the Land Use Element and the 2021 Housing Element Update?** If "Yes," proceed to **Step 2: Determine Whether the Project Screens Out of Certain CEQA Streamlining Requirements** below. If "No," the proposed project may not streamline its GHG impacts analysis by using the 2045 CAP's EIR and must prepare a comprehensive project-specific analysis of GHG emissions and impacts pursuant to CEQA.	*Describe how the project is consistent with the General Plan growth projections. Provide additional supporting documentation as an attachment as needed.* *OR,* *Explain why the project is not consistent with the General growth projections, and whether the project would include a General Plan amendment. If the project includes a General Plan amendment, STOP HERE.*	☐ Yes ☐ No
Step 2: Determine Whether the Project Screens Out of ~~Certain~~ the CEQA Streamlining Requirements		
Certain projects may screen out of the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining ~~Checklist~~Requirements if they meet the following screening ~~criteria~~criterion. **Does the project achieve net zero GHG emissions?** The project must conduct a comprehensive project-specific analysis of all GHG emissions, sinks, and removals, consistent with all CEQA guidelines and standard practice for modeling GHG emissions for projects, to demonstrate that the project achieves net zero GHG emissions. If "Yes," the project would comply with the CEQA streamlining requirements and no additional analysis is needed (no project-specific GHG impact analysis would be required). If "No," proceed to **Step 3: Demonstrate Compliance with the CEQA Streamlining Requirements** below.	*If "Yes," attach to this checklist the estimated project GHG emissions. Provide supporting calculation files and documentation for this analysis. If the proposed project is determined to result in net zero GHG emissions, STOP HERE.* *If "No," proceed to Step 3 below.*	☐ Yes ☐ No

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
Step 3: Demonstrate Compliance with the CEQA Streamlining Requirements		
Energy Supply		
1. TIER 1: Sunset Oil and Gas Operations For any project involving the decommissioning, replacement, retrofit, or redesign of infrastructure or facilities associated with the oil and gas industry, including energy generation (i.e., cogen), the project must: A) Comply with the Oil Well Ordinance (Title 22). B) Reduce fossil fuel–based emissions by at least 80% compared to existing conditions. C) If the project site includes existing active and abandoned oil wells, examine all wells for fugitive emissions of methane. Reduce such existing emissions by a minimum of 80%. D) To reduce any residual fossil fuel–based emissions generated by the project, incorporate carbon removal technologies including direct air capture and carbon and sequestration, as feasible. **Supports 2045 CAP Measures (and Actions):** ES1 (ES1.1, ES1.2, ES1.3)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed as a replacement strategy (provide additional documentation as described below).* *IN ADDITION, provide documentation of the project's ability to reduce fossil fuel–based emissions, including fugitive methane emissions.* *Provide the number of oil and gas operations/wells closed. Provide documentation of any carbon removal technologies incorporated at the project site.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
2. TIER 1: Utilize 100% Zero-Carbon Electricity The project must utilize 100% zero-carbon electricity on-site. The project must comply with one of the following options: A) Install on-site renewable energy systems or participate in a community solar program to supply 100% of the project's estimated energy demand to the maximum extent feasible. B) Participate in Southern California Edison at the Green Rate level (i.e., 100% carbon-free electricity) for all electricity accounts associated with the project until SCE provides 100% carbon-free electricity for all accounts by default. C) Participate in the Clean Power Alliance at the Clean Rate level (i.e., 100% carbon-free electricity) for all electricity accounts associated with the project until CPA provides 100% carbon-free electricity for all accounts by default. D) A combination of #1, #2, and #3 above such that 100% of the project's electricity consumption is supplied by zero-GHG emission sources of power generation, whether by utilities or by on-site electricity generation or both. **Supports 2045 CAP Measures (and Actions):** ES2 (ES2.1, ES2.2), ES3 (ES3.1, ES3.2, ES3.3, ES3.4, ES3.5, ES3.6)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below)* *IN ADDITION, provide the project's anticipated electricity demand, the project's participation and opt-out rates for SCE's Green Rate and CPA's Clean Rate electricity rate options used by tenants; and the total kW of solar PV panels installed at the project site.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
Transportation		
3. Meets Transportation Screening Criteria For development projects, does the project: A) have no retail component and generate a net increase of less than 110 daily vehicle trips? If "Yes," skip streamlining requirements #4, #5, #12, #13, and #14 below. Please complete items #6 through #11 below. If "No," proceed to item (B) below. For development projects, does the project: B) have a retail component and contains retail uses that do not exceed 50,000 square feet of gross floor area? If "Yes," skip streamlining requirements #4, #5, #12, #13, and #14 below. Please complete items #6 through #11 below. If the project contains retail and is mixed use, proceed to item (C) below. If "No," proceed to item (C) below. For development projects, does the project: C) have a residential component and 100% of the units, excluding manager's units, are set aside for lower income households? If "Yes," skip streamlining requirements #4, #5, #12, #13, and #14 below. Please complete items #6 through #11 below. If the project contains retail and is mixed use, proceed to item (D) below. If "No," proceed to item (D) below. For development projects: D) Is the project located within a one-half mile radius of a major transit stop or an existing stop along a high-quality transit corridor and: i. has a Floor Area Ratio greater than 0.75? ii. provides less parking than required by the Los Angeles County Code? iii. is consistent with the Southern California Association of Governments (SCAG) Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS)? iv. does not replace residential units set aside for lower income households with a smaller number of market-rate residential units? If "Yes," skip streamlining requirements #4, #5, #12, #13, and #14 below. Please complete items #6 through #11 below. If "No," proceed to streamlining requirement #3 below. For transportation projects, does the project meet one of the following transportation screening criteria?	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why such actions are infeasible and identify the alternative measure(s) proposed as an alternative strategy (provide additional documentation as necessary).*	☐ Yes ☐ No

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
A) The project would not include the addition of through traffic lanes on existing or new highways, including general-purpose lanes, high-occupancy vehicle (HOV) lanes, peak-period lanes, auxiliary lanes, and lanes through grade-separated interchanges (except managed lanes, transit lanes, and auxiliary lanes of less than 1 mile in length designed to improve roadway safety). B) The project would reduce roadway capacity and VMT. If "Yes," skip streamlining requirements #4, #5, #12, #13, and #14 below. Please complete items #6 through #11 below. If "No," proceed to streamlining requirement #4 below. **Supports 2045 CAP Measures (and Actions):** T1 (T1.1, T1.2)		
4. TIER 1: Increase Density Near High-Quality Transit Areas If the project is located within a High Quality Transit Area (HQTA), it must achieve a minimum of 20 dwelling units (DU) per acre, consistent with the Housing Element Rezoning Program. If the project is not located within an HQTA, it must locate residential and employment centers within 1 mile of an HQTA. **Supports 2045 CAP Measures (and Actions):** T1 (T1.1, T1.2)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed as a replacement strategy (provide additional documentation as described below).*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
5. TIER 1: Incorporate Bicycle and Pedestrian Infrastructure The project must incorporate pedestrian and bicycle infrastructure into its design: A) Provide pedestrian facilities and connections to public transportation consistent with the Pedestrian Action Plan, Active Transportation Plans, and Vision Zero Action Plan, and any other relevant governing plan. B) Provide bicycle facilities consistent with the Bicycle Master Plan, Active Transportation Plans, and Vision Zero Action Plan, and any other relevant governing plan, and meet or exceed minimum standards for bicycle facilities in the Zoning Code and CALGreen Code. C) Increase sidewalk coverage to improve pedestrian access. D) Improve degraded or substandard sidewalks. E) Incorporate best practices to ensure pedestrian infrastructure is contiguous and links externally with existing and planned pedestrian facilities; best practices include high-visibility crosswalks, pedestrian hybrid beacons, and other pedestrian signals, mid-block crossing walks, pedestrian refuge islands, speed tables, bulb-outs (curb extensions), curb ramps, signage, pavement markings, pedestrian-only connections and districts, landscaping, and other improvements to pedestrian safety.	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed as a replacement strategy (provide additional documentation as described below)* *IN ADDITION, provide the length and/or amount of bicycle and pedestrian infrastructure incorporated, such as feet or miles of bikeways.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
F) Minimize barriers to pedestrian access and interconnectivity, such as walls, landscaping buffers, slopes, and unprotected crossings. G) Provide bicycle facilities for new and expanded buildings, new dwelling units, change of occupancy, increase of use intensity, and added off-street vehicle parking spaces. H) Provide short- and long-term (secure) bicycle parking for at least 5% of motorized vehicle capacity and nothing less than CALGreen Code requirements, whichever is more restrictive. I) Support the County's goal to increase bikeway miles by 300 percent by 2030 (including Class I bike paths, Class II bike lanes, and Class III bike routes). **Supports 2045 CAP Measures (and Actions):** T3 (T3.1, T3.2, T3.3)		
6. TIER 1: Comply with the County Transportation Demand Management (TDM) Ordinance The Project must comply with the TDM ordinance at the time of project approval. This may include preferential carpool/vanpool parking, bicycle parking, and shower facilities and locker rooms; trip reduction plans; transit-supportive infrastructure development; and similar strategies. Comply with any applicable VMT reduction target and incorporate any required monitoring mechanisms for development, subject to the ordinance. **Supports 2045 CAP Measures (and Actions):** T4 (T4.5)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below)* *IN ADDITION, provide the number of employers participating in the TDM program, the total trip reduction goals for the project's TDM program, and the total trips and VMT reduced via the project's TDM program.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
7. TIER 1: Comply with the County's Transportation Impact Guidelines The project must comply with the County's current Transportation Impact Analysis (TIA) Guidelines. Projects may screen out if they meet certain criteria, such as being located in a transit priority area or local-serving retail development less than 50,000 square feet. Projects that do not screen out must meet the VMT efficiency metrics identified by the TIA Guidelines (e.g., daily VMT per capita for residential projects that is 16.8% below the existing residential VMT per capita for the Baseline Area in which the project is located) and quantitatively demonstrate how these metrics are achieved, pursuant to the TIA Guidelines requirements. **Supports 2045 CAP Measures (and Actions):** T1, T2, T3, T4, T5	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed strategy (provide additional documentation as described below).*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
8. TIER 1: Incorporate Electric Vehicle Charging Infrastructure The project must incorporate zero-emission vehicle (ZEV) infrastructure and incentives into its design as follows: A) Comply with any CALGreen Code requirement, County ordinance, building code, or condition of approval that requires a certain amount of electric vehicle (EV) charging infrastructure (EVCSs) and readiness. This may include minimum requirements for EV charging stations, EV-capable parking spaces, and EV-ready parking spaces. B) Comply with any provisions and requirements in the forthcoming Zero Emission Vehicle Master Plan.[1] C) Include electric options for promoting active transportation, such as electric scooters and e-bikes. D) Provide education and outreach to tenants and occupants about the benefits of ZEVs and the project's EV infrastructure. **Supports 2045 CAP Measures (and Actions):** T6 (T6.1, T6.2, T6.3, T6.4, T6.5, T6.6, T6.7)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below)* *IN ADDITION, provide the number of ZEVs in the project's tenant's and vendor fleet, if available; the number of public and private EVCSs installed; and the number of scooters/e-bikes available to tenants.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
9. TIER 1: Decarbonize Trucks For projects that include goods movement facilities and/or warehouses, the project must incorporate freight decarbonization technologies and infrastructure, including: A) Comply with any CALGreen Code requirement, County ordinance, building code, or condition of approval that requires a certain amount of EV charging infrastructure and readiness for goods movement facilities and trucks. B) Provide EVCSs at all new warehouse loading docks. C) Comply with any provisions and requirements in the forthcoming Zero Emission Vehicle Master Plan related to goods movement. D) Implement freight decarbonization technologies along highway corridors. E) For all goods movement facilities, install alternative fueling infrastructure such as EVCSs, green hydrogen fueling stations, and/or biomethane fueling stations. F) Comply with any established zero-emission delivery zones. **Supports 2045 CAP Measures (and Actions):** T8 (T8.1, T8.2, T8.3, T8.4, T8.5)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the number of ZEV trucks in the project's tenant's and vendor fleet if available and the number EVCS installed.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
10. TIER 1: Incorporate Zero-Emission Technologies for Off-Road Vehicles & Equipment The project must: A) Prohibit the use of small equipment powered by gasoline, diesel, propane, or other fossil fuels, including lawn and garden equipment and outdoor power equipment, for all tenants and owners. B) Provide educational materials to tenants regarding the SCAQMD Electric Lawn and Garden Equipment Incentive and Exchange Program, Commercial Lawn & Garden Battery Buy-Down Rebate Program, the Residential Lawn Mower Rebate Program, the new requirements of AB 1346, and any other available options and incentives for purchasing zero-emission equipment, including rebates and subsidies offered by CARB, the County, or other agencies and entities. C) Use electric and zero-emission construction equipment during project construction to the maximum extent feasible. Such equipment shall include forklifts, manlifts, loaders, welders, saws, pumps, fixed cranes, air compressors, sweepers, aerial lifts, pressure washers, and other small equipment. At minimum, the project must use off-road construction equipment that meet CARB Tier 4 Final engine emission standards. D) Use electric and zero-emission agriculture and manufacturing equipment to the maximum extent feasible. These requirements must be stipulated in the contract specifications for the project's construction and for the project's future tenants and any landscaping contracts for the property or tenants. **Supports 2045 CAP Measures (and Actions):** T9 (T9.1, T9.2, T9.3)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide off-road vehicle and equipment fleet count, type, and fuel type, as available.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
11. TIER 1: Electrify County Fleet Vehicles (for municipal projects only) For all new municipal projects and facilities that include the purchase or operation of new fleet vehicles, including public transit buses and shuttles, all such fleet vehicles must be ZEVs. **Supports 2045 CAP Measures (and Actions):** T7 (T7.1, T7.2)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the number of new ZEV buses and the total ZEV percentage of the project's fleet.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
12. TIER 2: Achieve a High Jobs/Housing Balance For projects with nonresidential development, the Project must incorporate the following design elements: A) Support the County's goal to achieve a job density of 300 jobs per acre. **Supports 2045 CAP Measures (and Actions):** T2 (T2.1)	*Describe how the project will achieve a job density of 300 jobs per acre.* *OR,* *Describe why this action is not applicable to your project.* *OR* *Describe why such actions are not incorporated into your project.* *IN ADDITION, provide the job density of the project in terms of jobs per acre.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
13. TIER 2: Encourage Transit, Active Transportation, and Alternative Modes of Transportation For transit projects only, incorporate the following: A) Expand and improve frequency of existing network of County shuttles. B) Install bus-only lanes and signal prioritization along major thoroughfares. C) Install full bus rapid transit infrastructure along priority corridors. For all other projects, incorporate the following: A) Provide new mobility services, such as micro transit, autonomous delivery vehicles, and on-demand autonomous shuttles, in unincorporated Los Angeles County. B) Offer free transit passes for students, youth, seniors, disabled, and low-income populations. C) Implement telecommuting by project tenants and residents. D) Establish temporary and permanent car-free areas at the project site. **Supports 2045 CAP Measures (and Actions):** T4 (T4.1, T4.2, T4.3, T4.6, T4.7, T4.8, T4.10)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project.* *IN ADDITION, for transit projects, provide the size of area served by transit, the number of employees and residents served by transit, the transit service frequency and headways, the increase in headways or frequencies provided by the project, total transit service hours provided by transit, the number and length of bus-only lanes, and information on signal prioritization on transit routes implemented by the project.* *For non-transit projects, provide the number of residents within one-half mile of bus or active transportation services; information on any new mobility services offered, information on free transit passes offered, the number of employers participating in telecommuting programs, and the number and location of car-free areas provided by the project.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
14. TIER 2: Implement Parking Limitations Projects should include the following characteristics: A) Shared and reduced parking strategies, such as shared parking facilities, carpool/vanpool-only spaces, shuttle facilities, EV-only spaces, and reduced parking below allowable amount B) Minimum amount of required parking C) Unbundled parking costs to reflect cost of parking D) Parking pricing to encourage "park-once" behavior E) Compliance with all County parking reform strategies and policies **Supports 2045 CAP Measures (and Actions):** T5 (T5.1)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions not incorporated into your project.* *IN ADDITION, provide the total number of parking spaces, carpool/vanpool-only spaces, shuttle facilities, EV-only spaces; information on parking costs and unbundling; and parking prices.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
Building Energy and Water		
15. TIER 2: Decarbonize Existing Buildings This action applies only to projects that include a retrofit, remodel, or redesign of an existing building. If the proposed project does not include a retrofit, remodel, or redesign, select "Not Applicable" in the *Project Complies* column. The project must incorporate the following design elements: A) Achieve zero GHG emissions for on-site energy use. B) Comply with all applicable Building Performance Standards.[2] C) Comply with all building carbon intensity limits.[3] D) If the project is a major renovation, achieve ZNE and/or comply with the City's ZNE ordinance.[4] **Supports 2045 CAP Measures (and Actions):** E1 (E1.1, E1.2, E1.3, E1.4, E1.5, E1.6)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the project's anticipated GHG emissions associated with on-site energy consumption (i.e., natural gas use and electricity use) and the number of existing buildings transitioned to zero-GHG buildings.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
16. TIER 2: Decarbonize New Buildings For projects under construction before 2030, the project must achieve zero GHG emissions for on-site energy use, and/or comply with the County's building decarbonization ordinance, unless the project meets specific exemptions identified in the ordinance.[5] For projects under construction after 2030, the project must be zero-net-energy (ZNE) and achieve zero GHG emissions for on-site energy use, and/or comply with the -County's ZNE ordinance, unless the project meets specific exemptions identified in the ordinance.[6] **Supports 2045 CAP Measures (and Actions):** E2 (E2.1, E2.2, E2.3)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the number and square footage of zero GHG emission buildings built, all ZNE buildings built, and the total GHG emissions anticipated for all buildings.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
17. TIER 1: Increase Building Energy Efficiency This action applies only to projects that include a retrofit of an existing building. If the proposed project does not include a retrofit, select "Not Applicable" in the *Project Complies* column. The project shall incorporate the following energy efficiency measures into the design: A) Comply with all applicable building performance standards.[7] B) Incorporate strategic energy management programs to reduce building energy demands. C) Conduct an energy audit or benchmarking analysis to identify potential energy savings opportunities and implement such opportunities. D) Achieve CALGreen Code Tier 2 or voluntary building energy measures as they apply to the retrofit. E) Replace existing appliances with higher-efficiency models. F) Install heat-trapping surfaces to cool or green surfaces, as feasible. G) Participate in SoCalREN, SCE, CPA, or other energy efficiency programs. H) Conduct other energy efficiency retrofits. I) Achieve zero-net-energy, if feasible. **Supports 2045 CAP Measures (and Actions):** E4 (E4.1, E4.2, E4.3)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the total number of energy retrofits performed, the building size (square footage) retrofit, the total project energy use and anticipated energy savings through retrofits, and the number and area of cool and green roofs installed.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
18. TIER 1: Implement Water Use Efficiency and Water Conservation The project must comply with the current water conservation ordinance in place, including any requirements for LEED or Sustainable SITES standards.[8] The project must also incorporate water use efficiency and conservation measures, including: A) High-efficiency appliances/fixtures to reduce water use, and/or include water-efficient landscape design B) CALGreen Code Tier 1 and Tier 2 voluntary water conservation measures C) Low-flow or high-efficiency water fixtures D) Water-efficient landscapes with lower water demands than required by the DWR 2015 Model Water Efficient Landscape Ordinance E) Drought-tolerant and native plant species only F) A comprehensive water conservation strategy G) Educational materials provided to future tenants and building occupants about water-saving behaviors and water-conserving landscaping	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the project's estimated total water consumption (in GPCD or total gallons), the square footage of buildings that are water-neutral, and the project's building size (square footage).*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
Supports 2045 CAP Measures (and Actions): E6 (E6.1, E6.2, E6.3, E6.4, E6.5)		
19. TIER 2: Reduce the Life-Cycle Carbon Intensity of Building Materials and Phase Out the Use of High-GWP Refrigerants The project must incorporate the following design elements to the maximum extent feasible: A) For projects that are not fully electric, incorporate biomethane into the natural gas mix in place of traditional natural gas. B) Use negative-carbon concrete for all construction. C) Use low-GWP refrigerants and fire suppression equipment for all uses on-site. D) Comply with all County codes and ordinances regarding building material carbon intensity and high-GWP refrigerants and other gases. **Supports 2045 CAP Measures (and Actions):** E3 (E3.1, E3.2, E3.3, E3.4)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project.* *IN ADDITION, provide the amount of biomethane used by the project, the quantify of negative-carbon concrete for construction, and the quantity of low-GWP refrigerants and fire suppression equipment used.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
20. TIER 2: Use Energy Storage and Microgrids The project must incorporate the following design elements to the maximum extent feasible: A) Install energy storage systems. B) Use a building-scale or community microgrid to support demand management and peak shaving. **Supports 2045 CAP Measures (and Actions):** ES4 (ES4.1, ES4.2, ES4.3, ES4.4, ES4.5)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project* *IN ADDITION, provide the total kW of energy storage capacity installed and operational information for any microgrids utilized, if applicable.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
21. TIER 2: Use Recycled Water and Graywater for Non-potable Uses and Include Rainfall Capture The project must implement water reuse strategies onsite through the following design elements: A) Require use of reclaimed/recycled water and/or graywater for outdoor uses. B) Install residential graywater systems that meet appropriate regulatory standards. C) Install rainfall capture systems. D) Install dual plumbing for the use of recycled water. **Supports 2045 CAP Measures (and Actions):** E5 (E5.1, E5.2, E5.3, E5.4)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project* *IN ADDITION, provide the amount of reclaimed/recycled water and/or graywater used by the project.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
Waste		
22. TIER 1: Compost Organic Materials The project must comply with all state and local requirements for composting and organic waste collection, including but not limited to Chapter 20.91 (Mandatory Organic Waste Disposal Reduction Ordinance) of the Los Angeles County Code, including all County requirements pursuant to AB 1826 and SB 1383. The project must also: A) Provide proper storage, collection, and loading of organics in a manner that is convenient and safe for all users of the building. Ensure there are sufficient sizes of collection containers for organics. Containers must be kept clean, be clearly labeled, and are co-located next to any other solid waste receptacles. Ensure sufficient pick-up of collection containers to meet the needs of the occupants. B) Include space for multi-stream collection containers for both recycling and organics in any location where a solid waste container is traditionally housed. This includes both outdoor collection containers serviced by a waste hauler or indoor collection containers utilized by occupants. Provide educational material and training to occupants and tenants in how to properly separate organics from all other solid waste and place organics in a separate container designated for organics. C) Ensure that all project occupants and tenants will separate compostables from all other refuse and place compostables in a separate container designated for composting. D) Require that all single-use food service ware (plates, bowls, cups) and accessories (straws, utensils, condiment cups) used by tenants at the project site be BPI certified compostable fiber, except where certain materials may be deemed medically necessary or necessary to ensure equal access for persons with disabilities. E) Require that any single-use accessories (straws, utensils, condiment cups) be only available on demand. F) Ensure that containers are audited annually to ensure proper service levels and to check for contamination. Report findings back to occupants within 30 days and to the County as requested. G) Work with the waste hauler to provide educational materials to tenants on at least an annual basis. H) Provide compliance data to the County as required for any current auditing program. **Supports 2045 CAP Measures (and Actions):** W1 (W1.1, W1.2) and W2 (W2.1, W2.2, W2.5)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the project's estimated organic waste generation (tons), the amount of organic waste sent to landfills, and the amount of organic waste generated by the project which is diverted from landfills.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
23. TIER 1: Recycle Recyclable Materials The project must comply with all state and local requirements for recycling, also including but not limited to Section 20.72.170 (Recyclable Materials Collection Program) of the Los Angeles County Code and all County requirements pursuant to AB 341 and AB 1826. The project must also: A) Comply with any zero waste ordinance in place at the time of project approval. B) Comply with all Mandatory Construction & Demolition (C&D) Recycling Program Requirements, including Chapter 20.87 (Construction and Demolition Debris Recycling and Reuse). C) Provide substantial storage, collection, and loading of recyclables in a manner that is convenient and safe for all users of the building. Ensure there are sufficient sizes and amount of collection containers for recyclables. Containers must be kept clean, be clearly labeled, and are co-located next to any other solid waste receptacles. Ensure sufficient pick-up of collection containers to meet the needs of the occupants. D) Include space for multi-stream collection containers in any location where a solid waste container is traditionally housed. This includes both outdoor collection containers serviced by a waste hauler or indoor collection containers utilized by occupants. Provide educational materials and training to occupants and tenants in how to properly separate recyclables from all other solid waste and place recyclables in a separate container designated for recycling. E) Ensure that all project occupants and tenants separate recyclables from all other refuse and place recyclables in a separate container designated for recycling. F) Require that all single-use food service ware (plates, bowls, cups) and accessories (straws, utensils, condiment cups) used by tenants at the project site be BPI certified compostable fiber, except where certain materials may be deemed medically necessary or necessary to ensure equal access for persons with disabilities. G) Require that any single-use accessories (straws, utensils, condiment cups) be only available on demand. H) Ensure that containers are audited annually to ensure proper service levels and to check for contamination. Report findings back to occupants within 30 days and to the County as requested. I) Work with the waste hauler to provide educational materials to tenants on at least an annual basis. J) Provide compliance data to the County as required for any current auditing program. **Supports 2045 CAP Measures (and Actions):** W1 (W1.1, W1.3)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the total C&D tonnage recycled and/or diverted from landfills, the project's estimated recyclable waste generation (tons), the amount of recyclable waste sent to landfills, and the amount of recyclable waste generated by the project which is diverted from landfills.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
24. TIER 2: Incorporate On-Site Composting, Mulching, and/or Anaerobic Digestion The project may incorporate organic waste processing capabilities, such as composting, mulching, or anaerobic digestion facilities (where applicable). Collaborate with PW and waste agencies to share organic processing information with interested parties. **Supports 2045 CAP Measures (and Actions):** W2 (W2.2, W2.3, W2.4)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project.* *IN ADDITION, provide information on any anaerobic digestion facilities constructed including their capacity and the amount of organic waste digested and converted to electricity, and the project's total energy generation from organic waste.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
Agriculture, Forestry, and Other Land Use (AFOLU)		
25. TIER 1: Incorporate Tree Plantings and Expand Urban Forest Cover The project must: A) Enhance and expand urban forest cover and vegetation by planting trees and other vegetation. All trees and vegetation planted must be drought-tolerant or California native trees and plants. B) Comply with the Urban Forest Management Plan. C) Replace all native trees removed by the project with an equal or greater number of new trees. D) To the extent feasible, incorporate equitable urban forest practices and prioritize: i. Tree- and park-poor communities ii. Climate and watershed-appropriate and drought/pest-resistant vegetation iii. Appropriate watering, maintenance, and disposal practices iv. Shading v. Biodiversity **Supports 2045 CAP Measures (and Actions):** A3 (A3.1, A3.2, A3.3)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the total number of trees planted, the total tree canopy cover, the project's total green space area, and the area of impervious surface converted to pervious surfaces.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
26. TIER 2: Conserve Forests, Woodlands, Shrublands, Grasslands, Desert, and other Carbon-Sequestering Wildlands and Working Lands For all projects involving the preservation, conservation, and restoration of agricultural lands, working lands, rangelands, forest lands, wetlands, and other wildlands in unincorporated Los Angeles County, the project may: A) Support the use of public and private land for urban and peri-urban agriculture, such as community gardens, and including urban vertical surfaces. B) Conserve and restore natural forest lands, wetlands and wildlands through land acquisitions and conservation easements. C) Preserve existing agricultural and farmlands, including those mapped as Agricultural Resource Areas. Expand adjoining areas to enlarge farmland area. D) Actively manage forests to reduce wildfire risk and prevent carbon loss in forest lands. **Supports 2045 CAP Measures (and Actions):** A1 (A1.1 and A1.2)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project.* *IN ADDITION, provide the total number of acres preserved, conserved, and restored by land type, the number and size of community gardens added, the amount of vertical surface converted, and the acres of forest land managed for wildfire risk reduction and carbon stock savings if applicable.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
27. TIER 2: Implement Regenerative Agricultural Practices For all agricultural projects, the project may: A) Utilize fallow and field resting practices to reduce bare-fallow land by adding cover crops and promoting crop rotation for active agricultural sites to improve soil quality and limit risks of nutrient erosion, pollutant runoff, and yield reduction. B) Implement a carbon farming plan with the primary objectives of carbon removal and regenerative agriculture. C) Use compost and/or organic fertilizer. **Supports 2045 CAP Measures (and Actions):** A2 (A2.1, A2.2)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project.* *IN ADDITION, provide the* quantity of synthetic fertilizers and compost used / applied, the number of acres of cover crops using regenerative agricultural techniques, the tonnage of fertilizer/compost produced each year.	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES

NOTES:

Abbreviations: 2045 CAP = 2045 Los Angeles County Climate Action Plan*; AB = Assembly Bill; AFOLU = Agriculture, Forestry, and Other Land Use; C&D = Construction & Demolition; CALGreen Code = California Green Building Standards Code; CAP = Climate Action Plan; CARB = California Air Resources Board; CEQA = California Environmental Quality Act; County = County of Los Angeles; CPA = Clean Power Alliance; DU = dwelling unit(s); DWR = California Department of Water Resources; EIR = environmental impact report; EV = electric vehicle; EVCS = electric vehicle charging station; General Plan* = Los Angeles County General Plan 2035*; GHG = greenhouse gas; GWP = global warming potential; HOV = high-occupancy vehicle; HQTA = High Quality Transit Area; kW = kilowatts; LEED = Leadership in Energy and Environmental Design; MWELO = Model Water Efficient Landscape Ordinance; PV = photovoltaic; PW = Los Angeles County Department of Public Works; RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy; SB = Senate Bill; SCAG = Southern California Association of Governments; SCAQMD = South Coast Air Quality Management District; SCE = Southern California Edison; SoCalREN = Southern California Regional Energy Network; TDM = transportation demand management; TIA = Transportation Impact Analysis; VMT = vehicle miles traveled; WUI = wildland urban interface; ZEV = zero-emission vehicle; ZNE = zero net energy.*

1 *Although the County has not yet developed the Zero Emission Vehicle Master Plan, the County will develop such a Plan before 2030, pursuant to Implementing Action T6.1 in the 2045 CAP.*

2 *Although the County has not yet developed building performance standards, the County will develop such a standard before 2030, pursuant to Implementing Action E1.1 in the 2045 CAP.*

3 *Although the County has not yet developed carbon intensity limits, the County will develop such a standard before 2030, pursuant to Implementing Action E1.2 in the 2045 CAP.*

4 *Although the County has not yet developed a ZNE ordinance, the County will develop such a standard before 2030, pursuant to Implementing Action E1.3 in the 2045 CAP.*

5 *Although the County has not yet developed a building decarbonization ordinance, the County will develop such an ordinance before 2030, pursuant to Implementing Action E2.1 in the 2045 CAP.*

6 *Although the County has not yet developed a ZNE ordinance, the County will develop such a standard before 2030, pursuant to Implementing Action E2.2 in the 2045 CAP.*

7 *Although the County has not yet developed building performance standards, the County will develop such a standard before 2030, pursuant to Implementing Action E4.1 in the 2045 CAP.*

8 *Although the County has not yet developed a net zero water ordinance, the County will develop such a standard before 2030, pursuant to Implementing Action E6.1 in the 2045 CAP.*

9 *Although the County has not yet developed building performance standards for building material carbon intensity and high-GWP refrigerants, the County will develop standards before 2030, pursuant to Implementing Actions E3.3 and E3.4 in the 2045 CAP.*

Table F-2: 2045 CAP Greenhouse Gas Emissions Reduction Alternative Measures

DESCRIPTION OF PROPOSED ALTERNATIVE MEASURE	DESCRIPTION OF GHG REDUCTION ESTIMATE
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*

F.4 Offsite GHG Reduction Program Framework

Introduction

Action ES5.4 of the 2045 CAP would establish an Offsite GHG Emissions Reduction Program (Offsite Program) for new development to use as a GHG reduction or mitigation pathway for 2045 CAP compliance and to fund programs for reducing GHG emissions in the built environment. This program would allow new development to fund decarbonization programs for existing development to accelerate 2045 CAP measures and actions or go beyond 2045 CAP measures and actions. ~~An Offsite GHG Emissions Reduction Program (Offsite Program) will be developed.~~ Future projects that cannot achieve net-zero GHG emissions or are unable to comply with all ~~required~~ CEQA streamlining requirements would have the option to participate in the Offsite Program. The Offsite GHG Reduction Program could be used for projects that propose alternative GHG emissions reduction measures to those identified in Table F-1, or that propose to include additional GHG emissions reduction measures beyond those described in Table F-1. This program would allow project applicants to implement local projects that reduce GHG emissions in unincorporated Los Angeles County (referred to herein as *offsite projects*). Such offsite projects must not otherwise be required by law or regulation and would not have happened but for the requirements placed on the project by the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist.

~~Offsite GHG Reduction Program~~

~~Action ES5.4 of the 2045 CAP would establish an Offsite GHG Emissions Reduction Program for new development to use as a GHG reduction or mitigation pathway for 2045 CAP compliance and to fund programs for reducing GHG emissions in the built environment. This program would allow new development to fund decarbonization programs for existing development to accelerate 2045 CAP measures and actions or go beyond 2045 CAP measures and actions. The Offsite GHG Reduction Program could be used for projects that propose alternative GHG emissions reduction measures to those identified in Table F-1, or that propose to include additional GHG emissions reduction measures beyond those described in Table F-1.~~ Once the Offsite GHG Reduction Program has been instituted by the County, project applicants will be able to use the program to complete Table F-2. Once established, the Offsite GHG Reduction Program should only be used after all feasible on-site GHG reduction measures are implemented at the project site to demonstrate compliance with the CEQA streamlining requirements. ~~See Section F.4 for additional details.~~

This section represents a *framework* for the forthcoming Offsite Program; the actual program will be developed after the 2045 CAP is adopted.

CARB Guidance on Offsite GHG Reductions

As discussed in Section F.1, CARB supports “off-site GHG mitigation” in Appendix D of the 2022 Scoping Plan for projects that have implemented all feasible on-site GHG reductions: “If implementation of all feasible on-site GHG reduction measures is insufficient to reduce a project’s impact to a less-than-significant level, the State recommends that the lead agency next explore

options to fund or implement ***local***, off-site direct GHG reduction strategies."[26] The Offsite Program would achieve these goals.

Relationship to 2045 CAP Measures and Actions

The offsite projects that will be allowed in the program fall into two general categories:

1. Offsite projects *included* in the 2045 CAP's measures and actions.
2. Offsite projects *not included* in the 2045 CAP's measures and actions.

Offsite Projects Included in the 2045 CAP

This category represents projects (and the GHG emissions reductions they create) that *are* already included in the 2045 CAP's measures and actions. An allowable offsite project could involve, for example, accelerating measures, actions, and/or programs that are already identified in the 2045 CAP by providing additional funding to that program. Such projects would not add new programs or actions not already included in the 2045 CAP; they would expand upon and/or accelerate these programs and actions. Example projects are discussed below.

Offsite Projects Not Included in the 2045 CAP

This category represents projects (and the GHG emissions reductions they create) that are *not* already included in the 2045 CAP's measures and actions. An allowable offsite project could involve, for example, creating or funding programs for implementing new technologies (e.g., zero-emission construction equipment) or implementing new emissions reduction measures or actions not considered in the 2045 CAP. Example projects are discussed below.

Offsite Projects Not Eligible

Offsite projects that are implementing planned 2045 CAP measures and actions on the 2045 CAP's identified timeline are not eligible for the Offsite Program. Additionally, an offsite project activity that would be mandated by any current or future ordinance (such as a future ZNE ordinance for new buildings) cannot be used in the Offsite Program.

Carbon offset credits are not permitted to be used as offsite projects. In other words, projects that generate carbon offset credits to be traded on a voluntary market registry are not permitted to be used in this program.

Location

All offsite projects must be located within the jurisdictional boundaries of unincorporated Los Angeles County. Therefore, emissions reductions achieved by such offsite projects will be accounted for in future GHG inventory updates and will contribute toward the emissions reduction targets, which are based on the jurisdictional boundaries of unincorporated Los Angeles County. See 2045 CAP Appendix A for a discussion of the inventory and forecast boundaries.

Offsite projects shall be in the following locations, in order of priority, to the extent available: (1) Within the neighborhood surrounding the project site; (2) within the greater surrounding

[26] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in January 2023.

community (i.e., town); (3) within the same Planning Area; and (4) in other Planning Areas, but within unincorporated Los Angeles County.

Standards

All offsite projects must achieve **six specific standards** to ensure that the GHG reductions produced by offsite projects are environmentally sound; namely that the GHG reductions be real, permanent, quantifiable, verifiable, enforceable, and additional, defined as follows:

- **Real** means that the offsite project's GHG reductions are the direct result of complete emissions accounting. In other words, *real* means that GHG reductions or GHG enhancements result from a demonstrable action or set of actions, and are quantified using appropriate, accurate, and conservative methodologies that account for all GHG emissions sources, GHG sinks, and GHG reservoirs within the offsite project boundary and account for uncertainty.[27]
- **Permanent** means either that GHG reductions and GHG removal enhancements are not reversible, or that when GHG reductions and GHG removal enhancements may be reversible, mechanisms are in place to replace any reversed GHG emissions reductions and GHG removal enhancements to ensure that all credited reductions endure for at least 100 years.
- **Quantifiable** means the ability to accurately measure and calculate GHG reductions or GHG removal enhancements relative to an offsite project's baseline in a reliable and replicable manner for all GHG emissions sources, GHG sinks, or GHG reservoirs included within the offsite project boundary, while accounting for uncertainty. GHG emissions reductions from an activity must be rigorously quantified, and such GHG reductions would only be permitted in an amount that corresponds to the GHG emissions that have been quantified. GHG emissions accounting must be accurate and adhere to standardized quantification methodologies, which are discussed further below.
- **Verifiable** means that an offsite project's assertion of GHG emissions reductions is well documented and transparent, such that it lends itself to an objective review by an accredited verification body. The forthcoming Offsite Program itself may require third-party verification.[28]
- **Enforceable** means the authority of the County to hold a particular party responsible to take appropriate action if any of the provisions of the Offsite Program are violated.
- **Additional** means that the offsite project is not otherwise required by law, regulation, or legally binding mandate, and none of the offsite project's GHG emissions reductions would otherwise occur. In other words, an offsite project activity is additional if it can be demonstrated that the activity would result in emissions reductions or removals exceeding what would be achieved in the absence of the incentive provided by the proposed project and the ~~2045 CAP Checklist~~2045 CAP CEQA Streamlining Checklist. Additionality is an

[27] In general, uncertainty should be accounted for by using conservative assumptions and/or parameter values that tend to underestimate, rather than overestimate, total GHG emissions reductions.

[28] Generally, third-party verification includes a review of all documentation, monitoring data, and procedures used to estimate GHG reductions, and culminate in the verification body's issuance of a report and statement that identifies the quantity of GHG reductions that can be issued to the offsite project. As part of the report and statement, the independent third party verifies that the offsite project has adhered to the pertinent protocol or methodology, to confirm that the offsite project's GHG reductions are real, permanent, quantifiable, enforceable, and additional.

important characteristic the Offsite Program because it indicates that the GHG reductions represent a net environmental benefit and a real reduction of GHG emissions and can thus be used to offset a project's new GHG emissions.

Proposed Process

If an applicant selects to use the Offsite Program as an alternative GHG emissions reduction measure beyond those described in Table F-1, a specific process must be followed. The process will consider the following topics, which are subject to modification by the County in the forthcoming Offsite Program.

Quantification: Project applicants shall provide evidence to the County showing that the offsite project(s) proposed achieve the amount of GHG emissions reductions required. Examples of such evidence include applicable methodologies associated with the GHG emissions reductions, quantification calculations, and supporting documentation.

Standards: Project applicants must demonstrate, with substantial evidence, that all six of the offsite project standards are met: *real, permanent, quantifiable, verifiable, enforceable*, and *additional*.

Enforcement: Project applicants shall obtain all necessary permits and approvals for implementation of the offsite project implementation and such materials shall be submitted to the County for review and approval before project approval.

Timing: Project applicants shall submit documentation to the County identifying the quantity of GHG emissions reductions required by the offsite project over a specific time frame to be identified in the Offsite Program (e.g., before project approval or permit issuance, over the course of buildout of the project).

Monitoring: Project applicants shall submit regular reports documenting the offsite project's achieved GHG emissions reductions over a specified time period (such as the previous or current calendar year).

Example Offsite Projects

- **Local building electrification programs**: Programs that target existing residential and commercial buildings in the project's vicinity for electrification, provided that such electrification actions are not already required by law or regulation, County building performance standards, or reach code requirements. For example, replacing a natural gas–fired heating, ventilation, and air conditioning system with an electric heat pump or replacing a gas stove with an induction cooktop.
- **Off-site EV chargers**: Programs that install EV charging stations, provided that such installations are not already required by law or regulation, or County reach code requirements and the forthcoming Zero Emission Vehicle Master Plan (Measure T6). For example, funding or directly installing EV chargers in multi-unit dwellings in disadvantaged or low-income areas, public locations (schools, libraries, city centers), workplaces, and key destinations (e.g., parks, recreation areas, sports arenas).
- **Local building solar programs**: Programs that target existing residential and commercial buildings in the project's vicinity for rooftop solar photovoltaic installations, provided that such installations are not already required by law or regulation, County building

performance standards, or reach code requirements. For example, funding or directly installing rooftop solar installations or community solar systems.

- **Energy storage and microgrids**: Funding for or direct implementation of a microgrid to balance generation from non-controllable renewable power sources, such as solar, with distributed, controllable generation, such as natural gas–fueled combustion turbines; or a strategically deployed battery storage system to make the grid more flexible by unlocking renewable energy and replacing fossil fuel–generated electricity, especially during peak hours. Such programs would be allowed provided they are not already required by law or regulation, County building performance standards, or reach code requirements.
- **Truck and bus electrification programs**: Funding for the purchase of zero-emission vehicle trucks and buses to replace existing fossil fuel–powered trucks and buses; coordination with local transportation agencies and school districts and replacement of diesel- or gasoline-fueled buses with less-polluting technologies such as compressed natural gas, electric, hybrid-electric, fuel cell, or other commercially available technologies. Such programs would be allowed provided they are not already required by law or regulation, County building performance standards, or reach code requirements.
- **Hydrogen fuel**: Funding for or programs that provide renewable hydrogen fueling stations to nearby truck fleets, such as at logistics warehouses, or other uses of renewable hydrogen fuel as a replacement for fossil fuels. Such programs would be allowed provided they are not already required by law or regulation, County building performance standards, or reach code requirements.

Environmental Impacts Pursuant to CEQA

Project applicants' CEQA documents would be required to disclose the impacts of any offsite projects that are proposed for funding or implementation. The Final PEIR for the 2045 CAP evaluates the potential environmental impacts of the 2045 CAP's measures and actions. For any offsite projects implemented via this program, then, to the extent that such projects include types of activities similar to those contemplated by the 2045 CAP's measures and actions, the resulting environmental impacts would be expected to be similar to those disclosed in the Final PEIR. Project applicants' CEQA documents may rely on the Final PEIR impact analysis for an offsite project similar to those contemplated by the 2045 CAP, unless a specific offsite project causes a new or substantially more severe impact for that project type not addressed in the Final PEIR.

Next Steps and Additional Guidance

This section represents a *framework* for the Offsite Program. The actual Offsite Program will be developed separately after the 2045 CAP is formally adopted and the Final PEIR is certified. Once the formal Offsite Program is developed, project applicants may use it to demonstrate compliance with the CEQA streamlining requirements as indicated above.

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APPENDIX F

2045 Climate Action Plan CEQA Streamlining Checklist

Purpose

The 2045 Climate Action Plan CEQA Streamlining Checklist (referred to herein as the *2045 CAP CEQA Streamlining Checklist*) can be used to provide a voluntary streamlined review process for analyzing the impacts of GHG emissions resulting from proposed discretionary projects that are subject to CEQA.

The 2045 CAP CEQA Streamlining Checklist may be updated administratively to incorporate new GHG emissions reduction techniques or to comply with later amendments to the 2045 CAP or local, state, or federal law.

Appendix F Organization

This appendix is organized into the following four sections:

Section F.1: Background

This section describes the rationale for the checklist and explains how it provides the mechanism for projects that wish to streamline environmental review of their GHG impacts using the 2045 CAP's PEIR pursuant to CEQA Guidelines Section 15183.5(b).

Section F.2: Checklist Instructions

This section includes the submittal requirements for applicants, the applicability of the 2045 CAP CEQA Streamlining Checklist, and instructions for completing the 2045 CAP CEQA Streamlining Checklist.

Section F.3: 2045 CAP CEQA Streamlining Checklist

This section includes the 2045 CAP CEQA Streamlining Checklist itself along with a table for reporting and documenting alternative project emissions reduction measures and additional GHG reductions.

Section F.4: Offsite GHG Reduction Program Framework

This section includes a framework for the County's forthcoming Offsite GHG Reduction Program. This program will be available for project applicants to use as an alternative GHG reduction measure to the CEQA streamlining requirements, by allowing applicants to fund or implement local projects that reduce GHG emissions within unincorporated Los Angeles County.

F.1 Background

2045 CAP CEQA Streamlining ChecklistThe growth projections outlined in the General Plan's Land Use and Housing Elements were used in the 2045 CAP to estimate unincorporated Los Angeles County's future emissions. Therefore, projects can use the 2045 CAP CEQA Streamlining Checklist if they are consistent with the Land Use Element. This consistency allows a project to streamline its analysis of GHG impacts by using the existing programmatic environmental review contained in the certified Final PEIR for the 2045 CAP. In doing so, pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to climate change resulting from the project's GHG emissions may be determined not to be cumulatively considerable. This approach is consistent with the recommendations of the California Air Resources Board (CARB) in the *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) that "CEQA-qualified CAPs" can allow eligible

projects to streamline their determination of significance for GHG emissions.[1] It is also consistent with the Association of Environmental Professionals Climate Change Committee's best practices for tiering from qualified GHG reduction plans that demonstrate substantial progress toward meeting the next milestone statewide planning reduction target (i.e., a 40 percent reduction below 1990 levels by 2030 as set forth by SB 32).[2]

This 2045 CAP CEQA Streamlining Checklist provides a mechanism for projects to specifically identify "those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project" per Section 15183.5(b)(2) of the CEQA Guidelines.

GHG emissions associated with the construction of projects, including demolition and decommissioning activities, are generally orders of magnitude lower than operational GHG emissions. This is primarily because construction emissions are typically short in duration compared to the project's overall lifetime. Typically, construction GHG emissions are amortized over 30 years and added to a project's 30-year lifetime emissions total; after this amortization, construction GHG emissions usually represent a small fraction of a project's total annual emissions. It is generally difficult to enforce low-emission construction equipment because of the limited availability of zero-emission and near-zero-emission construction equipment, along with contracting requirements. In addition, the 2045 CAP quantifies GHG emissions from off-road construction activity at the unincorporated Los Angeles County level; these emissions are accounted for in the 2045 CAP's ability to achieve the 2030, 2035, and 2045 targets.

The 2045 CAP CEQA Streamlining Checklist also requires the use of electric and zero-emission construction equipment during project construction to the maximum extent feasible, to align with Measure T9. Therefore, construction emissions can be assessed qualitatively as part of related CEQA GHG emissions analysis. However, some projects may have long construction periods or entail substantial excavation and grading that could result in construction-related GHG emissions that may be considered significant. Thus, the County retains the discretion on a project-by-project basis to consider whether a project's construction-related GHG emissions could be cumulatively considerable and require a more detailed quantitative CEQA analysis and mitigation of GHG emissions.

Projects that elect not to use the 2045 CAP CEQA Streamlining Checklist for CEQA streamlining must prepare a comprehensive project-specific analysis of GHG emissions. The analysis must quantify existing and projected GHG emissions and it is strongly encouraged that the project incorporate all CEQA streamlining requirements in this 2045 CAP CEQA Streamlining Checklist, although this is not required. The 2045 CAP CEQA Streamlining Checklist may be updated to incorporate new GHG emissions reduction techniques or to comply with later amendments to the 2045 CAP or to local, state, or federal law.

2045 CAP Appendix B, *Emissions Forecasting and Reduction Methods*, provides the quantitative basis for CEQA streamlining requirements. This document demonstrates how, based on substantial

[1] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in January 2023.

[2] Association of Environmental Professionals. 2016. *Final White Paper Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California.* October 18, 2016. Available: https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf.

evidence,[3] implementing these CEQA streamlining requirements on a project-by-project basis will collectively achieve the 2045 CAP's target emissions level for projects by 2030 and 2035, as required by CEQA Guidelines Section 15183.5(b)(1)(D).

Alignment with the 2022 Scoping Plan

Appendix D of CARB's 2022 Scoping Plan provides guidance for local governments and lead agencies for how local climate action planning can support the State of California's climate goals.[4] CARB reiterates that a CAP that has been adopted through the CEQA review process and meets the criteria specified in CEQA Guidelines Section 15183.5(b) for a "plan for the reduction of greenhouse gas emissions"—such as the 2045 CAP—is a "CEQA-qualified CAP" that can allow eligible projects to streamline their determination of significance for GHG emissions.

Streamlining CEQA GHG analysis for future projects by demonstrating consistency with a CAP involves evaluating whether a project demonstrates consistency with "all applicable GHG reduction measures identified in the CAP." CARB notes that such consistency can be determined by using CAP compliance checklists, which can be "included as part of the proposed project's CEQA analysis documenting the project's consistency with the CEQA-qualified CAP."

The 2045 CAP CEQA Streamlining Checklist is therefore consistent with CARB's guidance in the 2022 Scoping Plan as a valid way for discretionary projects to streamline their analysis of GHG impacts.

Recommended Project Attributes for Residential and Mixed-Use Projects

Appendix D of the 2022 Scoping Plan includes a list of "key project attributes" for residential and mixed-use projects. CARB states that if a project incorporates these attributes, the project would "accommodate growth in a manner consistent with State GHG reduction and equity prioritization goals" and would be "***clearly*** consistent with the State's climate goals." Further, such projects would be "consistent with the Scoping Plan or other plans, policies, or regulations adopted for the purposes of reducing GHGs" and that therefore, "the GHG emissions associated with such projects may result in a less-than-significant GHG impact under CEQA."

Alternative Project Emissions Reduction Measures and Offsite GHG Reduction Programs

As discussed below under *Step 4: Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions*, project applicants may employ alternative GHG emissions reduction measures to serve as replacements for any CEQA streamlining requirement not feasible to implement at the project-level. Such replacement measures must meet specific criteria and be

[3] CEQA Guidelines Section 15384 defines *substantial evidence* as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. Whether a fair argument can be made that the project may have a significant effect on the environment is to be determined by examining the whole record before the lead agency. Argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly erroneous or inaccurate, or evidence of social or economic impacts which do not contribute to or are not caused by physical impacts on the environment does not constitute substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts."

[4] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in January 2023.

supported by substantial evidence that the measure would achieve the same or greater level of GHG emissions reductions as the CEQA streamlining requirement that it replaces.

CARB supports the idea of "off-site GHG mitigation" in Appendix D of the 2022 Scoping Plan for projects that have maxed out their on-site GHG reduction actions: "If implementation of all feasible on-site GHG reduction measures is insufficient to reduce a project's impact to a less-than-significant level, the State recommends that the lead agency next explore options to fund or implement ***local***, off-site direct GHG reduction strategies."[5]

As discussed further below, Action ES5.4 of the 2045 CAP would establish an Offsite GHG Reduction Program for new development to use as a GHG reduction or mitigation pathway for 2045 CAP compliance and to fund programs for reducing GHG emissions in the built environment.

CARB cautions that such off-site measures must directly "offset" a project's GHG emissions and must not be unrelated off-site measures that would occur independently of the proposed project. Lead agencies and project applicants must provide substantial evidence that a specific off-site mitigation measure is not otherwise required by law or regulation and would not have occurred "***but for*** the requirement to mitigate a project's GHG impacts." CARB goes on to state the following:

> There has been concern that GHG emission reductions from off-site GHG mitigation measures… may double count GHG emission reductions from California's Cap-and-Trade program. However, off-site mitigation measures, such as EV [electric vehicle] charging or building efficiency retrofits, are viable options for mitigation under CEQA and would not be double counted, provided they are not otherwise required by law or regulation and would not have happened but for the mitigation requirements of the project. If the mitigation would have been implemented or required through another statute, regulation, existing local program, or requirement other than the project it is mitigating, then the project being mitigated may not also claim credit for the reductions.

F.2 Checklist Instructions

2045 CAP CEQA Streamlining Checklist Submittal Requirements

The 2045 CAP CEQA Streamlining Checklist shall accompany the project application for all projects and plans proposed within unincorporated Los Angeles County's land use authority that are subject to CEQA. The 2045 CAP CEQA Streamlining Checklist is designed to assist in identifying the GHG emissions reduction actions and other applicable sustainability-focused requirements specific to a proposed project. However, it may be necessary to supplement the completed 2045 CAP CEQA Streamlining Checklist with supporting materials, calculations, or certifications to demonstrate compliance with all the applicable CEQA streamlining requirements in the 2045 CAP CEQA Streamlining Checklist. The 2045 CAP CEQA Streamlining Checklist shall be included in the respective project conditions of approval.

[5] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in January 2023.

2045 CAP CEQA Streamlining Checklist Applicability

The 2045 CAP CEQA Streamlining Checklist allows for streamlined project-specific CEQA GHG analysis. The 2045 CAP CEQA Streamlining Checklist is only required if a project applicant wants to use CEQA streamlining for GHG impacts; it is not required if a project-level environmental analysis of GHG impacts is conducted. As such, the 2045 CAP CEQA Streamlining Checklist is voluntary. The 2045 CAP CEQA Streamlining Checklist cannot be used for projects requiring a General Plan amendment associated with land use density increases. Ministerial projects and projects that otherwise are exempt from CEQA are deemed to be consistent with the 2045 CAP, and no further review is necessary, with the exception of the residential infill categorical exemption (CEQA Guidelines Section 15195), for which projects are required to demonstrate consistency with the 2045 CAP through the 2045 CAP CEQA Streamlining Checklist if the applicant elects to use CEQA streamlining for GHG impacts. All projects using the 2045 CAP CEQA Streamlining Checklist for CEQA streamlining must demonstrate consistency with the General Plan growth projections. **If a project is not consistent with the General Plan growth projections, then the 2045 CAP CEQA Streamlining Checklist may not be used for CEQA streamlining.**

2045 CAP CEQA Streamlining Checklist Instructions

Project applicants shall complete the following **four steps** to demonstrate compliance with the 2045 CAP for a proposed project.

Step 1. Demonstrate consistency with the General Plan growth projections (**Table F-1**).

Step 2. Determine whether the project screens out of certain CEQA streamlining requirements (Table F-1).

Step 3. Complete the 2045 CAP CEQA Streamlining Checklist (Table F-1).

Step 4. Identify alternative project emissions reduction measures and additional GHG reductions (**Table F-2**), as needed.

All projects must complete ***Step 1:*** *Demonstrate Consistency with the General Plan Growth Projections* and ***Step 2:*** *Determine Whether the Project Screens Out of Certain CEQA Streamlining Requirements*. Projects that do not meet the screening criteria must complete ***Step 3:*** *Complete the 2045 CAP CEQA Streamlining Requirements*. Projects that cannot meet all CEQA streamlining requirements shown in Table F-1 must also complete ***Step 4:*** *Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions* (Table F-2) to describe alternative GHG emissions reduction measures that serve as replacements to any CEQA streamlining requirements not met by the project.

The following 6rocesss, illustrated in **Figure F-1**, explains how to demonstrate consistency of a project with the 2045 CAP's GHG emissions reduction measures and actions, and thereby streamline the project's GHG impacts analysis by tiering from the certified Final PEIR for the 2045 CAP.

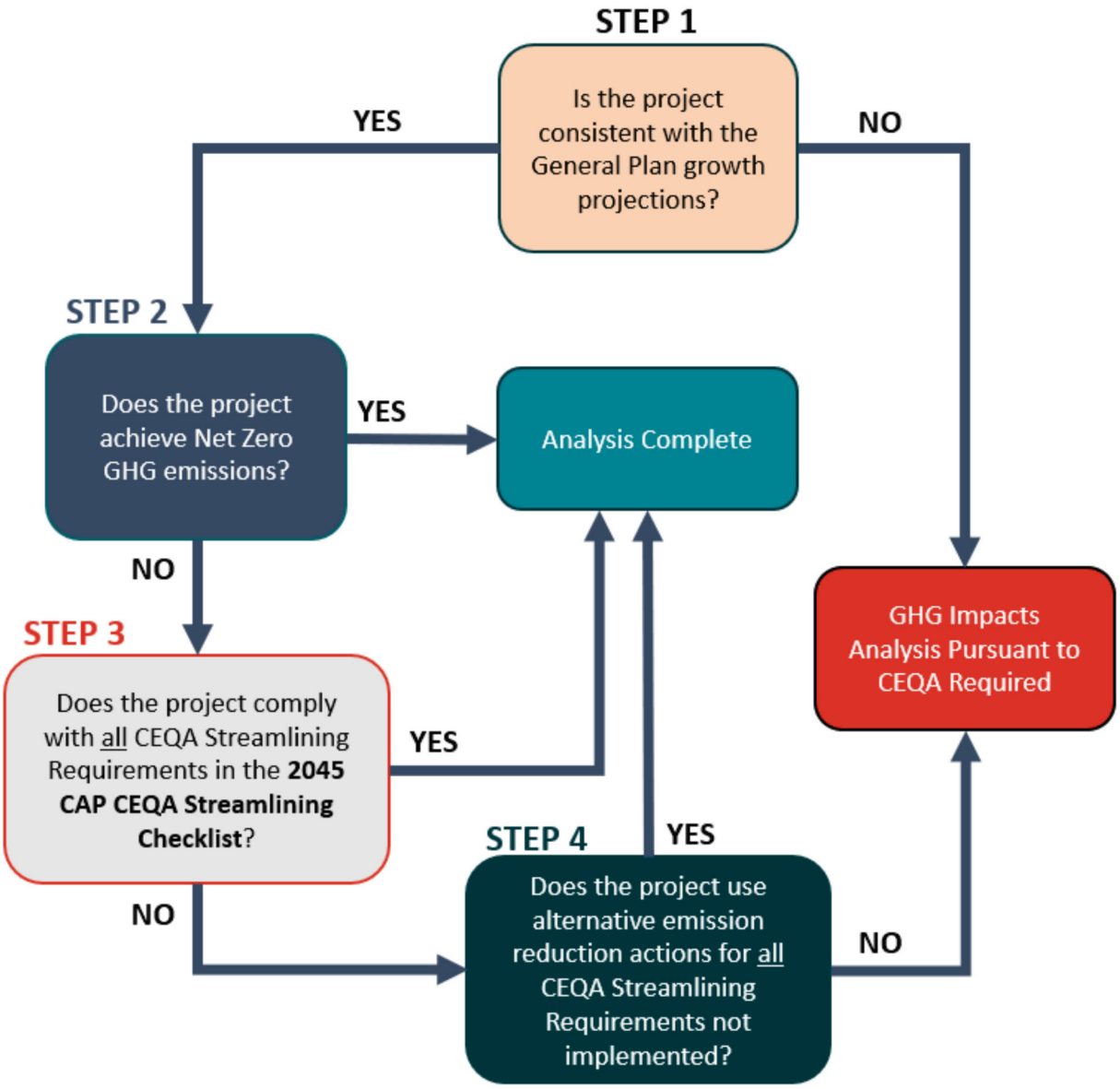

Figure F-1: Determining Consistency with the 2045 CAP for CEQA Streamlining

Step 1: Demonstrate Consistency with the General Plan Growth Projections

All projects must demonstrate consistency with the General Plan growth projections. **If a project is not consistent with the General Plan growth projections, then the 2045 CAP CEQA Streamlining Checklist may not be used for CEQA streamlining.** Complete the *General Plan Consistency* section of **Table F-1,** *General Plan and CEQA Streamlining Requirement Checklist*, below.

The options for determining General Plan consistency (included in Table F-1) are as follows:

- Is the proposed project consistent with the General Plan growth projections? If yes, move to **Step 2** below. If no, the proposed project may not streamline its GHG impacts analysis

by using the 2045 CAP's EIR, and instead must prepare a comprehensive project-specific analysis of GHG emissions and impacts pursuant to CEQA. Such projects are also encouraged to incorporate all the CEQA streamlining requirements in the 2045 CAP CEQA Streamlining Checklist.

Step 2: Determine Whether the Project Screens Out of Certain CEQA Streamlining Requirements

Certain projects may screen out of compliance with certain CEQA streamlining requirements contained in Table F-1 if such projects meet specific criteria. These criteria are designed to ensure high efficiency and low GHG emissions and describe projects that would generally comply with the 2045 CAP.

2045 CAP CEQA Streamlining Checklist Screening Criteria: Projects may skip the *Demonstrate Compliance with the CEQA Streamlining Requirements* section of Table F-1 below if they meet the following criteria:

- If the project would achieve **net zero GHG emissions** the project is considered to comply with the 2045 CAP and the analysis is complete.

Net zero GHG emissions means that the project's GHG emissions from construction and operational activities occurring at full buildout would result in zero total GHG emissions on an annual basis. In other words, all GHGs emitted the atmosphere during construction and operation by a project are balanced completely by GHG sequestration and removal over each calendar year period. Construction GHG emissions should be amortized for the project (typically 30 or 40 years) and added to the annual full buildout operational emissions to determine total annual emissions. Net zero GHG emissions for a project does not consider GHG emissions from existing conditions or existing uses at the project site. For example, if a project emits 1,500 $MTCO_2e$ per year for both construction and operations but includes the planting of enough new trees to sequester 1,500 $MTCO_2e$ per year, the project would achieve net zero GHG emissions.

To demonstrate that the project achieves net zero GHG emissions, the applicant must submit a comprehensive quantitative project-specific analysis of all GHG emissions, sinks, and removals from construction and full buildout operations, consistent with CEQA guidelines and standard practice for modeling GHG emissions for projects. If the project meets this criterion, the project does not need to complete **Table F-1** below and the analysis is complete.

Transportation Screening Criteria: Projects may skip CEQA streamlining requirements #3, #4, #5, #11, and #12 of the *Demonstrate Compliance with the CEQA Streamlining Requirements* section of Table F-1 below if they meet the following criteria (based on the 2020 Los Angeles County Department of Public Works Transportation Impact Analysis Guidelines):[6]

[6] Los Angeles County Department of Public Works. 2020. *Transportation Impact Analysis Guidelines*. July 2020. Available: https://dpw.lacounty.gov/traffic/trafficreportmsg.cfm. Accessed February 2022.

1. For development projects:[7]
    a. If the project does not have a retail component, and the project generates a net increase of less than 110 daily vehicle trips,[8] then it screens out.
    b. If the project has a retail component, and it contains retail uses that do not exceed 50,000 square feet of gross floor area,[9] then it screens out.
    c. If the project has a residential component, and 100 percent of the units, excluding manager's units, are set aside for lower income households,[10] then it screens out.
    d. If the project is located within a one-half mile radius of a major transit stop or an existing stop along a high-quality transit corridor[11] and meets all of the following criteria, then it screens out:
        i. Has a Floor Area Ratio greater than 0.75. [12]
        ii. Provides less parking than required by the Los Angeles County Code.[13]
        iii. Is consistent with the Southern California Associated of Governments' Regional Transportation Plan/Sustainable Communities Strategy.[14]
        iv. Does not replace residential units set aside for lower income households with a smaller number of market-rate residential units.
2. For transportation projects:[15]
    a. If the project would not include the addition of through traffic lanes on existing or new highways, including general-purpose lanes, high-occupancy vehicle lanes, peak-period lanes, auxiliary lanes, and lanes through grade-separated interchanges (except managed lanes, transit lanes, and auxiliary lanes of less than 1 mile in length designed to improve roadway safety),[16] then it screens out.
    b. If the project would reduce roadway capacity and VMT, [17] then it screens out.

If the project meets the above criteria, it may skip certain transportation portions of the 2045 CAP CEQA Streamlining Checklist (see Table F-1 for details).

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7 The Transportation Impact Analysis (TIA) Guidelines provide a list of development project types, which include residential, office, manufacturing, institutional, and retail project types. For a complete list, see page 11 of the TIA Guidelines.
8 As referenced in: Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA.* December 2018.
9 Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA.* December 2018.
10 Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA.* December 2018.
11 Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.
12 Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.
13 Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.
14 Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.
15 The TIA Guidelines describe transportation projects as projects that would increase vehicular/roadway capacity.
16 As noted above, the TIA Guidelines describe transportation projects as projects that would increase vehicular/roadway capacity.
17 A list of transportation projects that are not likely to lead to a substantial or measurable increase in vehicle miles travelled are included in the County's TIA Guidelines, pp. 17–19.

Step 3: Demonstrate Compliance with the 2045 CAP CEQA Streamlining Requirements

Table F-1 identifies the CEQA streamlining requirements for projects. Projects must demonstrate compliance with the 2045 CAP CEQA streamlining requirements listed in Table F-1 or document why the requirements are not applicable or are infeasible.[18] The corresponding 2045 CAP measures and actions are indicated in the table to provide additional context. The full text of the 2045 CAP measures and actions is provided in the 2045 CAP (see Chapter 3 and Appendix E).

All applicants shall complete the following steps for the *Transportation, Building Energy and Water, Waste*, and *Agriculture, Forestry, and Other Land Use (AFOLU)* sections of **Table F-1** below (unless the project meets the transportation screening criteria identified in Step 1 above, in which case the project may skip completion of certain sections of the *Transportation* section of Table F-1):

Step 3a. Review the CEQA streamlining requirements described in the column titled "2045 CAP Streamlining Requirement."

Step 3b. Use the check boxes in the column titled "Project Complies" to indicate whether the "Project Complies," the requirement is "Not Applicable," or the "Project Does Not Comply and Alternative Measure Proposed."

Step 3c. Provide a qualitative analysis of the proposed project's compliance with the CEQA streamlining requirements in the column titled "Description of Project Measure(s)/Documentation of Compliance." This will be the basis for the CEQA analysis to demonstrate compliance with the 2045 CAP, and by extension, with SB 32. The qualitative analysis should provide:

i. A description of which streamlining requirements are included as part of the proposed project; or

ii. A description of why the streamlining requirement is not applicable to the proposed project; or

iii. A description of why the streamlining requirements are infeasible. If applicants select "Project Does Not Comply" or "Alternative Measure Proposed," they must complete Table F-2 to document what alternative project measures will be implemented to achieve a similar level of GHG reduction and how those GHG emissions reduction estimates were calculated.

Step 3d. Provide specific project design criteria and/or reporting metrics to support the proposed project's compliance with each CEQA streamlining requirement. Specific information is requested for each respective item in the 2045 CAP CEQA Streamlining Checklist.

Regarding item #2 above, the project applicant can only select "Not Applicable" if the requirement is not relevant to the project. The project applicant should only select "Project Does Not Comply and Alternative Measure Proposed" if it is infeasible, as defined by the CEQA Guidelines, for the project to comply with the checklist requirement. Sufficient documentation of such infeasibility must be supplied to the County to support such a determination. The County retains ultimate

[18] Please note that the CEQA streamlining requirements are not mitigation measures as defined by CEQA.

discretion for determining the feasibility of the checklist requirement for the proposed project. Further, if "Project Does Not Comply and Alternative Measure Proposed" is selected for a specific checklist requirement, then the project applicant **must** identify an alternative measure to achieve the same or greater level of GHG emissions reduction as the CEQA streamlining requirement with which the project does not comply.

If the project applicant cannot fully complete these requirements, then the 2045 CAP CEQA Streamlining Checklist may not be used for CEQA streamlining of GHG emissions impacts. See the *Projects That Are Not Eligible for CEQA Streamlining* section for additional instructions.

The 2045 CAP CEQA streamlining requirements are listed as either "Tier 1" or "Tier 2." These two levels are defined as follows:

> **Tier 1**: Required for all discretionary projects in order to use CEQA streamlining for GHG impacts.
>
> **Tier 2**: Encouraged for all discretionary projects. Although these measures are not required, projects are strongly encouraged to implement them. In Table F.1 below, these voluntary items are colored with gray shading.

In general, Tier 1 requirements were quantified in the 2045 CAP for GHG emissions reductions needed to achieve the 2030, 2035, and 2045 emissions reduction targets. Because these measures were quantified, they would be required for the 2045 CAP to achieve its full emissions reduction potential. Some Tier 1 measures were not quantified, but they either are required through other code or ordinance (such as compliance with the Transportation Demand Management Ordinance) or are deemed essential for the overall success of the 2045 CAP. Tier 2 requirements were identified as supporting actions but are not deemed essential for the overall success of the 2045 CAP.

Some Tier 1 and Tier 2 requirements point to future County regulations or ordinances that have not yet been developed, such as the forthcoming building decarbonization ordinance. In these instances, projects using the Checklist must only comply with currently adopted ordinances and requirements at the time of project approval.

The 2045 CAP CEQA Streamlining Checklist includes the following Tier 1 and Tier 2 requirements, organized by strategy area:

Energy Supply

1. Tier 1: Sunset Oil and Gas Operations
2. Tier 1: Utilize 100% Zero-Carbon Electricity

Transportation

3. Meets Transportation Screening Criteria
4. Tier 1: Increase Density Near High-Quality Transit Areas
5. Tier 1: Incorporate Bicycle and Pedestrian Infrastructure
6. Tier 1: Comply with the County Transportation Demand Management (TDM) Ordinance
7. Tier 1: Comply with the County's Transportation Impact Guidelines

8. Tier 1: Incorporate Electric Vehicle Charging Infrastructure
9. Tier 1: Decarbonize Trucks
10. Tier 1: Incorporate Zero-Emission Technologies for Off-Road Vehicles & Equipment
11. Tier 1: Electrify County Fleet Vehicles (for municipal projects only)
12. Tier 2: Achieve a High Jobs/Housing Balance
13. Tier 2: Encourage Transit, Active Transportation, and Alternative Modes of Transportation
14. Tier 2: Implement Parking Limitations

Building Energy and Water

15. Tier 2: Decarbonize Existing Buildings
16. Tier 2: Decarbonize New Buildings
17. Tier 1: Increase Building Energy Efficiency
18. Tier 1: Implement Water Use Efficiency and Water Conservation
19. Tier 2: Reduce the Life-Cycle Carbon Intensity of Building Materials and Phase Out the Use of High-Global Warming Potential (GWP) Refrigerants
20. Tier 2: Use Energy Storage and Microgrids
21. Tier 2: Use Recycled Water and Graywater for Non-potable Uses and Include Rainfall Capture

Waste

22. Tier 1: Compost Organic Materials
23. Tier 1: Recycle Recyclable Materials
24. Tier 2: Incorporate On-site Composting, Mulching, and/or Anaerobic Digestion

Agriculture, Forestry, and Other Land Use

25. Tier 1: Incorporate Tree Plantings and Expand Urban Forest Cover
26. Tier 2: Conserve Forests, Woodlands, Shrublands, Grasslands, Desert, and other Carbon-Sequestering Wildlands and Working Lands
27. Tier 2: Implement Regenerative Agricultural Practices

2045 CAP Appendix B, *Emissions Forecasting and Reduction Methods*, provides the quantitative basis for the CEQA streamlining requirements.

Step 4: Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions

Projects that propose alternative GHG emissions reduction measures to those identified in Table F-1 or propose to include additional GHG emissions reduction measures beyond those described in Table F-1 shall provide a summary explanation of the proposed measures and demonstrate GHG reductions achievable though the proposed measures.[19] Documentation for these alternative or additional project measures shall be documented in **Table F-2,** *Applicant Proposed*

[19] Please note that the alternative GHG emissions reduction measures are not mitigation measures as defined by CEQA.

Alternative Project Emissions Reduction Measures. Any applicants who select "Project Does Not Comply and Alternative Measure Proposed" in Table F-1 must complete the following steps for Table F-2.

Step 4a. In the column titled "Description of Alternative Measure," provide a qualitative description of what measure will be implemented, why it is proposed, and how it will reduce GHG emissions.

Step 4b. In the column titled "Description of GHG Reduction Estimate," demonstrate how the alternative project measure would achieve the same or greater level of GHG emissions reductions as the CEQA streamlining requirement that it replaces. Documentation and calculation files must be attached separately.

An example alternative project measure may be installing additional EV charging infrastructure beyond what is required by the California Green Building Standards Code (CALGreen Code), County ordinance, or requirements in the forthcoming Zero Emission Vehicle Master Plan, to support zero-emission vehicles beyond what is specified in the 2045 CAP's performance objectives for Measure T6 (Increase ZEV Market Share and Reduce Gasoline and Diesel Fuel Sales). The applicant would then demonstrate how this would achieve the same or greater level of GHG emissions reductions as the checklist requirement for which it serves as an alternative.

Carbon offset credits are not permitted to be used as alternative project emissions reduction measures.

Guidance for Quantifying GHG Reductions from Alternative Measures

In order to use alternative GHG emissions reduction measures to replace a CEQA streamlining requirement in Table F-1 below, project applicants must use the three-step process outlined below to quantitatively demonstrate how the alternative project measure would achieve the same or greater level of GHG emissions reductions as the CEQA streamlining requirement (or requirements) that it replaces.

Project applicants should follow these three steps:

Step 4c. Prepare a detailed quantified GHG emissions inventory for the project taking into consideration all GHG-reducing project features and 2045 CAP CEQA Streamlining Checklist items included as part of the project (including proposed mitigation measures, project design features, strategies being implemented, and other County requirements).

Project applicants shall prepare a detailed quantified GHG emissions inventory for the project taking into consideration all GHG-reducing project features and CEQA streamlining requirements included as part of the project (including proposed mitigation measures, project design features, strategies being implemented, and other County requirements), ***except*** for the alternative GHG emissions reduction measures proposed by the applicant to replace any Tier 1 CEQA streamlining requirement (as described in Step 4e). Applicants should use CalEEMod, CARB's Emission FACtor

model (EMFAC),[20] the CAPCOA Handbook, and other commonly accepted GHG modeling methods and protocols.

Step 4d. For each Tier 1 CEQA streamlining requirement that the project will not meet, include a quantified calculation of the additional GHG emission reductions that would have occurred had the project implemented the Tier 1 Checklist streamlining requirement.

Project applicants shall, for all Tier 1 CEQA streamlining requirements that the project will not meet, a quantified calculation of the additional GHG emission reductions that would have occurred had the project implemented those Tier 1 CEQA streamlining requirements. In order to do this, applicants shall prepare a project model run assuming the implementation of all Tier 1 CEQA streamlining requirement that the project will not meet. Applicants should then compare the project's GHG emissions from this scenario with the project's GHG emissions from Step 4c above. The difference in GHG emissions between the two scenarios represents the GHG emission reductions that would have occurred had the project implemented all Tier 1 CEQA streamlining requirements; this is the amount of GHG emissions required to be reduced in total by the alternative GHG emissions reduction measures.

Step 4e. Propose an alternative measure (or set of measures) and demonstrate quantitatively that the alternative measures would achieve a GHG emission reduction equivalent to the GHG emission reduction that would have resulted from complying with the Tier 1 CEQA streamlining requirement.

Project applicants shall provide a quantified measure or set of measures that closes the gap between the two scenarios as quantified in Step 4c and Step 4d. In order to do this, applicants shall prepare a project model similar to Step 4c but include all alternative GHG emissions reduction measures proposed by the applicant. The resulting GHG emissions from this model run must equal or be less than the GHG emissions resulting from the project model run in Step 4d above which assumes the implementation of all Tier 1 CEQA streamlining requirements. In other words, the GHG emission reductions achieved by the alternative measures must meet or exceed the GHG emission reductions achieved by the Tier 1 CEQA streamlining requirements.

Project applicants shall submit documentation to the City demonstrating all three steps above. This can include model run inputs and/or outputs, excel calculation files, or other documentation of the emission calculations.

Potential alternative GHG emissions reduction measures to be considered include, but are not be limited to, measures recommended in the South Coast Air Quality Management District's latest CEQA Air Quality Guidelines, the California Air Resources Board Scoping Plan (December 2022, as may be revised), the California Air Pollution Control Officers Association (CAPCOA) *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* (December 2021, as may be revised), the CAPCOA California Emissions Estimator Model (CalEEMod), the California Attorney General's *Mitigation for*

[20] California Air Resources Board. 2022. EMFAC2021 Model. Version v1.0.2. Available: https://arb.ca.gov/emfac/. Accessed June 2023.

Greenhouse Gas Emissions guidance, and Reference Guides on Leadership in Energy and Environmental Design (LEED) published by the U.S. Green Building Council.

As for any project design features or mitigation measures implemented via the County's project approval and CEQA review process, the project applicant shall implement all alternative GHG emissions reduction measures proposed. For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits and implemented during construction. For operational GHG reduction measures to be incorporated into the project, the measures shall be implemented on ongoing basis.

Projects That Are Not Eligible for CEQA Streamlining

In some cases, a project may not be able to comply with all of the 2045 CAP CEQA streamlining requirements. This may be because the project is inconsistent with the General Plan's growth projections as described in Step 1. Or a project may not be able to feasibly incorporate all CEQA streamlining requirements as identified in Table F-1 and discussed in Step 3; such a project may further be unable to adequately identify alternative project measures to achieve a similar level of GHG reduction to each CEQA streamlining requirement which a project cannot comply with. Such projects are not eligible to streamline environmental review of their GHG impacts using the 2045 CAP's PEIR and may be required to prepare a comprehensive project-specific analysis of GHG emissions pursuant to CEQA Guidelines (including the CEQA Guidelines Appendix G Environmental Checklist).

A comprehensive project-specific analysis of GHG emissions must be prepared for any project that elects not to use the Checklist for CEQA streamlining by completing Table F-1 and (if applicable) Table F-2. Such an analysis shall quantify existing and projected GHG emissions and evaluate potential impacts pursuant to the CEQA Guidelines (including the CEQA Guidelines Appendix G Environmental Checklist). It is strongly encouraged that the project incorporate all the CEQA streamlining requirements in the 2045 CAP CEQA Streamlining Checklist, though this is not required.

F.3 2045 CAP CEQA Streamlining Checklist

Table F-1, *General Plan and 2045 CAP CEQA Streamlining Checklist,* allows the applicant to demonstrate compliance with the 2045 CAP's GHG emissions reduction measures and actions. This table addresses ***Step 1:*** *Demonstrate Consistency with the General Plan Growth Projections*; ***Step 2:*** *Determine Whether the Project Screens Out of Certain CEQA Streamlining Requirements*; and ***Step 3:*** *Demonstrate Compliance with the CEQA Streamlining Requirements*. This checklist must be completed for all applicable projects electing to streamline their CEQA GHG analysis.

Table F-2, *2045 CAP Greenhouse Gas Emissions Reduction Alternative Measures*, allows the project applicant to document alternative GHG emissions reduction measures used to demonstrate compliance with the Table F-1 CEQA streamlining requirements. This table addresses ***Step 4:*** *Identify Alternative Project Emissions Reduction Measures and Additional GHG Reductions*. This checklist is required only for projects that propose to use alternative GHG emissions reduction measures.

Table F-1: General Plan and 2045 CAP CEQA Streamlining Checklist

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
Step 1: Demonstrate Consistency with the General Plan Growth Projections		
1. The Project is Consistent with the General Plan Growth Projections The growth projections included in the General Plan were used in the 2045 CAP to estimate unincorporated Los Angeles County GHG emissions over time. Therefore, projects must be consistent with the General Plan to comply with the CEQA streamlining requirements. To determine a project's consistency with the General Plan growth projections, please answer the following question and provide an explanation with supporting documentation. **Is the proposed project consistent with the existing land use designation of the Land Use Element and the 2021 Housing Element Update?** If "Yes," proceed to **Step 2: Determine Whether the Project Screens Out of Certain CEQA Streamlining Requirements** below. If "No," the proposed project may not streamline its GHG impacts analysis by using the 2045 CAP's EIR and must prepare a comprehensive project-specific analysis of GHG emissions and impacts pursuant to CEQA.	*Describe how the project is consistent with the General Plan growth projections. Provide additional supporting documentation as an attachment as needed.* *OR,* *Explain why the project is not consistent with the General growth projections, and whether the project would include a General Plan amendment. If the project includes a General Plan amendment, STOP HERE.*	☐ Yes ☐ No
Step 2: Determine Whether the Project Screens Out of the CEQA Streamlining Requirements		
Certain projects may screen out of the 2045 CAP CEQA Streamlining Requirements if they meet the following screening criterion. **Does the project achieve net zero GHG emissions?** The project must conduct a comprehensive project-specific analysis of all GHG emissions, sinks, and removals, consistent with all CEQA guidelines and standard practice for modeling GHG emissions for projects, to demonstrate that the project achieves net zero GHG emissions. If "Yes," the project would comply with the CEQA streamlining requirements and no additional analysis is needed (no project-specific GHG impact analysis would be required). If "No," proceed to **Step 3: Demonstrate Compliance with the CEQA Streamlining Requirements** below.	*If "Yes," attach to this checklist the estimated project GHG emissions. Provide supporting calculation files and documentation for this analysis. If the proposed project is determined to result in net zero GHG emissions, STOP HERE.* *If "No," proceed to Step 3 below.*	☐ Yes ☐ No

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
Step 3: Demonstrate Compliance with the CEQA Streamlining Requirements		
Energy Supply		
1. TIER 1: Sunset Oil and Gas Operations For any project involving the decommissioning, replacement, retrofit, or redesign of infrastructure or facilities associated with the oil and gas industry, including energy generation (i.e., cogen), the project must: A) Comply with the Oil Well Ordinance (Title 22). B) Reduce fossil fuel–based emissions by at least 80% compared to existing conditions. C) If the project site includes existing active and abandoned oil wells, examine all wells for fugitive emissions of methane. Reduce such existing emissions by a minimum of 80%. D) To reduce any residual fossil fuel–based emissions generated by the project, incorporate carbon removal technologies including direct air capture and carbon and sequestration, as feasible. **Supports 2045 CAP Measures (and Actions):** ES1 (ES1.1, ES1.2, ES1.3)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed as a replacement strategy (provide additional documentation as described below).* *IN ADDITION, provide documentation of the project's ability to reduce fossil fuel–based emissions, including fugitive methane emissions.* *Provide the number of oil and gas operations/wells closed. Provide documentation of any carbon removal technologies incorporated at the project site.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
2. TIER 1: Utilize 100% Zero-Carbon Electricity The project must utilize 100% zero-carbon electricity on-site. The project must comply with one of the following options: A) Install on-site renewable energy systems or participate in a community solar program to supply 100% of the project's estimated energy demand to the maximum extent feasible. B) Participate in Southern California Edison at the Green Rate level (i.e., 100% carbon-free electricity) for all electricity accounts associated with the project until SCE provides 100% carbon-free electricity for all accounts by default. C) Participate in the Clean Power Alliance at the Clean Rate level (i.e., 100% carbon-free electricity) for all electricity accounts associated with the project until CPA provides 100% carbon-free electricity for all accounts by default. D) A combination of #1, #2, and #3 above such that 100% of the project's electricity consumption is supplied by zero-GHG emission sources of power generation, whether by utilities or by on-site electricity generation or both. **Supports 2045 CAP Measures (and Actions):** ES2 (ES2.1, ES2.2), ES3 (ES3.1, ES3.2, ES3.3, ES3.4, ES3.5, ES3.6)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below)* *IN ADDITION, provide the project's anticipated electricity demand, the project's participation and opt-out rates for SCE's Green Rate and CPA's Clean Rate electricity rate options used by tenants; and the total kW of solar PV panels installed at the project site.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
Transportation		
3. Meets Transportation Screening Criteria For development projects, does the project: A) have no retail component and generate a net increase of less than 110 daily vehicle trips? If "Yes," skip streamlining requirements #4, #5, #12, #13, and #14 below. Please complete items #6 through #11 below. If "No," proceed to item (B) below. For development projects, does the project: B) have a retail component and contains retail uses that do not exceed 50,000 square feet of gross floor area? If "Yes," skip streamlining requirements #4, #5, #12, #13, and #14 below. Please complete items #6 through #11 below. If the project contains retail and is mixed use, proceed to item (C) below. If "No," proceed to item (C) below. For development projects, does the project: C) have a residential component and 100% of the units, excluding manager's units, are set aside for lower income households? If "Yes," skip streamlining requirements #4, #5, #12, #13, and #14 below. Please complete items #6 through #11 below. If the project contains retail and is mixed use, proceed to item (D) below. If "No," proceed to item (D) below. For development projects: D) Is the project located within a one-half mile radius of a major transit stop or an existing stop along a high-quality transit corridor and: i. has a Floor Area Ratio greater than 0.75? ii. provides less parking than required by the Los Angeles County Code? iii. is consistent with the Southern California Association of Governments (SCAG) Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS)? iv. does not replace residential units set aside for lower income households with a smaller number of market-rate residential units? If "Yes," skip streamlining requirements #4, #5, #12, #13, and #14 below. Please complete items #6 through #11 below. If "No," proceed to streamlining requirement #3 below. For transportation projects, does the project meet one of the following transportation screening criteria? A) The project would not include the addition of through traffic lanes on existing or new highways, including general-purpose lanes, high-occupancy vehicle (HOV) lanes, peak-period lanes, auxiliary lanes, and lanes through grade-	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why such actions are infeasible and identify the alternative measure(s) proposed as an alternative strategy (provide additional documentation as necessary).*	☐ Yes ☐ No

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
separated interchanges (except managed lanes, transit lanes, and auxiliary lanes of less than 1 mile in length designed to improve roadway safety). B) The project would reduce roadway capacity and VMT. If "Yes," skip streamlining requirements #4, #5, #12, #13, and #14 below. Please complete items #6 through #11 below. If "No," proceed to streamlining requirement #4 below. **Supports 2045 CAP Measures (and Actions):** T1 (T1.1, T1.2)		
4. TIER 1: Increase Density Near High-Quality Transit Areas If the project is located within a High Quality Transit Area (HQTA), it must achieve a minimum of 20 dwelling units (DU) per acre, consistent with the Housing Element Rezoning Program. If the project is not located within an HQTA, it must locate residential and employment centers within 1 mile of an HQTA. **Supports 2045 CAP Measures (and Actions):** T1 (T1.1, T1.2)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed as a replacement strategy (provide additional documentation as described below).*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
5. TIER 1: Incorporate Bicycle and Pedestrian Infrastructure The project must incorporate pedestrian and bicycle infrastructure into its design: A) Provide pedestrian facilities and connections to public transportation consistent with the Pedestrian Action Plan, Active Transportation Plans, and Vision Zero Action Plan, and any other relevant governing plan. B) Provide bicycle facilities consistent with the Bicycle Master Plan, Active Transportation Plans, and Vision Zero Action Plan, and any other relevant governing plan, and meet or exceed minimum standards for bicycle facilities in the Zoning Code and CALGreen Code. C) Increase sidewalk coverage to improve pedestrian access. D) Improve degraded or substandard sidewalks. E) Incorporate best practices to ensure pedestrian infrastructure is contiguous and links externally with existing and planned pedestrian facilities; best practices include high-visibility crosswalks, pedestrian hybrid beacons, and other pedestrian signals, mid-block crossing walks, pedestrian refuge islands, speed tables, bulb-outs (curb extensions), curb ramps, signage, pavement markings, pedestrian-only connections and districts, landscaping, and other improvements to pedestrian safety. F) Minimize barriers to pedestrian access and interconnectivity, such as walls, landscaping buffers, slopes, and unprotected crossings. G) Provide bicycle facilities for new and expanded buildings, new dwelling units, change of occupancy, increase of use intensity, and added off-street vehicle parking spaces. H) Provide short- and long-term (secure) bicycle parking for at least 5% of motorized vehicle capacity and nothing less than CALGreen Code requirements, whichever is more restrictive.	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed as a replacement strategy (provide additional documentation as described below)* *IN ADDITION, provide the length and/or amount of bicycle and pedestrian infrastructure incorporated, such as feet or miles of bikeways.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
l) Support the County's goal to increase bikeway miles by 300 percent by 2030 (including Class I bike paths, Class II bike lanes, and Class III bike routes). **Supports 2045 CAP Measures (and Actions):** T3 (T3.1, T3.2, T3.3)		
6. TIER 1: Comply with the County Transportation Demand Management (TDM) Ordinance The Project must comply with the TDM ordinance at the time of project approval. This may include preferential carpool/vanpool parking, bicycle parking, and shower facilities and locker rooms; trip reduction plans; transit-supportive infrastructure development; and similar strategies. Comply with any applicable VMT reduction target and incorporate any required monitoring mechanisms for development, subject to the ordinance. **Supports 2045 CAP Measures (and Actions):** T4 (T4.5)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below)* *IN ADDITION, provide the number of employers participating in the TDM program, the total trip reduction goals for the project's TDM program, and the total trips and VMT reduced via the project's TDM program.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
7. TIER 1: Comply with the County's Transportation Impact Guidelines The project must comply with the County's current Transportation Impact Analysis (TIA) Guidelines. Projects may screen out if they meet certain criteria, such as being located in a transit priority area or local-serving retail development less than 50,000 square feet. Projects that do not screen out must meet the VMT efficiency metrics identified by the TIA Guidelines (e.g., daily VMT per capita for residential projects that is 16.8% below the existing residential VMT per capita for the Baseline Area in which the project is located) and quantitatively demonstrate how these metrics are achieved, pursuant to the TIA Guidelines requirements. **Supports 2045 CAP Measures (and Actions):** T1, T2, T3, T4, T5	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed strategy (provide additional documentation as described below).*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
8. TIER 1: Incorporate Electric Vehicle Charging Infrastructure The project must incorporate zero-emission vehicle (ZEV) infrastructure and incentives into its design as follows: A) Comply with any CALGreen Code requirement, County ordinance, building code, or condition of approval that requires a certain amount of electric vehicle (EV) charging infrastructure (EVCSs) and readiness. This may include minimum requirements for EV charging stations, EV-capable parking spaces, and EV-ready parking spaces. B) Comply with any provisions and requirements in the forthcoming Zero Emission Vehicle Master Plan.[1] C) Include electric options for promoting active transportation, such as electric scooters and e-bikes. D) Provide education and outreach to tenants and occupants about the benefits of ZEVs and the project's EV infrastructure.	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below)* *IN ADDITION, provide the number of ZEVs in the project's tenant's and vendor fleet, if available; the number of public and private EVCSs installed; and the number of scooters/e-bikes available to tenants.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
Supports 2045 CAP Measures (and Actions): T6 (T6.1, T6.2, T6.3, T6.4, T6.5, T6.6, T6.7)		
9. TIER 1: Decarbonize Trucks For projects that include goods movement facilities and/or warehouses, the project must incorporate freight decarbonization technologies and infrastructure, including: A) Comply with any CALGreen Code requirement, County ordinance, building code, or condition of approval that requires a certain amount of EV charging infrastructure and readiness for goods movement facilities and trucks. B) Provide EVCSs at all new warehouse loading docks. C) Comply with any provisions and requirements in the forthcoming Zero Emission Vehicle Master Plan related to goods movement. D) Implement freight decarbonization technologies along highway corridors. E) For all goods movement facilities, install alternative fueling infrastructure such as EVCSs, green hydrogen fueling stations, and/or biomethane fueling stations. F) Comply with any established zero-emission delivery zones. **Supports 2045 CAP Measures (and Actions):** T8 (T8.1, T8.2, T8.3, T8.4, T8.5)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the number of ZEV trucks in the project's tenant's and vendor fleet if available and the number EVCS installed.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
10. TIER 1: Incorporate Zero-Emission Technologies for Off-Road Vehicles & Equipment The project must: A) Prohibit the use of small equipment powered by gasoline, diesel, propane, or other fossil fuels, including lawn and garden equipment and outdoor power equipment, for all tenants and owners. B) Provide educational materials to tenants regarding the SCAQMD Electric Lawn and Garden Equipment Incentive and Exchange Program, Commercial Lawn & Garden Battery Buy-Down Rebate Program, the Residential Lawn Mower Rebate Program, the new requirements of AB 1346, and any other available options and incentives for purchasing zero-emission equipment, including rebates and subsidies offered by CARB, the County, or other agencies and entities. C) Use electric and zero-emission construction equipment during project construction to the maximum extent feasible. Such equipment shall include forklifts, manlifts, loaders, welders, saws, pumps, fixed cranes, air compressors, sweepers, aerial lifts, pressure washers, and other small equipment. At minimum, the project must use off-road construction equipment that meet CARB Tier 4 Final engine emission standards. D) Use electric and zero-emission agriculture and manufacturing equipment to the maximum extent feasible. These requirements must be stipulated in the contract specifications for the project's construction and for the project's future tenants and any landscaping contracts for the property or tenants.	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide off-road vehicle and equipment fleet count, type, and fuel type, as available.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
Supports 2045 CAP Measures (and Actions): T9 (T9.1, T9.2, T9.3)		
11. TIER 1: Electrify County Fleet Vehicles (for municipal projects only) For all new municipal projects and facilities that include the purchase or operation of new fleet vehicles, including public transit buses and shuttles, all such fleet vehicles must be ZEVs. **Supports 2045 CAP Measures (and Actions):** T7 (T7.1, T7.2)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the number of new ZEV buses and the total ZEV percentage of the project's fleet.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
12. TIER 2: Achieve a High Jobs/Housing Balance For projects with nonresidential development, the Project must incorporate the following design elements: A) Support the County's goal to achieve a job density of 300 jobs per acre. **Supports 2045 CAP Measures (and Actions):** T2 (T2.1)	*Describe how the project will achieve a job density of 300 jobs per acre.* *OR,* *Describe why this action is not applicable to your project.* *OR* *Describe why such actions are not incorporated into your project.* *IN ADDITION, provide the job density of the project in terms of jobs per acre.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
13. TIER 2: Encourage Transit, Active Transportation, and Alternative Modes of Transportation For transit projects only, incorporate the following: A) Expand and improve frequency of existing network of County shuttles. B) Install bus-only lanes and signal prioritization along major thoroughfares. C) Install full bus rapid transit infrastructure along priority corridors. For all other projects, incorporate the following: A) Provide new mobility services, such as micro transit, autonomous delivery vehicles, and on-demand autonomous shuttles, in unincorporated Los Angeles County. B) Offer free transit passes for students, youth, seniors, disabled, and low-income populations. C) Implement telecommuting by project tenants and residents. D) Establish temporary and permanent car-free areas at the project site. **Supports 2045 CAP Measures (and Actions):** T4 (T4.1, T4.2, T4.3, T4.6, T4.7, T4.8, T4.10)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project.* *IN ADDITION, for transit projects, provide the size of area served by transit, the number of employees and residents served by transit, the transit service frequency and headways, the increase in headways or frequencies provided by the project, total transit service hours provided by transit, the number and length of bus-only lanes, and information on signal prioritization on transit routes implemented by the project.* *For non-transit projects, provide the number of residents within one-half mile of bus or active transportation services; information on any new mobility services offered, information on free transit passes offered, the number of employers*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
	participating in telecommuting programs, and the number and location of car-free areas provided by the project.	
14. TIER 2: Implement Parking Limitations Projects should include the following characteristics: A) Shared and reduced parking strategies, such as shared parking facilities, carpool/vanpool-only spaces, shuttle facilities, EV-only spaces, and reduced parking below allowable amount B) Minimum amount of required parking C) Unbundled parking costs to reflect cost of parking D) Parking pricing to encourage "park-once" behavior E) Compliance with all County parking reform strategies and policies **Supports 2045 CAP Measures (and Actions):** T5 (T5.1)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions not incorporated into your project.* *IN ADDITION, provide the total number of parking spaces, carpool/vanpool-only spaces, shuttle facilities, EV-only spaces; information on parking costs and unbundling; and parking prices.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
Building Energy and Water		
15. TIER 2: Decarbonize Existing Buildings This action applies only to projects that include a retrofit, remodel, or redesign of an existing building. If the proposed project does not include a retrofit, remodel, or redesign, select "Not Applicable" in the *Project Complies* column. The project must incorporate the following design elements: A) Achieve zero GHG emissions for on-site energy use. B) Comply with all applicable Building Performance Standards.[2] C) Comply with all building carbon intensity limits.[3] D) If the project is a major renovation, achieve ZNE and/or comply with the City's ZNE ordinance.[4] **Supports 2045 CAP Measures (and Actions):** E1 (E1.1, E1.2, E1.3, E1.4, E1.5, E1.6)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the project's anticipated GHG emissions associated with on-site energy consumption (i.e., natural gas use and electricity use) and the number of existing buildings transitioned to zero-GHG buildings.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
16. TIER 2: Decarbonize New Buildings For projects under construction before 2030, the project must achieve zero GHG emissions for on-site energy use, and/or comply with the County's building decarbonization ordinance, unless the project meets specific exemptions identified in the ordinance.[5] For projects under construction after 2030, the project must be zero-net-energy (ZNE) and achieve zero GHG emissions for on-site energy use, and/or comply with the County's ZNE ordinance, unless the project meets specific exemptions identified in the ordinance.[6] **Supports 2045 CAP Measures (and Actions):** E2 (E2.1, E2.2, E2.3)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the number and square footage of zero GHG emission buildings built, all ZNE buildings built, and the total GHG emissions anticipated for all buildings.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
17. TIER 1: Increase Building Energy Efficiency This action applies only to projects that include a retrofit of an existing building. If the proposed project does not include a retrofit, select "Not Applicable" in the *Project Complies* column. The project shall incorporate the following energy efficiency measures into the design: A) Comply with all applicable building performance standards.[7] B) Incorporate strategic energy management programs to reduce building energy demands. C) Conduct an energy audit or benchmarking analysis to identify potential energy savings opportunities and implement such opportunities. D) Achieve CALGreen Code Tier 2 or voluntary building energy measures as they apply to the retrofit. E) Replace existing appliances with higher-efficiency models. F) Install heat-trapping surfaces to cool or green surfaces, as feasible. G) Participate in SoCalREN, SCE, CPA, or other energy efficiency programs. H) Conduct other energy efficiency retrofits. I) Achieve zero-net-energy, if feasible. **Supports 2045 CAP Measures (and Actions):** E4 (E4.1, E4.2, E4.3)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the total number of energy retrofits performed, the building size (square footage) retrofit, the total project energy use and anticipated energy savings through retrofits, and the number and area of cool and green roofs installed.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
18. TIER 1: Implement Water Use Efficiency and Water Conservation The project must comply with the current water conservation ordinance in place, including any requirements for LEED or Sustainable SITES standards.[8] The project must also incorporate water use efficiency and conservation measures, including: A) High-efficiency appliances/fixtures to reduce water use, and/or include water-efficient landscape design B) CALGreen Code Tier 1 and Tier 2 voluntary water conservation measures C) Low-flow or high-efficiency water fixtures D) Water-efficient landscapes with lower water demands than required by the DWR 2015 Model Water Efficient Landscape Ordinance E) Drought-tolerant and native plant species only F) A comprehensive water conservation strategy G) Educational materials provided to future tenants and building occupants about water-saving behaviors and water-conserving landscaping **Supports 2045 CAP Measures (and Actions):** E6 (E6.1, E6.2, E6.3, E6.4, E6.5)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the project's estimated total water consumption (in GPCD or total gallons), the square footage of buildings that are water-neutral, and the project's building size (square footage).*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed
19. TIER 2: Reduce the Life-Cycle Carbon Intensity of Building Materials and Phase Out the Use of High-GWP Refrigerants The project must incorporate the following design elements to the maximum extent feasible:	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
A) For projects that are not fully electric, incorporate biomethane into the natural gas mix in place of traditional natural gas. B) Use negative-carbon concrete for all construction. C) Use low-GWP refrigerants and fire suppression equipment for all uses on-site. D) Comply with all County codes and ordinances regarding building material carbon intensity and high-GWP refrigerants and other gases. **Supports 2045 CAP Measures (and Actions):** E3 (E3.1, E3.2, E3.3, E3.4)	*OR,* *Describe why such actions are not incorporated into your project.* *IN ADDITION, provide the amount of biomethane used by the project, the quantify of negative-carbon concrete for construction, and the quantity of low-GWP refrigerants and fire suppression equipment used.*	
20. TIER 2: Use Energy Storage and Microgrids The project must incorporate the following design elements to the maximum extent feasible: A) Install energy storage systems. B) Use a building-scale or community microgrid to support demand management and peak shaving. **Supports 2045 CAP Measures (and Actions):** ES4 (ES4.1, ES4.2, ES4.3, ES4.4, ES4.5)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project* *IN ADDITION, provide the total kW of energy storage capacity installed and operational information for any microgrids utilized, if applicable.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
21. TIER 2: Use Recycled Water and Graywater for Non-potable Uses and Include Rainfall Capture The project must implement water reuse strategies onsite through the following design elements: A) Require use of reclaimed/recycled water and/or graywater for outdoor uses. B) Install residential graywater systems that meet appropriate regulatory standards. C) Install rainfall capture systems. D) Install dual plumbing for the use of recycled water. **Supports 2045 CAP Measures (and Actions):** E5 (E5.1, E5.2, E5.3, E5.4)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project* *IN ADDITION, provide the amount of reclaimed/recycled water and/or graywater used by the project.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
Waste		
22. TIER 1: Compost Organic Materials The project must comply with all state and local requirements for composting and organic waste collection, including but not limited to Chapter 20.91 (Mandatory Organic Waste Disposal Reduction Ordinance) of the Los Angeles County Code, including all County requirements pursuant to AB 1826 and SB 1383. The project must also: A) Provide proper storage, collection, and loading of organics in a manner that is convenient and safe for all users of the building. Ensure there are sufficient sizes of collection containers for organics. Containers must be kept clean, be clearly labeled, and are co-located next to any other solid waste receptacles.	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
Ensure sufficient pick-up of collection containers to meet the needs of the occupants. B) Include space for multi-stream collection containers for both recycling and organics in any location where a solid waste container is traditionally housed. This includes both outdoor collection containers serviced by a waste hauler or indoor collection containers utilized by occupants. Provide educational material and training to occupants and tenants in how to properly separate organics from all other solid waste and place organics in a separate container designated for organics. C) Ensure that all project occupants and tenants will separate compostables from all other refuse and place compostables in a separate container designated for composting. D) Require that all single-use food service ware (plates, bowls, cups) and accessories (straws, utensils, condiment cups) used by tenants at the project site be BPI certified compostable fiber, except where certain materials may be deemed medically necessary or necessary to ensure equal access for persons with disabilities. E) Require that any single-use accessories (straws, utensils, condiment cups) be only available on demand. F) Ensure that containers are audited annually to ensure proper service levels and to check for contamination. Report findings back to occupants within 30 days and to the County as requested. G) Work with the waste hauler to provide educational materials to tenants on at least an annual basis. H) Provide compliance data to the County as required for any current auditing program. **Supports 2045 CAP Measures (and Actions):** W1 (W1.1, W1.2) and W2 (W2.1, W2.2, W2.5)	*IN ADDITION, provide the project's estimated organic waste generation (tons), the amount of organic waste sent to landfills, and the amount of organic waste generated by the project which is diverted from landfills.*	
23. TIER 1: Recycle Recyclable Materials The project must comply with all state and local requirements for recycling, also including but not limited to Section 20.72.170 (Recyclable Materials Collection Program) of the Los Angeles County Code and all County requirements pursuant to AB 341 and AB 1826. The project must also: A) Comply with any zero waste ordinance in place at the time of project approval. B) Comply with all Mandatory Construction & Demolition (C&D) Recycling Program Requirements, including Chapter 20.87 (Construction and Demolition Debris Recycling and Reuse). C) Provide substantial storage, collection, and loading of recyclables in a manner that is convenient and safe for all users of the building. Ensure there are sufficient sizes and amount of collection containers for recyclables. Containers must be kept clean, be clearly labeled, and are co-located next to any other solid waste	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the total C&D tonnage recycled and/or diverted from landfills, the project's estimated recyclable waste generation (tons), the amount of recyclable waste sent to landfills, and the amount of recyclable waste generated by the project which is diverted from landfills.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply and Alternative Measure Proposed

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
receptacles. Ensure sufficient pick-up of collection containers to meet the needs of the occupants. D) Include space for multi-stream collection containers in any location where a solid waste container is traditionally housed. This includes both outdoor collection containers serviced by a waste hauler or indoor collection containers utilized by occupants. Provide educational materials and training to occupants and tenants in how to properly separate recyclables from all other solid waste and place recyclables in a separate container designated for recycling. E) Ensure that all project occupants and tenants separate recyclables from all other refuse and place recyclables in a separate container designated for recycling. F) Require that all single-use food service ware (plates, bowls, cups) and accessories (straws, utensils, condiment cups) used by tenants at the project site be BPI certified compostable fiber, except where certain materials may be deemed medically necessary or necessary to ensure equal access for persons with disabilities. G) Require that any single-use accessories (straws, utensils, condiment cups) be only available on demand. H) Ensure that containers are audited annually to ensure proper service levels and to check for contamination. Report findings back to occupants within 30 days and to the County as requested. I) Work with the waste hauler to provide educational materials to tenants on at least an annual basis. J) Provide compliance data to the County as required for any current auditing program. **Supports 2045 CAP Measures (and Actions):** W1 (W1.1, W1.3)		
24. TIER 2: Incorporate On-Site Composting, Mulching, and/or Anaerobic Digestion The project may incorporate organic waste processing capabilities, such as composting, mulching, or anaerobic digestion facilities (where applicable). Collaborate with PW and waste agencies to share organic processing information with interested parties. **Supports 2045 CAP Measures (and Actions):** W2 (W2.2, W2.3, W2.4)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project.* *IN ADDITION, provide information on any anaerobic digestion facilities constructed including their capacity and the amount of organic waste digested and converted to electricity, and the project's total energy generation from organic waste.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
Agriculture, Forestry, and Other Land Use (AFOLU)		
25. TIER 1: Incorporate Tree Plantings and Expand Urban Forest Cover The project must:	*Describe which project compliance options from the leftmost column you are implementing.*	☐ Project Complies ☐ Not Applicable

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
A) Enhance and expand urban forest cover and vegetation by planting trees and other vegetation. All trees and vegetation planted must be drought-tolerant or California native trees and plants. B) Comply with the Urban Forest Management Plan. C) Replace all native trees removed by the project with an equal or greater number of new trees. D) To the extent feasible, incorporate equitable urban forest practices and prioritize: i. Tree- and park-poor communities ii. Climate and watershed-appropriate and drought/pest-resistant vegetation iii. Appropriate watering, maintenance, and disposal practices iv. Shading v. Biodiversity **Supports 2045 CAP Measures (and Actions):** A3 (A3.1, A3.2, A3.3)	*OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are infeasible and identify the alternative measure proposed (provide additional documentation as described below).* *IN ADDITION, provide the total number of trees planted, the total tree canopy cover, the project's total green space area, and the area of impervious surface converted to pervious surfaces.*	☐ Project Does Not Comply and Alternative Measure Proposed
26. TIER 2: Conserve Forests, Woodlands, Shrublands, Grasslands, Desert, and other Carbon-Sequestering Wildlands and Working Lands For all projects involving the preservation, conservation, and restoration of agricultural lands, working lands, rangelands, forest lands, wetlands, and other wildlands in unincorporated Los Angeles County, the project may: A) Support the use of public and private land for urban and peri-urban agriculture, such as community gardens, and including urban vertical surfaces. B) Conserve and restore natural forest lands, wetlands and wildlands through land acquisitions and conservation easements. C) Preserve existing agricultural and farmlands, including those mapped as Agricultural Resource Areas. Expand adjoining areas to enlarge farmland area. D) Actively manage forests to reduce wildfire risk and prevent carbon loss in forest lands. **Supports 2045 CAP Measures (and Actions):** A1 (A1.1 and A1.2)	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project.* *IN ADDITION, provide the total number of acres preserved, conserved, and restored by land type, the number and size of community gardens added, the amount of vertical surface converted, and the acres of forest land managed for wildfire risk reduction and carbon stock savings if applicable.*	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply
27. TIER 2: Implement Regenerative Agricultural Practices For all agricultural projects, the project may: A) Utilize fallow and field resting practices to reduce bare-fallow land by adding cover crops and promoting crop rotation for active agricultural sites to improve soil quality and limit risks of nutrient erosion, pollutant runoff, and yield reduction. B) Implement a carbon farming plan with the primary objectives of carbon removal and regenerative agriculture. C) Use compost and/or organic fertilizer.	*Describe which project compliance options from the leftmost column you are implementing.* *OR,* *Describe why this action is not applicable to your project.* *OR,* *Describe why such actions are not incorporated into your project.* *IN ADDITION, provide the* quantity of synthetic fertilizers and compost used / applied, the number of acres of cover crops	☐ Project Complies ☐ Not Applicable ☐ Project Does Not Comply

CEQA STREAMLINING REQUIREMENT	DESCRIPTION OF PROJECT MEASURE(S) / DOCUMENTATION OF COMPLIANCE / EXPLANATION OF NON-COMPLIANCE	PROJECT COMPLIES
Supports 2045 CAP Measures (and Actions): A2 (A2.1, A2.2)	using regenerative agricultural techniques, the tonnage of fertilizer/compost produced each year.	

NOTES:

Abbreviations: 2045 CAP = 2045 Los Angeles County Climate Action Plan*; AB = Assembly Bill; AFOLU = Agriculture, Forestry, and Other Land Use; C&D = Construction & Demolition; CALGreen Code = California Green Building Standards Code; CAP = Climate Action Plan; CARB = California Air Resources Board; CEQA = California Environmental Quality Act; County = County of Los Angeles; CPA = Clean Power Alliance; DU = dwelling unit(s); DWR = California Department of Water Resources; EIR = environmental impact report; EV = electric vehicle; EVCS = electric vehicle charging station; General Plan* = Los Angeles County General Plan 2035*; GHG = greenhouse gas; GWP = global warming potential; HOV = high-occupancy vehicle; HQTA = High Quality Transit Area; kW = kilowatts; LEED = Leadership in Energy and Environmental Design; MWELO = Model Water Efficient Landscape Ordinance; PV = photovoltaic; PW = Los Angeles County Department of Public Works; RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy; SB = Senate Bill; SCAG = Southern California Association of Governments; SCAQMD = South Coast Air Quality Management District; SCE = Southern California Edison; SoCalREN = Southern California Regional Energy Network; TDM = transportation demand management; TIA = Transportation Impact Analysis; VMT = vehicle miles traveled; WUI = wildland urban interface; ZEV = zero-emission vehicle; ZNE = zero net energy.*

1 *Although the County has not yet developed the Zero Emission Vehicle Master Plan, the County will develop such a Plan before 2030, pursuant to Implementing Action T6.1 in the 2045 CAP.*

2 *Although the County has not yet developed building performance standards, the County will develop such a standard before 2030, pursuant to Implementing Action E1.1 in the 2045 CAP.*

3 *Although the County has not yet developed carbon intensity limits, the County will develop such a standard before 2030, pursuant to Implementing Action E1.2 in the 2045 CAP.*

4 *Although the County has not yet developed a ZNE ordinance, the County will develop such a standard before 2030, pursuant to Implementing Action E1.3 in the 2045 CAP.*

5 *Although the County has not yet developed a building decarbonization ordinance, the County will develop such an ordinance before 2030, pursuant to Implementing Action E2.1 in the 2045 CAP.*

6 *Although the County has not yet developed a ZNE ordinance, the County will develop such a standard before 2030, pursuant to Implementing Action E2.2 in the 2045 CAP.*

7 *Although the County has not yet developed building performance standards, the County will develop such a standard before 2030, pursuant to Implementing Action E4.1 in the 2045 CAP.*

8 *Although the County has not yet developed a net zero water ordinance, the County will develop such a standard before 2030, pursuant to Implementing Action E6.1 in the 2045 CAP.*

9 *Although the County has not yet developed building performance standards for building material carbon intensity and high-GWP refrigerants, the County will develop standards before 2030, pursuant to Implementing Actions E3.3 and E3.4 in the 2045 CAP.*

Table F-2: 2045 CAP Greenhouse Gas Emissions Reduction Alternative Measures

DESCRIPTION OF PROPOSED ALTERNATIVE MEASURE	DESCRIPTION OF GHG REDUCTION ESTIMATE
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*
Alternative for 2045 CAP Compliance Requirement #: *[Number]* **Emissions Sector:** *[transportation, building energy and water, waste, AFOLU, or other sector]* **Measure Description:** [Describe the proposed project measure and why it is proposed]	*[Demonstrate the effectiveness of the proposed measure to reduce the project's GHG emissions. Include a description of how your measure will reduce emissions and provide supporting quantification documentation and assumptions. The GHG emissions reduction analysis must be consistent with all CEQA guidelines and standard practice for modeling GHG emissions for project measures and actions.]*

F.4 Offsite GHG Reduction Program Framework

Introduction

Action ES5.4 of the 2045 CAP would establish an Offsite GHG Emissions Reduction Program (Offsite Program) for new development to use as a GHG reduction or mitigation pathway for 2045 CAP compliance and to fund programs for reducing GHG emissions in the built environment. This program would allow new development to fund decarbonization programs for existing development to accelerate 2045 CAP measures and actions or go beyond 2045 CAP measures and actions. Future projects that cannot achieve net-zero GHG emissions or are unable to comply with all CEQA streamlining requirements would have the option to participate in the Offsite Program. The Offsite GHG Reduction Program could be used for projects that propose alternative GHG emissions reduction measures to those identified in Table F-1, or that propose to include additional GHG emissions reduction measures beyond those described in Table F-1. This program would allow project applicants to implement local projects that reduce GHG emissions in unincorporated Los Angeles County (referred to herein as *offsite projects*). Such offsite projects must not otherwise be required by law or regulation and would not have happened but for the requirements placed on the project by the 2045 CAP CEQA Streamlining Checklist.

Once the Offsite GHG Reduction Program has been instituted by the County, project applicants will be able to use the program to complete Table F-2. Once established, the Offsite GHG Reduction Program should only be used after all feasible on-site GHG reduction measures are implemented at the project site to demonstrate compliance with the CEQA streamlining requirements.

This section represents a *framework* for the forthcoming Offsite Program; the actual program will be developed after the 2045 CAP is adopted.

CARB Guidance on Offsite GHG Reductions

As discussed in Section F.1, CARB supports "off-site GHG mitigation" in Appendix D of the 2022 Scoping Plan for projects that have implemented all feasible on-site GHG reductions: "If implementation of all feasible on-site GHG reduction measures is insufficient to reduce a project's impact to a less-than-significant level, the State recommends that the lead agency next explore options to fund or implement ***local***, off-site direct GHG reduction strategies."[21] The Offsite Program would achieve these goals.

Relationship to 2045 CAP Measures and Actions

The offsite projects that will be allowed in the program fall into two general categories:

1. Offsite projects *included* in the 2045 CAP's measures and actions.
2. Offsite projects *not included* in the 2045 CAP's measures and actions.

[21] California Air Resources Board. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Appendix D, "Local Actions." November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed in January 2023.

Offsite Projects Included in the 2045 CAP

This category represents projects (and the GHG emissions reductions they create) that *are* already included in the 2045 CAP's measures and actions. An allowable offsite project could involve, for example, accelerating measures, actions, and/or programs that are already identified in the 2045 CAP by providing additional funding to that program. Such projects would not add new programs or actions not already included in the 2045 CAP; they would expand upon and/or accelerate these programs and actions. Example projects are discussed below.

Offsite Projects Not Included in the 2045 CAP

This category represents projects (and the GHG emissions reductions they create) that are *not* already included in the 2045 CAP's measures and actions. An allowable offsite project could involve, for example, creating or funding programs for implementing new technologies (e.g., zero-emission construction equipment) or implementing new emissions reduction measures or actions not considered in the 2045 CAP. Example projects are discussed below.

Offsite Projects Not Eligible

Offsite projects that are implementing planned 2045 CAP measures and actions on the 2045 CAP's identified timeline are not eligible for the Offsite Program. Additionally, an offsite project activity that would be mandated by any current or future ordinance (such as a future ZNE ordinance for new buildings) cannot be used in the Offsite Program.

Carbon offset credits are not permitted to be used as offsite projects. In other words, projects that generate carbon offset credits to be traded on a voluntary market registry are not permitted to be used in this program.

Location

All offsite projects must be located within the jurisdictional boundaries of unincorporated Los Angeles County. Therefore, emissions reductions achieved by such offsite projects will be accounted for in future GHG inventory updates and will contribute toward the emissions reduction targets, which are based on the jurisdictional boundaries of unincorporated Los Angeles County. See 2045 CAP Appendix A for a discussion of the inventory and forecast boundaries.

Offsite projects shall be in the following locations, in order of priority, to the extent available: (1) Within the neighborhood surrounding the project site; (2) within the greater surrounding community (i.e., town); (3) within the same Planning Area; and (4) in other Planning Areas, but within unincorporated Los Angeles County.

Standards

All offsite projects must achieve **six specific standards** to ensure that the GHG reductions produced by offsite projects are environmentally sound; namely that the GHG reductions be real, permanent, quantifiable, verifiable, enforceable, and additional, defined as follows:

- **Real** means that the offsite project's GHG reductions are the direct result of complete emissions accounting. In other words, *real* means that GHG reductions or GHG enhancements result from a demonstrable action or set of actions, and are quantified using appropriate, accurate, and conservative methodologies that account for all GHG

emissions sources, GHG sinks, and GHG reservoirs within the offsite project boundary and account for uncertainty.[22]

- **Permanent** means either that GHG reductions and GHG removal enhancements are not reversible, or that when GHG reductions and GHG removal enhancements may be reversible, mechanisms are in place to replace any reversed GHG emissions reductions and GHG removal enhancements to ensure that all credited reductions endure for at least 100 years.
- **Quantifiable** means the ability to accurately measure and calculate GHG reductions or GHG removal enhancements relative to an offsite project's baseline in a reliable and replicable manner for all GHG emissions sources, GHG sinks, or GHG reservoirs included within the offsite project boundary, while accounting for uncertainty. GHG emissions reductions from an activity must be rigorously quantified, and such GHG reductions would only be permitted in an amount that corresponds to the GHG emissions that have been quantified. GHG emissions accounting must be accurate and adhere to standardized quantification methodologies, which are discussed further below.
- **Verifiable** means that an offsite project's assertion of GHG emissions reductions is well documented and transparent, such that it lends itself to an objective review by an accredited verification body. The forthcoming Offsite Program itself may require third-party verification.[23]
- **Enforceable** means the authority of the County to hold a particular party responsible to take appropriate action if any of the provisions of the Offsite Program are violated.
- **Additional** means that the offsite project is not otherwise required by law, regulation, or legally binding mandate, and none of the offsite project's GHG emissions reductions would otherwise occur. In other words, an offsite project activity is additional if it can be demonstrated that the activity would result in emissions reductions or removals exceeding what would be achieved in the absence of the incentive provided by the proposed project and the 2045 CAP CEQA Streamlining Checklist. Additionality is an important characteristic the Offsite Program because it indicates that the GHG reductions represent a net environmental benefit and a real reduction of GHG emissions and can thus be used to offset a project's new GHG emissions.

Proposed Process

If an applicant selects to use the Offsite Program as an alternative GHG emissions reduction measure beyond those described in Table F-1, a specific process must be followed. The process will consider the following topics, which are subject to modification by the County in the forthcoming Offsite Program.

Quantification: Project applicants shall provide evidence to the County showing that the offsite project(s) proposed achieve the amount of GHG emissions reductions required. Examples of

[22] In general, uncertainty should be accounted for by using conservative assumptions and/or parameter values that tend to underestimate, rather than overestimate, total GHG emissions reductions.

[23] Generally, third-party verification includes a review of all documentation, monitoring data, and procedures used to estimate GHG reductions, and culminate in the verification body's issuance of a report and statement that identifies the quantity of GHG reductions that can be issued to the offsite project. As part of the report and statement, the independent third party verifies that the offsite project has adhered to the pertinent protocol or methodology, to confirm that the offsite project's GHG reductions are real, permanent, quantifiable, enforceable, and additional.

such evidence include applicable methodologies associated with the GHG emissions reductions, quantification calculations, and supporting documentation.

Standards: Project applicants must demonstrate, with substantial evidence, that all six of the offsite project standards are met: *real, permanent, quantifiable, verifiable, enforceable*, and *additional*.

Enforcement: Project applicants shall obtain all necessary permits and approvals for implementation of the offsite project implementation and such materials shall be submitted to the County for review and approval before project approval.

Timing: Project applicants shall submit documentation to the County identifying the quantity of GHG emissions reductions required by the offsite project over a specific time frame to be identified in the Offsite Program (e.g., before project approval or permit issuance, over the course of buildout of the project).

Monitoring: Project applicants shall submit regular reports documenting the offsite project's achieved GHG emissions reductions over a specified time period (such as the previous or current calendar year).

Example Offsite Projects

- **Local building electrification programs**: Programs that target existing residential and commercial buildings in the project's vicinity for electrification, provided that such electrification actions are not already required by law or regulation, County building performance standards, or reach code requirements. For example, replacing a natural gas–fired heating, ventilation, and air conditioning system with an electric heat pump or replacing a gas stove with an induction cooktop.
- **Off-site EV chargers**: Programs that install EV charging stations, provided that such installations are not already required by law or regulation, or County reach code requirements and the forthcoming Zero Emission Vehicle Master Plan (Measure T6). For example, funding or directly installing EV chargers in multi-unit dwellings in disadvantaged or low-income areas, public locations (schools, libraries, city centers), workplaces, and key destinations (e.g., parks, recreation areas, sports arenas).
- **Local building solar programs**: Programs that target existing residential and commercial buildings in the project's vicinity for rooftop solar photovoltaic installations, provided that such installations are not already required by law or regulation, County building performance standards, or reach code requirements. For example, funding or directly installing rooftop solar installations or community solar systems.
- **Energy storage and microgrids**: Funding for or direct implementation of a microgrid to balance generation from non-controllable renewable power sources, such as solar, with distributed, controllable generation, such as natural gas–fueled combustion turbines; or a strategically deployed battery storage system to make the grid more flexible by unlocking renewable energy and replacing fossil fuel–generated electricity, especially during peak hours. Such programs would be allowed provided they are not already required by law or regulation, County building performance standards, or reach code requirements.
- **Truck and bus electrification programs**: Funding for the purchase of zero-emission vehicle trucks and buses to replace existing fossil fuel–powered trucks and buses;

coordination with local transportation agencies and school districts and replacement of diesel- or gasoline-fueled buses with less-polluting technologies such as compressed natural gas, electric, hybrid-electric, fuel cell, or other commercially available technologies. Such programs would be allowed provided they are not already required by law or regulation, County building performance standards, or reach code requirements.

- **Hydrogen fuel**: Funding for or programs that provide renewable hydrogen fueling stations to nearby truck fleets, such as at logistics warehouses, or other uses of renewable hydrogen fuel as a replacement for fossil fuels. Such programs would be allowed provided they are not already required by law or regulation, County building performance standards, or reach code requirements.

Environmental Impacts Pursuant to CEQA

Project applicants' CEQA documents would be required to disclose the impacts of any offsite projects that are proposed for funding or implementation. The Final PEIR for the 2045 CAP evaluates the potential environmental impacts of the 2045 CAP's measures and actions. For any offsite projects implemented via this program, then, to the extent that such projects include types of activities similar to those contemplated by the 2045 CAP's measures and actions, the resulting environmental impacts would be expected to be similar to those disclosed in the Final PEIR. Project applicants' CEQA documents may rely on the Final PEIR impact analysis for an offsite project similar to those contemplated by the 2045 CAP, unless a specific offsite project causes a new or substantially more severe impact for that project type not addressed in the Final PEIR.

Next Steps and Additional Guidance

This section represents a *framework* for the Offsite Program. The actual Offsite Program will be developed separately after the 2045 CAP is formally adopted and the Final PEIR is certified. Once the formal Offsite Program is developed, project applicants may use it to demonstrate compliance with the CEQA streamlining requirements as indicated above.

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Exhibit D

DRAFT CANDIDATE FINDINGS OF FACT
Public Resources Code Section 21081
For:
LOS ANGELES COUNTY 2045 CLIMATE ACTION PLAN
State Clearinghouse No. 2021120568

Lead Agency:
County of Los Angeles Department of Regional Planning

I. INTRODUCTION

This document presents the Findings of Fact (Findings) prepared by the County of Los Angeles Department of Regional Planning (County) for consideration of adoption by the Board of Supervisors of Los Angeles County (Board) regarding the Program Environmental Impact Report (PEIR) for the Los Angeles County 2045 Climate Action Plan (Project or 2045 CAP). The environmental effects of the Project are addressed in the Recirculated Draft PEIR dated March 2023 and a Final PEIR dated October 2023. The PEIR was prepared in compliance with the California Environmental Quality Act (CEQA, Pub. Resources Code, §§ 21000 *et seq.*) and its implementing regulations (CEQA Guidelines, Cal. Code Regs., tit. 14, §§ 15000 *et seq.*) and is incorporated by reference herein.

This document is organized as follows:

- Section I provides an introduction that describes the basis for these Findings and identifies the components of the record of proceedings as well as where to locate them.
- Section II describes the Project, including its location, objectives, and implementation timeline.
- Section III details the environmental review process and public participation.
- Section IV identifies the EIR certification process.
- Section V provides a summary of Project impacts, including which resource areas would have significant and unavoidable impacts, impacts that would be less than significant with mitigation incorporated, and less-than-significant impacts as a result of projects facilitated by the 2045 CAP.
- Section VI summarizes the Board's findings regarding significant and unavoidable impacts and impacts that would be less than significant with mitigation incorporated. Impact finding summaries are organized by environmental resource area with impacts, findings, and mitigation measures outlined.
- Section VII describes Findings relating to Project alternatives analyzed in the EIR, including the No Project Alternative, Alternative 1, Alternative 2, and Alternative 3.
- Section VIII summarizes additional CEQA Findings regarding the EIR.
- Section IX provides details about the Mitigation Monitoring and Reporting Plan.

Public Resources Code section 21081(a) and CEQA Guidelines section 15091(a) state that no public agency shall approve or carry out a project for which an environmental impact report has been completed that identifies one or more significant effects thereof, unless such public agency makes one or more of the following findings:

1. Finding 1: Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant environmental effects on the environment;
2. Finding 2: Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been or can or should be adopted by that other agency[1]; or
3. Finding 3: Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report.

CEQA requires that the Findings be supported by substantial evidence in the record. (CEQA Guidelines, § 15091(b).) Under CEQA, "substantial evidence" means enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. (CEQA Guidelines, § 15384.) Substantial evidence must include facts, reasonable assumptions predicted upon facts, and expert opinion supported by facts. (CEQA Guidelines, § 15384(b).) Additional substantial evidence supporting all Findings made herein is contained in the EIR and/or the record of proceedings.

The Findings have been submitted by the County of Los Angeles Department of Regional Planning as Findings to be made by the decision-making body, the County of Los Angeles Board of Supervisors. The issuance of these Findings allows readers an opportunity to review them prior to a decision by the Board on the Project. It is the role of County staff to independently evaluate the proposed Findings, and to make a recommendation to the Board regarding their adequacy. It is the exclusive discretion of the Board, as decision-maker responsible for certifying the EIR, to determine the adequacy of the proposed Findings.

CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project. (CEQA Guidelines, § 15093.) For a project that has significant impacts that cannot feasibly be avoided or substantially lessened, a public agency, after adopting proper findings, may nevertheless approve the project if the agency first adopts a Statement of Overriding Considerations setting forth the specific reasons why the agency found that the project's "benefits" render "acceptable" its "unavoidable adverse environmental effects". (CEQA Guidelines, §§ 15093, 15043(b); Pub. Resources Code, § 21081(b).)

a. Record of Proceedings

The record of proceedings for the Project upon which the Board's Findings are based includes, but is not limited to, the following:

- The Notice of Preparation (NOP) and all other public notices issued by the County in conjunction with the project;
- All responses to the NOP received by the County;

[1] There are no changes or alterations within the responsibility of and jurisdiction of another public agency such that Finding 2 is not applied below.

- The Recirculated Draft PEIR;
- The Final PEIR;
- All written comments submitted by agencies or members of the public during the public review comment periods;
- All responses to the written comments included in the Final PEIR;
- The Mitigation Monitoring and Reporting Program;
- The reports and technical memoranda included or referenced in any responses to comments in the Final PEIR;
- All documents, studies, EIRs, or other materials incorporated by reference in, or otherwise relied upon during the preparation of, the Recirculated Draft PEIR and the Final PEIR;
- Any documents expressly cited in these Findings; and
- Any other relevant materials constituting the record of proceedings pursuant to Public Resources Code Section 21167.6(e).

b. Custodian and Location of Records

The following Findings of fact are based in part on the information contained in the EIR for the Project, as well as additional facts found in the complete record of proceedings. The County is the custodian of the Administrative Record for the Project. This information is provided in compliance with Public Resources Code section 21081.6(a)(2) and CEQA Guidelines section 15091(e).

The 2045 CAP Environmental Impact Report consists of:

1. Draft Program Environmental Impact Report dated May 2022;
2. Recirculated Draft Program Environmental Impact Report dated March 2023; and
3. Final Program EIR dated October 2023 consisting of the Recirculated Draft PEIR and the Final PEIR, which together provide in one place all clarifications, corrections, and minor revisions to the text, tables, figures, and appendixes of the Recirculated Draft PEIR generated either from responses to comments or independently by the County.

The EIR is hereby incorporated by reference and is available for review with all documents and other materials that constitute the record of proceedings for the County's actions related to the Project. The complete record of proceedings is available at Los Angeles County, Department of Regional Planning, 320 W. Temple Street 13th Floor, Los Angeles CA 900012. Copies of the documents that constitute the record of proceedings are also on the County's website. The Final PEIR, Notice of Availability, and Notice of Completion are also located on the County's website at https://planning.lacounty.gov/long-range-planning/climate-action-plan/documents/.

II. DESCRIPTION OF THE PROJECT

The Project, e.g., the Draft 2045 CAP as described in the Final PEIR, is up for approval. Subsections a., b., and c. below summarize the main components of the Project, including location, objectives, and implementation.

a. Project Location

The Project is not constrained to a single location within the region. Rather the Project area for the 2045 CAP consists of the unincorporated areas of Los Angeles County. These unincorporated areas occupy approximately 1,696,000 acres, or 2,650 square miles. Altogether, the Project area accounts for approximately 65 percent of the total land area of Los Angeles County.

b. Project Objectives

Overall, the 2045 CAP represents the County's plan to meet greenhouse gas (GHG) emissions reduction targets for unincorporated Los Angeles County by the years of 2030, 2035, and 2045. It was developed with the goal to implement the GHG emissions reduction policies of the General Plan Air Quality Element, and to ensure the County contributes its fair share to statewide GHG emissions reductions. The Project addresses the following objectives:

1. Identify detailed programs, actions, and performance goals to achieve the climate action policies of the General Plan.
2. Identify GHG emissions reduction targets tailored to the unincorporated County that closely align with state and County climate goals.
3. Provide a road map for reducing GHG emissions to achieve the County's GHG emissions reduction targets.
4. Encourage sustainable housing production at all levels of affordability, including increasing housing densities near transit to the extent allowed in the General Plan.
5. Demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide CEQA streamlining for development projects (serve as a "qualified CAP") via the 2045 Climate Action Plan Consistency Review Checklist (2045 CAP Checklist).

c. Project Overview and Implementation

The 2045 CAP now being considered for approval reflects the further development and refinement that resulted from public review of Draft 2045 CAP analyzed in the Draft PEIR and the Revised Draft 2045 CAP analyzed in the Recirculated Draft PEIR. See Section III, below, for details. The 2045 CAP identifies strategies, measures, and actions to effectively meet GHG emission reduction targets for 2030, 2035, and 2045. The 2045 CAP builds on previous County work and defines new reduction targets beyond the year 2020 that are consistent with the State of California's targets and legislative actions for GHG emissions reductions. The 2045 CAP details the GHG emissions reduction vision and goals *of OurCounty: Los Angeles Countywide Sustainability Plan* for the unincorporated Los Angeles County and implements the GHG emissions reduction strategies of the General Plan's Air Quality Element. Specifically, the 2045 CAP, once approved, would replace the existing implementation strategy of the Air Quality Element called the Unincorporated Los Angeles County Community Climate Action Plan 2020 (2020 CCAP). Approval of the 2045 CAP would require an amendment to the General Plan to replace the 2020 CCAP, an

implementing component of the General Plan's Air Quality Element. The 2045 CAP is a policy document intended to reduce community-wide GHG emissions and would support development allowed under the General Plan. No changes to General Plan land use designations, zoning, or land use, or specific projects, are proposed as part of the 2045 CAP.

Implementation of the 2045 CAP would occur over the following three phases, which takes advantage of easier short-term measures and actions to meet the 2030 target and then builds up to more complex solutions as the 2035 target and 2045 target dates approach:

- Phase 1: Short-Term Actions (2024–2030)—Short-term actions that are high-priority with large emissions reductions that would lay the foundation for longer term actions. The short-term target of the 2045 CAP is to reduce GHG emissions in the County by 40 percent below 2015 levels by 2030.
- Phase 2: Medium-Term Actions (2030–2035)—Actions needed to achieve the 2030 or 2035 GHG emissions reduction targets that may need additional time, funding, or new technology to implement. The medium-term target of the 2045 CAP is to reduce GHG emissions in the County by 50 percent below 2015 levels by 2035.
- Phase 3: Long-Term Actions (2035–2045)—Actions needed to achieve the 2045 GHG emissions reduction target that may need substantial time, funding, or new technology to implement. The long-term target of the 2045 CAP is to reduce GHG emissions in the County by 83 percent below 2015 levels by 2045. The long-term aspirational goal of the 2045 CAP is to achieve carbon neutrality in the County by 2045.

The Draft 2045 CAP includes the following:

- A GHG emissions inventory for 2018.
- Emissions forecasts for 2030, 2035, and 2045.
- GHG emissions targets for 2030, 2035, and 2045.
- A long-term aspirational goal for carbon neutrality by 2045.
- A suite of GHG emissions reduction strategies, measures, and actions to reduce GHG emissions from major sectors.
- A technical modeling appendix to explain the Draft 2045 CAP's GHG emissions reduction estimates.
- A consideration of environmental justice and equity concerns.
- Implementation and monitoring measures to ensure successful climate action.
- A new development review consistency checklist to allow future projects to streamline GHG emissions analyses pursuant to CEQA as anticipated by CEQA Guidelines section 15183.5 by using the 2045 CAP.

III. ENVIRONMENTAL REVIEW PROCESS AND PUBLIC PARTICIPATION

The County of Los Angeles is the lead agency responsible for conducting environmental review under CEQA and shall be primarily responsible for carrying out the Project. The County issued a Draft PEIR for the Draft 2045 CAP on May 25, 2022. After the July 18, 2022 conclusion of the comment period for the Draft PEIR, the County elected to revise the Draft 2045 CAP in response to public and other input received, and to transition the Draft 2045 CAP's aspirational goal of carbon neutrality by 2045 into a

target consistent with new legislation, Assembly Bill (AB) 1279. AB 1279 was enacted in September 2022 after the close of the Draft PEIR comment period.

The County released the Revised Draft 2045 CAP on March 16, 2023. The County issued a Recirculated Draft PEIR on the Revised Draft 2045 CAP on March 24, 2023, in compliance with CEQA. The Recirculated Draft PEIR describes changes to the Draft 2045 CAP in Chapter 2, *Project Description*, and analyzes the Project as revised on a resource-by-resource basis throughout Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*. It also adds content to address issues raised by public comments on the Draft PEIR and makes other minor clarifications. The Recirculated Draft PEIR wholly replaced the May 2022 Draft PEIR.

Pursuant to CEQA Guidelines section 15085, upon publication of the Recirculated Draft PEIR, the County filed a Notice of Completion with the Governor's Office of Planning and Research, State Clearinghouse, indicating that the Recirculated Draft PEIR had been completed and was available for review and comment by the public. The County also posted a Notice of Availability of the Recirculated Draft PEIR at this time pursuant to CEQA Guidelines section 15087. During the public review period, beginning March 30, 2023 and ending on May 15, 2023, the County received comments on the environmental document. Comments were received via email to: climate@planning.lacounty.gov; and by mail at: Los Angeles County Department of Regional Planning 320 W. Temple Street 13th Floor, Los Angeles CA 90012. After the close of public review period, the County provided responses in writing to all comments received on the Recirculated Draft PEIR. See Table 1 below for a list of the parties who commented on the Recirculated Draft PEIR.

Name	Date(s)	Response to Comment
Agencies and Tribes		
California Air Resources Board	5/15/2023	Responses are provided in Section 2.3.1, Responses to Comments from Agencies and Tribes. See Letter A1.
San Manuel	4/26/2023	Responses are provided in Section 2.3.1, Responses to Comments from Agencies and Tribes. See Letter A2.
Los Angeles County Sanitation Districts	5/15/2023	Responses are provided in Section 2.3.1, Responses to Comments from Agencies and Tribes. See Letter A3.
Organizations		
Abundant Housing LA	5/15/2023	This comment on the Revised Draft 2045 CAP does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses generally comments received on the Revised Draft 2045 CAP.
Acton Town Council	5/15/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations. See Letter O2.
Altadena Town Council	5/15/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations. See Letter O3.
Altadena Wild	5/15/2023	This comment on the Revised Draft 2045 CAP does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses generally comments received on the Revised Draft 2045 CAP.
BizFed	5/9/2023 5/15/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations. See Letter O5a and Letter O5b.

Name	Date(s)	Response to Comment
Building Industry Association	5/15/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations. See Letter O6.
Center for Biological Diversity	5/15/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations. See Letter O7.
Communities for a Better Environment	5/16/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations. See Letter O8.
Endangered Habitats League	4/11/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations. See Letter O9.
FivePoint Newhall Land and Farming Company	5/15/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations. See Letter 10.
League of Women Voters	3/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations. See Letter 12.
Santa Clarita Organization for Planning and the Environment	5/15/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations. See Letter 13.
Southwest Mountain States Regional Council of Carpenters	5/12/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations. See Letter 14.
Tejon Ranch Company	5/15/2023	Responses are provided in Section 2.3.2 Responses to Comments from Organizations. See Letter 15.
The Greenlining Institute	5/15/2023	This comment on the Revised Draft 2045 CAP does not raise significant environmental issues related to the Recirculated Draft PEIR, and no further response is required on this issue pursuant to CEQA Guidelines section 15088(a). Nonetheless, see Chapter 1, which addresses generally comments received on the Revised Draft 2045 CAP.
Individuals		
Chelsea Katan	4/10/2023	Responses are provided in Section 2.3.3 Responses to Comments from Individuals. See Letter I1.
Emmanuel Alcantar		Responses are provided in Section 2.3.3 Responses to Comments from Individuals. See Letter I2.

The CEQA process includes public involvement at several steps, including consultation with California Native American Tribes consistent with AB 52. (Pub. Resources Code, § 21080.3.1). AB 52 establishes a process for CEQA lead agencies to consult with tribes that are traditionally and culturally affiliated with a project area—here, the unincorporated areas of Los Angeles County. For this Project, the County also invited public involvement in the form of public review of the Draft 2045 CAP and the Revised Draft 2045 CAP; and as part of the CEQA scoping process and following issuance of the Draft PEIR and Recirculated Draft PEIR.

IV. EIR CERTIFICATION PROCESS

The County released the Final PEIR on October 12, 2023 and posted the Final PEIR on its website. The County submitted the Final PEIR with the Governor's Office of Planning and Research on October 23, 2023, per Cal. Code of Reg. Title 14 Chap. 3 ss 15089(b).

Prior to considering adoption of these Findings on November 15, 2023, pursuant to CEQA Guidelines section 15090, the Board certified that:

- The EIR has been completed in compliance with CEQA;

- The EIR was presented to the decision-making body of the lead agency – Los Angeles County Board of Supervisors – and that the decision-making body reviewed and considered the information contained in the EIR prior to approving the Project; and
- The EIR reflects the lead agency's independent judgment and analysis.

Following publication of the Final PEIR, County staff has recommended the Board approve the Project as identified in the Final PEIR. The Findings and Statement of Overriding Considerations herein address the Project.

V. SUMMARY OF IMPACTS

Impacts associated with specific environmental resource areas resulting from the Project are summarized in Table ES-2 of the Recirculated Draft PEIR (p. ES-20 et seq.) and discussed below.

The EIR concludes that the Project will have a less-than-significant impact with mitigation measures incorporated on some components of the following issue areas:

- Aesthetics (Impacts 3.2-5 and 3.2-10)
- Air Quality (Impacts 3.4-3b and 3.4-7 [Valley Fever])
- Biological Resources (Impacts 3.5-1, 3.5-4, 3.5-6, and 3.5-9)
- Cultural Resources (All impacts)
- Hazards and Hazardous Materials (Impact 3.10-2, 3.10-3, 3.10-6, 3.10-8, 3.10-9, and 3.10-12)
- Hydrology and Water Quality (Impacts 3.11-5 and 3.11-11)
- Transportation (Impacts 3.15-1, 3.15-3, 3.15-4, and 3.15-6)
- Tribal Cultural Resources (All impacts)
- Wildfire (Impacts 3.18-1, 3.18-3, 3.18-5, 3.18-6, 3.18-8, and 3.18-10)

Section 15126.2(b) of the CEQA Guidelines requires an EIR to describe any significant impacts, including those that can be mitigated but not reduced to a less-than-significant level. The Project, as a result of the implementation of projects facilitated by the 2045 CAP, would have a significant and unavoidable impact on some components of the following environmental resource areas:

- Aesthetics (Impacts 3.2-1, 3.2-2, 3.2-3, 3.2-4, 3.2-6, 3.2-7, 3.2-8, and 3.2-9)
- Agriculture and Forestry (Impacts 3.3-1, 3.3-2, 3.3-5, 3.3-7, 3.3-8, and 3.3-11)
- Air Quality (Impacts 3.4-1, 3.4-2, 3.4-3a, 3.4-5, 3.4-6, and 3.4-7 [local Air Pollutant and toxic air contaminant {TAC} emissions])
- Biological Resources (Impacts 3.5-2, 3.5-3, 3.5-5, 3.5-7, 3.5-8, 3.5-10, and 3.5-11)
- Noise and Vibration (All impacts)
- Utilities and Service Systems (Impact 3.17-1, 3.17-3, 3.17-5, and 3.17-7)

CEQA does not require specific Findings to be made for impacts that would be less than significant without the incorporation of mitigation measures. The EIR concludes that the Project will have a less-than-significant impact and require no mitigation measures with respect to components of the following issue areas:

- Agriculture and Forestry (Impacts 3.3-3, 3.3-4, 3.3-6, 3.3-10, and 3.3-12)
- Air Quality (Impacts 3.4-4 and 3.4-8)
- Geology and Soils (All Impacts)
- Greenhouse Gas Emissions (All impacts)
- Hazards and Hazardous Materials (Impact 3.10-1, 3.10-4, 3.10-5, 3.10-7, 3.10-10, and 3.10-11)
- Hydrology and Water Quality (Impacts 3.11-1, 3.11-2, 3.11-3, 3.11-4, 3.11-6, 3.11-7, 3.11-8, 3.11-9, 3.11-10, and 3.11-12)
- Land Use and Planning (All impacts)
- Population and Housing (All impacts)
- Transportation (Impacts 3.15-2 and 3.15-5)
- Utilities and Service Systems (Impact 3.17-2, 3.17-4, 3.17-6, and 3.17-8)
- Wildfire (Impacts 3.18-2, 3.18-4, 3.18-7, and 3.18-9)

VI. FINDINGS OF FACT REGARDING THE PROJECT'S SIGNIFICANT AND LESS-THAN-SIGNIFICANT ENVIRONMENTAL IMPACTS

In making each of the findings below, the County has considered the plans, programs, and policies discussed in the PEIR.

a. Findings Regarding Project Impacts Determined to Be Less Than Significant with Mitigation Incorporated

The following significant impacts were analyzed in the PEIR. Because of the environmental analysis of the Project; presumed compliance with existing laws, codes, and statutes; and the identification and incorporation of feasible mitigation measures, the following significant impacts have been determined by the County to be reduced to a level of less than significant; and the County has found – in accordance with Public Resources Code section 21081(a)(1) and the CEQA Guidelines section 15091(a)(1) – that "Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant effects on the environment as identified in the final EIR." This is referred to herein as "Finding 1." Please refer to the PEIR for a further discussion of impacts within each resource section.

i) Aesthetics

Impact 3.2-5: Projects facilitated by the 2045 CAP would create a new source of substantial shadow, light, or glare, which would adversely affect day or nighttime views in the area.

> Finding 1: Mitigation measures would reduce the Project's impacts due to the creation of a new source of substantial shadow, light, or glare, which would adversely affect day or nighttime views in the area to less-than-significant levels. The Board finds that Mitigation Measure 3.2-3, described below, is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.
>
> Facts in Support of Finding: The implementation of Mitigation Measure 3.2-3, Reduce Light and Glare Impacts, would ensure that lighting from projects facilitated by the 2045 CAP would not substantially intrude on daytime or nighttime views in the area because its provisions would

substantially limit light trespass and confine generated light to within project boundaries. Also, adhering to design and siting requirements would reduce the potential for glare. Accordingly, with the implementation of Mitigation Measure 3.2-3, Impact 3.2-5 would be reduced to less than significant.

Mitigation Measures:

Mitigation Measure 3.2-3: Reduce Light and Glare Impacts (Recirculated Draft PEIR, p. 3.2-18)

To reduce significant light and glare impacts of projects facilitated by the 2045 CAP, the County shall require the following measures to be incorporated: a) All lighting shall be focused toward the site and outdoor lighting shall be directed downward; b) The design of exterior light fixtures shall incorporate shielding to prevent glare and offsite light spillage; c) Outdoor lighting shall include non-glare fixtures; and d) Structure design shall include exterior finishes and materials that would be minimally reflective or sited or oriented in such a way as to direct glare away from sensitive receptors.

Impact 3.2-10: Projects facilitated by the 2045 CAP would not cause or contribute to a new source of substantial shadow, light or glare, which would result in a significant cumulative impact to views in the area.

Finding 1: Mitigation measures would reduce the Project's impacts related to causing or contributing to a new source of substantial shadow, light or glare, which would result in a significant cumulative impact to views in the area to less-than-significant levels. The Board finds that Mitigation Measure 3.2-3 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than cumulatively considerable and therefore, less than significant.

Facts in Support of Finding: Pre-mitigation, the cumulative impact attributable to nighttime lighting would be significant, and the Project's contribution to this impact would be cumulatively considerable as a result of the incremental impacts of the implementation of projects facilitated by the 2045 CAP. However, the implementation of Mitigation Measure 3.2-3 would ensure that nighttime lighting associated with projects facilitated by the 2045 CAP would not substantially intrude on daytime or nighttime views in the area because its provisions would substantially confine generated light to within the projects' boundaries. Accordingly, with the implementation of Mitigation Measure 3.2-3, the Project's contribution to cumulative impacts would be less than cumulatively considerable, and therefore less than significant.

Mitigation Measures:

Mitigation Measure 3.2-3. See Impact 3.2-5 for a discussion of this mitigation measure.

ii) Air Quality

Impact 3.4-3b: The Project, as a result of projects facilitated by the 2045 CAP measures and actions, would not expose sensitive receptors to substantial pollutant concentrations relating to Valley Fever.

Finding 1: Mitigation measures would reduce the Project's impacts relating to exposing sensitive receptors to substantial pollutant concentrations relating to Valley Fever to less-than-significant levels. The Board finds that Mitigation Measures 3.4-1, 3.4-2, and 3.4-8 described below, are feasible and hereby adopts them. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: Projects facilitated by the 2045 CAP would result in a significant impact related to exposure of sensitive receptors to substantial pollutant concentrations related to Valley Fever. Implementation of Mitigation Measures 3.4-1 and 3.4-2 would control and reduce fugitive dust emissions and reduce potential off-site exposures. Mitigation Measure 3.4-8 would reduce potential exposures to construction workers located on-site and off-site, reducing this impact to a less-than-significant level. Because the exact specifications for projects that may be facilitated by the 2045 CAP are unknown, this determination applies to horizon years 2030, 2035, and 2045. Although the magnitude of long-term impacts would increase over time to the extent that more projects would be facilitated by CAP measures and actions to meet the 2045 CAP's increasingly aggressive 2030, 2035, and 2045 GHG reduction targets, the impact would remain less than significant for all horizon years.

Mitigation Measures:

Mitigation Measure 3.4-1: Construction Emissions (Recirculated Draft PEIR, p. 3.4-51 et seq.)

If, during subsequent project-level environmental review, construction-related criteria air pollutants are determined to have the potential to exceed the applicable air quality management district (AQMD) adopted thresholds of significance, the lead agency shall require applicants for new projects facilitated by the 2045 CAP measures and actions to incorporate mitigation measures to avoid or reduce air pollutant emissions during construction activities. Mitigation measures that may be identified during the environmental review include, but are not limited to:

- When wind gusts exceed 25 miles per hour, cease all active construction activities or follow the applicable guidelines outlined in Table 3 of SCAQMD Rule 403 or Sections (C)(10) through (C)(14) of AVAQMD Rule 403.
- Use construction equipment rated by the U.S. Environmental Protection Agency (USEPA) as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits, applicable for engines between 50 and 750 horsepower, as commercially available.
- Ensure that construction equipment is properly serviced and maintained to the manufacturer's standards.
- Limit nonessential idling of construction equipment to no more than five consecutive minutes.
- Where acceptable to the fire department, control weed growth by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering.
- Water all active construction areas at least three times daily or four times daily if needed to control dust emissions. Watering should be sufficient to prevent airborne visible dust from leaving the site. Where local water supplies are not available in sufficient quantities within unincorporated areas of the County, use nontoxic chemical soil stabilizers or dust suppressants to control dust emissions in sufficient amounts to prevent airborne visible dust from leaving the site.
- Increase watering frequency and/or application frequency of nontoxic chemical soil stabilizers or dust suppressants whenever wind speeds exceed 25 miles per hour. Reclaimed water shall be used whenever possible.

- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- Pave, apply water three times daily or as often as necessary to control dust, or where local water supplies are not available in sufficient quantities within unincorporated areas of the County, apply (nontoxic) soil stabilizers or dust suppressants on all unpaved access roads, parking areas, and staging areas at construction sites.
- Sweep daily (with water sweepers using reclaimed water if possible), or as often as needed, all paved access roads, parking areas, and staging areas at the construction site to control dust.
- Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the Project site, or as often as needed, to keep streets free of visible soil material.
- Where local water supplies are not available in sufficient quantities within unincorporated areas of Los Angeles County, hydroseed or apply nontoxic chemical soil stabilizers or dust suppressants to inactive construction areas.
- Enclose, cover, water three times daily, or apply nontoxic chemical soil stabilizers or dust suppressants to exposed stockpiles (dirt, sand, etc.).
- In areas with existing vegetation, install the facility components with minimal disturbance. Take all necessary precautions to not use vehicles or machinery for grading or alter the existing grade in these areas.
- Design project facilities to limit ground disturbance or grading to only the access roads, substations and related underground transmission lines, tanks, basins, inverter pads, or other areas required by the County. Ensure that the facilities comply with all applicable grading standards.
- Site utility-scale renewable energy projects in a way that minimizes site disturbance, such as grading, brush clearance, and other forms of earthwork.
- In areas with existing vegetation, install facility components with minimal disturbance. Take all necessary precautions to avoid using vehicles or machinery for grading, or altering the existing grade in these areas.
- Establish and maintain a landscaped buffer:
    - Maintain a landscaped area at least 10 feet deep along any facility perimeter fencing and between such fencing and any public right-of-way or adjacent property with an existing residential or agricultural use.
    - Establish the landscaped area in such manner that adequate corner sight distance is maintained from all access roads to the public right-of-way to the satisfaction of the County of Los Angeles Department of Public Works.
    - Maintain the landscaped area throughout the life of the facility.

Mitigation Measure 3.4-2: Operational Fugitive Dust Emissions (Recirculated Draft PEIR, p. 3.2-53 et seq.)

If, during subsequent project-level environmental review, operational fugitive dust emissions are determined to have the potential to be significant, the lead agency shall require applicants for new projects facilitated by the 2045 CAP measures and actions to incorporate mitigation measures to avoid or reduce air pollutant emissions during operational activities. Mitigation measures that may be identified during the environmental review include, but are not limited to, the following:

- Unpaved main access roads for operational vehicle trips shall be paved or effectively stabilized using soil stabilizers that can be determined to be as efficient as or more efficient for fugitive dust control than California Air Resources Board–approved soil stabilizers, and that shall not increase any other environmental impacts, including loss of vegetation.
- All other unpaved roads shall be stabilized using water or soil stabilizers so that vehicle travel on these roads does not cause visible dust plumes.
- Gravel pads, grizzly strips, or other material track-out control methods approved for use by the local AQMD shall be installed where vehicles enter or exit unpaved roads onto paved roadways.
- Traffic speeds on unpaved roads shall be limited to no more than 10 miles per hour, except that vehicles may travel up to 25 miles per hour on stabilized unpaved roads as long as such speeds do not create visible dust emissions. Traffic speed signs shall be displayed prominently at all site entrances and at egress point(s) from the central maintenance complex.
- Where acceptable to the local and County fire departments, all unpaved, non-road surfaces that may potentially be disturbed shall be covered with a minimum of 3 inches of mulch. Where acceptable to the local and County fire departments, vegetation shall be maintained at 6 inches height.
- All trucks hauling dirt, sand, soil, or other loose materials shall be covered or shall maintain at least 6 inches of freeboard (minimum vertical distance between top of the load and top of the trailer) in accordance with California Vehicle Code Section 23114.
- A fugitive dust control plan that includes a dust plume response plan shall be prepared for review and approval by applicable agencies before any earthwork activities.
- Where acceptable to the local and County fire departments, weed control shall be accomplished by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering.
- Existing vegetation may be mowed, but removal of existing vegetation root systems shall be prohibited, except where necessary for construction of access roads, substations and related underground transmission lines, tanks, basins, inverter pads, or other areas required by the County.
- Continuous particulate monitors shall be installed at the discretion of the lead agency.

Mitigation Measure 3.4-8: Valley Fever (Recirculated Draft PEIR, p. 3.4-71).

During heavy grading where the top 12–18 inches of soil would be disturbed, and in locations with potential Valley Fever fungal spores, applicants for projects facilitated by the 2045 CAP measures shall require construction contractors to comply with the following measures as feasible to reduce potential Valley Fever impacts:

- Require crews to use respirators during project clearing, grading, and excavation operations in accordance with California Division of Occupational Safety and Health regulations.
- Require that the cabs of grading and construction equipment be air-conditioned or enclosed with sufficient ventilation and particulate matter filtration systems.
- Require crews to work upwind from excavation sites where possible.
- Where acceptable to the fire department, control weed growth by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering.
- During rough grading and construction, ensure that the access way into the project site from adjoining paved roadways is paved or treated with environmentally safe dust control agents.

Impact 3.4-7: The Project, as a result of projects facilitated by the 2045 CAP, could contribute to a significant cumulative impact, to air quality associated with Valley Fever.

Finding 1: Mitigation measures would reduce the Project's impacts relating to contributions of the projects facilitated by the 2045 CAP to a significant cumulative impact to air quality associated with Valley Fever to less-than-significant levels. The Board hereby makes Finding 1 and determines this impact to be less than cumulatively considerable and therefore, less than significant.

Facts in Support of Finding: Valley Fever cumulative impacts would be significant, and the Project's contribution would be cumulatively considerable; however, implementation of Mitigation Measures 3.4-1: Construction Emissions; 3.4-2: Operational Fugitive Dust Emissions; and 3.4-8: Valley Fever; would reduce Valley Fever cumulative impacts to less than significant.

Mitigation Measures:

Mitigation Measure 3.4-1: Construction Emissions. See Impact 3.4-3b for a discussion of this mitigation measure.

Mitigation Measure 3.4-2. Operational Fugitive Dust Emissions. See Impact 3.4-3b for a discussion of this mitigation measure.

Mitigation Measure 3.4-8. Valley Fever. See Impact 3.4-3b for a discussion of this mitigation measure.

iii) Biological Resources

Impact 3.5-1: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would have a substantial direct adverse impact on one or more species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

Finding 1: Mitigation measures would reduce the Project's substantial direct adverse impacts on one or more species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS to less-than-significant levels. The Board finds that Mitigation Measures 3.5-1, 3.4-2, and 3.4-8 described below are feasible and hereby adopts them. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: A total of 275 special-status plant species and 239 special-status wildlife species have been documented in Los Angeles County. While the 2045 CAP is a policy document and does not include specific projects that would have adverse impacts on special-status species and their habitat, various projects facilitated by the 2045 CAP measures and actions could adversely affect special-status species and their habitat. Measures to protect biological resources would come from two sources: the County's General Plan 2035 and the EIR for the Project.

The County adopted a General Plan update in 2015, which included biological resources mitigation measures General Plan Mitigation Measure BIO-1 and General Plan Mitigation Measure BIO-2. These measures would protect biological resources from impacts resulting from implementation of projects facilitated by the 2045 CAP measures and actions. Briefly, General Plan Mitigation Measure BIO-1 would require project-level surveys and analysis to characterize the project site and determine the presence/absence of special-status species in advance of a future discretionary project approval. If construction activities could cause direct impacts to special-status species, then General Plan Mitigation Measure BIO-2 requires the identification and implementation of mitigation measures and/or construction monitoring to ensure avoidance, relocation, or safe escape of special-status species from the construction activities. The text of General Plan Mitigation Measures BIO-1 and BIO-2 is set forth in full in the Mitigation Monitoring and Reporting Program for this Project.

Mitigation Measure 3.5-1 and Mitigation Measure 3.5-2 also would be followed and enforced to protect biological resources. Mitigation Measure 3.5-1 would ensure that, on a project-specific level, necessary surveys would be conducted, and a biological resources assessment prepared to analyze the specific impacts of projects facilitated by the 2045 CAP and would propose appropriate mitigation measures to offset those impacts. Mitigation Measure 3.5-2 would avoid direct mortality to special-status species from construction activities by requiring preconstruction surveys (and construction monitoring where warranted) for special-status species as necessary. Federal and state regulations would continue to apply. Mitigation measures would apply only if specific projects have significant impacts.

Mitigation Measures:

Mitigation Measure 3.5-1 (Recirculated Draft PEIR, p. 3.5-19)

The County shall require biological resources to be analyzed on a project-specific level by a qualified biological consultant. Prior to or during the preparation of project-level environmental documents, and prior to the start of construction activities, a biological resources assessment shall be conducted to characterize the project site. Suitable buffer areas surrounding the project site shall be included where native habitat is contiguous with off-site habitat areas. The assessment and analysis shall emphasize identifying endangered, threatened, rare, and other special-status species; regionally and locally unique species; and sensitive natural communities, jurisdictional waters, and oak woodlands. Focused surveys shall be conducted as necessary to

determine the presence of special-status species (e.g., focused sensitive plant or wildlife surveys). Focused surveys shall be conducted according to established CDFW or USFWS protocols, if available for the object species. Natural communities shall be mapped and identified according to floristic alliance- and/or association-based mapping protocols consistent with CDFW natural communities. A jurisdictional delineation may be required if there are signs of potentially regulated wetlands and non-wetland waters. A biological resources assessment report shall be prepared to characterize the biological resources on-site, analyze direct and indirect impacts on biological resources, and propose mitigation measures to offset those impacts. The report shall include site location, literature sources, methodology, timing of surveys, vegetation map, site photographs, and descriptions of biological resources on-site (e.g., observed and detected species as well as those species with potential to occur on-site).

Mitigation Measure 3.5-2 (Recirculated Draft PEIR, p. 3.5-19 et seq.)

If there is potential for direct impacts to special-status species with implementation of construction activities, the project-specific biological resources assessment report (as described in Mitigation Measure 3.5-1) shall include a mitigation measure requiring pre-construction surveys for special-status species and/or construction monitoring to ensure avoidance, relocation, or safe escape of special-status species from the construction activities, as appropriate. The mitigation measures shall also include consultation with and obtaining permits from USFWS or CDFW prior to construction, if required by FESA or CESA for listed endangered and threatened species. If special-status species are found to be nesting, brooding, denning, etc. on-site during the pre-construction survey or monitoring, construction activity shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate offsite habitat areas. Relocation of such species into areas of appropriate restored habitat would have the best chance of replacing/incrementing populations that are lost due to habitat converted to development. Relocation to restored habitat areas shall be the preferred goal of this measure. A qualified biologist shall be on site to conduct surveys, to perform or oversee implementation of protective measures, and to determine when construction activity may resume.

Impact 3.5-4: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would have a substantial adverse impact on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means.

Finding 1: Mitigation measures would reduce the Project's impacts on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means to less-than-significant levels. The Board finds that Mitigation Measures 3.5-1 and 3.5-3, described below, are feasible and hereby adopts them. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: Impacts of projects facilitated by the 2045 CAP may be significant in the absence of mitigation measures. The Conservation and Natural Resources Element of the General Plan would continue to be followed and enforced to protect biological resources, including through General Plan Mitigation Measures BIO-1 and BIO-2. The implementation of Mitigation Measures 3.5-1 and 3.5-3 identified in the EIR also would be required. For example, Mitigation Measure 3.5-1 would ensure that surveys are conducted to identify any state or federally protected wetlands prior to any new development projects implemented under the 2045

CAP measures. Mitigation Measure 3.5-3 would ensure that new projects facilitated by 2045 CAP measures and actions would provide appropriate mitigation for impacts on state and federally protected wetlands. Federal and state regulations would continue to apply. Thus, with the implementation of the recommended mitigation measures, impacts on state or federally protected wetlands due to the implementation of projects facilitated by the 2045 CAP would be less than significant.

Mitigation Measures:

Mitigation Measure 3.5-1. See Impact 3.5-1 for a description of this mitigation measure.

Mitigation Measure 3.5-3 (Recirculated Draft PEIR, p. 3.5-23)

Prior to the issuance of any grading permit for permanent impacts in the areas designated as jurisdictional features, the project applicant shall obtain a Clean Water Act Section 404 permit from USACE, a Clean Water Act Section 401 certification from the RWQCB, and a Streambed Alteration Agreement/LSAA permit under Section 1602 of the California Fish and Game Code from CDFW, where the project warrants.

Impact 3.5-6: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would convert oak woodlands (as defined by the state, oak woodlands are oak stands with greater than 10 percent canopy cover with oaks at least 5 inches in diameter measured at 4.5 feet above mean natural grade) or other unique native woodlands (juniper, Joshua tree, Southern California black walnut, etc.).

Finding 1: Mitigation measures would reduce the Project's impacts regarding the conversion of oak woodlands (as defined by the state, oak woodlands are oak stands with greater than 10 percent canopy cover with oaks at least 5 inches in diameter measured at 4.5 feet above mean natural grade) or other unique native woodlands (juniper, Joshua tree, Southern California black walnut, etc.) to less-than-significant levels. The Board finds that Mitigation Measures 3.5-1 and 3.5-5 are feasible and hereby adopts them. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: Mitigation Measures 3.5-1 and 3.5-5 would reduce impacts to oak woodlands and other unique native woodlands by requiring surveys and impact analyses for these resources, and measures to reduce or compensate for impacts. With the implementation of these mitigation measures, impacts on oak woodlands and other unique native woodlands would be less than significant.

Mitigation Measures:

Mitigation Measure 3.5-1. See Impact 3.5-1 for a description of this mitigation measure.

Mitigation Measure 3.5-5 (Recirculated Draft PEIR, p. 3.5-26)

Proponents of projects resulting in the loss of oak woodlands shall mitigate with in-kind replacement habitat at a minimum of 1:1 mitigation ratio documented through a County–approved habitat mitigation plan. The plan shall include the number of replacement trees (or acreage and average density of woodland), location of replacement woodland, understory habitat components, sequencing for any phased tree removal, and performance standards for mitigation. The plan shall include monitoring for a minimum of five years, with annual reports submitted to the County.

For oak woodlands impacts, project mitigation shall be consistent with recommendations in the County's Oak Woodland Conservation Management Plan and its 2014 Guide. If a project cannot be redesigned to avoid impacts to oak woodlands, an appropriate mitigation strategy would be developed by selecting from the Guide's list of recommended mitigation measures prioritizing the acquisition of oak woodland habitat comparable to the habitat that was affected over the restoration of degraded off-site and in-lieu fees. A Mitigation Monitoring Plan consistent with the Guide's recommendations would be prepared and implemented.

Impact 3.5-9: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would contribute to a substantial cumulative adverse impact on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means.

Finding 1: Mitigation measures would reduce the Project's contribution to a substantial cumulative adverse impact on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means to less-than-significant levels. The Board finds that Mitigation Measures 3.5-1 and 3.5-3 are feasible and hereby adopts them. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: The 2045 CAP would contribute a significant incremental contribution to this significant cumulative impact that could be mitigated to a level that would be less than cumulatively considerable (i.e., less than significant) by the implementation of Mitigation Measures 3.5-1 and 3.5-3. With the implementation of these mitigation measures and compliance with the regulatory agencies of USACE, CDFW, and RWQCB implementing their "no net loss" of biological resource habitat policies, the Project-specific, incremental contribution, in combination with the cumulative projects' impacts on special-status species over the span of the 2045 CAP, would not be cumulatively considerable. A less-than-significant cumulative impact on wetlands would result.

Mitigation Measures:

Mitigation Measure 3.5-1. See Impact 3.5-1 for a description of this mitigation measure.

Mitigation Measure 3.5-3: See Impact 3.5-4 for a description of this mitigation measure.

Proponents for individual projects facilitated by the 2045 CAP provisions shall analyze impacts on wildlife movement and corridors that may introduce new or additional barriers to wildlife dispersal or constrain existing wildlife corridors to future movement, or indirect impacts constraining future wildlife movement. Where projects may interfere with wildlife movement, alternative designs shall be included in the analysis to reduce wildlife movement impacts. Corridors, linkages, and pinch points shall not be entirely closed by any development, and partial mitigation shall be mandatory for project-specific impacts on wildlife corridors and wildlife nursery sites. This shall include provision of a minimum of half the corridor width. (The width shall be at least what is needed to remain connective for the top predators using the corridor.) Mitigation can include preservation by deed in perpetuity of other parts of the wildlife corridor connecting through the development area; it can include native landscaping to provide cover on the corridor. For nursery site impacts, mitigation shall include preservation by deed in perpetuity for another comparable nursery site of the same species.

iv) Cultural Resources

Impact 3.6-1: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines section 15064.5.

Finding 1: Mitigation measures would reduce the Project's impacts relating to causing a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines section 15064.5 to less-than-significant levels. The Board finds that Mitigation Measures 3.6-1, 3.6-2, 3.6-3, 3.6-4, 3.6-5, and 3.6-6 are feasible and hereby adopts them. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: The Project, due to projects facilitated by 2045 CAP measures and actions, would result in a less-than-significant impact on historical resources after implementation of Mitigation Measures 3.6-1 through 3.6-6. The implementation of these measures would reduce significant impacts on historical resources resulting from projects facilitated by 2045 CAP measures and actions by avoiding or reducing the significant impact. Mitigation Measure 3.6-1 requires identification of historical resources of a built nature that could be affected by a project to avoid or reduce inadvertent significant impacts on such resources. The measure further requires that projects be designed to conform with the Secretary of the Interior's Standards to avoid or reduce significant impacts on such resources. Mitigation Measure 3.6-2 requires identification of significant archaeological resources (i.e., resources considered historical resources or unique archaeological resources) to avoid or reduce inadvertent significant impacts on such resources. The measure further requires that archaeological/Native American monitoring be considered to ensure that there is an opportunity to avoid or reduce inadvertent significant impacts on such resources. Mitigation Measure 3.6-3 requires that construction personnel involved in ground-disturbing activities be trained in the identification of cultural resources to assist in avoidance or minimizing of inadvertent potentially significant impacts on such resources. Mitigation Measures 3.6-4 and 3.6-5 require that significant archaeological resources be avoided and preserved in place if feasible. If avoidance and preservation in place is not feasible, then data recovery is required to recover the scientifically consequential information contained in the resource, which would avoid or reduce significant adverse impacts on the resource. Mitigation Measure 3.6-6 provides for final disposition of archaeological materials, such as curation or donation to a Native American group or other entity, to reduce significant impacts on such resources by preserving the materials for those with research or educational interests.

Mitigation Measures:

Mitigation Measure 3.6-1: Historic Resources Assessment (Recirculated Draft PEIR, p. 3.6-24)

Prior to demolition or alteration of buildings and/or structures or the construction of aboveground infrastructure with potentially significant impacts on historic architectural resources, the project proponent shall retain an architectural historian meeting the minimum professional qualifications standards (PQS) set forth by the Secretary of the Interior (codified in 36 CFR Part 61; 48 FR 44738–44739) (Qualified Architectural Historian) to conduct a historic resources assessment of affected properties. The assessment shall include a records search at the South Central Coastal Information Center or review of a prior record search conducted within the previous one year; a review of other pertinent archives and sources; a pedestrian field survey; recordation of all identified historic architectural resources on California Department of Parks and Recreation (DPR) 523 forms; evaluation of resources which may be eligible for listing in the California

Register (i.e., meets the definition for historical resource in CEQA Guidelines Section 15064.5[a]), and for local listing; and preparation of a technical report documenting the methods and results of the assessment for each future project facilitated by 2045 CAP measures and actions. If a historic architectural resource is found eligible by the Qualified Architectural Historian, then the Qualified Architectural Historian shall coordinate with the project proponent and the County to ensure the project is constructed in conformance with the Secretary of the Interior's Standards. All reports resulting from implementation of this measure shall be filed with the South Central Coastal Information Center (including but not limited to historic resources assessments and Secretary of the Interior's Standards plan reviews).

Mitigation Measure 3.6-2: Archaeological Resources Assessment (Recirculated Draft PEIR, p. 3.6-24 et seq.)

Prior to conducting construction activities that would involve ground disturbance, the project proponent shall retain an archaeologist meeting the minimum PQS set forth by the Secretary of the Interior (codified in 36 CFR Part 61; 48 FR 44738–44739) (Qualified Archaeologist) to conduct an archaeological resources assessment. The assessment shall include a records search at the South Central Coastal Information Center or review of a prior record search conducted within the previous one year; a Sacred Lands File search at the California Native American Heritage Commission (NAHC); geoarchaeological review including a focused assessment of land use history and any available geotechnical data to assess the potential for subsurface archaeological resources; a pedestrian field survey in instances where ground surface is exposed; recordation of all identified archaeological resources on DPR 523 forms; evaluation of resources affected by the project for eligibility for listing in the California Register (i.e., meets the definition for historical resource in CEQA Guidelines Section 15064.5[a]), and for local listing; and preparation of a technical report documenting the methods and results of the assessment. Resources that do not qualify as historical resources shall be considered by the Qualified Archaeologist for qualification as unique archaeological resources as defined in Public Resources Code Section 21083.2(g). The technical report also shall provide recommendations as to whether additional studies are warranted to further identify or evaluate archaeological resources (i.e., Extended Phase I boundary delineation, Phase II testing and evaluation) and if archaeological monitoring and Native American monitoring of ground disturbing activities is warranted (e.g., in areas where there is a higher potential to encounter buried resources). Prior to the initiation of field work for any Extended Phase I or Phase II investigation, the Qualified Archaeologist shall prepare a work plan outlining the investigation's objectives, goals, and methodology. When developing a work plan for Native American resources, the County shall consult with local Native American tribes.

If archaeological/Native American monitoring is warranted, the Qualified Archaeologist shall determine the locations and duration of monitoring and reporting requirements. All reports resulting from implementation of this measure shall be filed with the South Central Coastal Information Center (including but not limited to archaeological resources assessments, Extended Phase I and Phase II reports, and monitoring reports).

Mitigation Measure 3.6-3: Construction Worker Cultural Resources Sensitivity Training (Recirculated Draft PEIR, p. 3.6-25)

For projects with ground-disturbing activities that may encounter potentially significant archaeological resources, the Qualified Archaeologist shall implement a cultural resources

sensitivity training program. The Qualified Archaeologist, or its designee, shall instruct all construction personnel of the types of archaeological resources that may be encountered, the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains, applicable laws protecting archaeological resources, and confidentiality of discoveries. Native American monitor(s) shall be invited to participate in presenting tribal perspectives as part of the training curriculum. In the event that construction crews are phased, additional trainings shall be conducted for new construction personnel. The project proponent or its contractors shall ensure construction personnel are made available for and attend the training. The project proponent shall retain documentation demonstrating attendance and provide it to the County.

Mitigation Measure 3.6-4: Archaeological Resources Discoveries (Recirculated Draft PEIR, p. 3.6-25)

In the event archaeological resources are encountered during construction of a project, the project proponent shall cease all activity within 50 feet of the find shall cease. The discovery shall be evaluated for significance by the Qualified Archaeologist. When assessing significance and developing treatment for resources that are Native American in origin, the County shall consult with local Native American tribes. If the Qualified Archaeologist determines that the resource is significant (i.e., meets the definition for historical resource in CEQA Guidelines Section 15064.5[a] or for unique archaeological resource in Public Resources Code Section 21083.2[g]), the Qualified Archaeologist shall provide a method for avoidance and preservation in place, which shall be the preferred manner of mitigating impacts. If avoidance is infeasible, the Qualified Archaeologist shall develop a Phase III Archaeological Resources Data Recovery and Treatment Plan consistent with Mitigation Measure 3.6-5. The Qualified Archaeologist also shall determine, based on the initial assessment of the discovery, whether the 50-foot buffer may be reduced. All reports resulting from implementation of this measure shall be filed with the South Central Coastal Information Center (including but not limited to Extended Phase I, Phase II, and Phase III reports).

Mitigation Measure 3.6-5: Treatment of Archaeological Resources (Recirculated Draft PEIR, p. 3.6-25 et seq.)

If the assessment conducted under Mitigation Measure 3.6-2 or Mitigation Measure 3.6-4 identifies significant archaeological resources (i.e., meets the definition for historical resource in CEQA Guidelines Section 15064.5[a] or for unique archaeological resource in Public Resources Code Section 21083.2[g]), then avoidance and preservation in place shall be the preferred manner of mitigating impacts. Preservation in place may be accomplished by, but is not limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. If avoidance and preservation in place of significant archaeological resources is determined by the County to be infeasible, then the Qualified Archaeologist shall prepare a Phase III Archaeological Resources Data Recovery and Treatment Plan. The plan shall include: a detailed research design; justification for data recovery or other treatment methods depending on the nature of the resource’s eligibility; excavation methodology; and, reporting and curation requirements. When developing treatment for resources that are Native American in origin, the County shall consult with local Native American tribes. All Phase III reports resulting from implementation of this measure shall be filed with the South Central Coastal Information Center.

Mitigation Measure 3.6-6: Curation and Disposition of Cultural Materials (Recirculated Draft PEIR, p. 3.6-26)

The project proponent shall arrange curation for all Native American archaeological materials, with the exception of funerary objects or grave goods (i.e., artifacts associated with Native American human remains). For significant Native American archaeological materials, the project proponent shall first consider repositories that are accredited by the American Association of Museums and that meet the standards outlined in 36 CFR 79.9. If a suitable accredited repository is not identified, then the project proponent shall consider nonaccredited repositories as long as they meet the minimum standards set forth by 36 CFR 79.9. If a suitable nonaccredited repository is not identified, then the project proponent shall donate the collection to a local California Native American tribe(s). Non-significant archeological materials shall be donated to a local California Native American tribe(s). If neither an accredited or nonaccredited repository or tribe accepts the collection, then the project proponent may offer the collection to a public, nonprofit institution with a research interest in the materials, or to a local school or historical society in the area for educational purposes. Disposition of Native American human remains and associated funerary objects or grave goods shall be determined by the landowner in consultation with the County and the MLD.

The project proponent shall curate all significant historic-period archaeological material, or portions thereof at the discretion of the Qualified Archaeologist, at a repository accredited by the American Association of Museums that meets the standards outlined in 36 CFR 79.9. If no accredited repository accepts the collection, then the project proponent may curate it at a nonaccredited repository as long as it meets the minimum standards set forth in 36 CFR 79.9. If neither an accredited nor a nonaccredited repository accepts the collection, then the project proponent may offer the collection to a public, nonprofit institution with a research interest in the materials, or to a local school or historical society in the area for educational purposes.

Impact 3.6-2: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines Section 15064.5

Finding 1: Mitigation measures would reduce the Project's impacts relating to causing a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines Section 15064.5 to less-than-significant levels. The Board finds that Mitigation Measures 3.6-2, 3.6-3, 3.6-4, 3.6-5, and 3.6-6 are feasible and hereby adopts them. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: The Project, as a result of projects facilitated by the 2045 CAP measures and actions, would result in less-than-significant impacts on unique archaeological resources after the implementation of Mitigation Measures 3.6-2 through 3.6-6. The implementation of these measures would reduce significant impacts on unique archaeological resources by avoiding or reducing the significant impact. Mitigation Measure 3.6-2 requires identification of unique archaeological resources to avoid or reduce inadvertent significant impacts on such resources. The measure further requires that archaeological/Native American monitoring be considered to ensure that there is an opportunity to avoid or reduce inadvertent significant impacts on such resources. Mitigation Measure 3.6-3 requires that construction personnel involved in ground-disturbing activities be trained in the identification of cultural resources to assist in avoidance or minimizing of inadvertent significant impacts on such

resources. Mitigation Measures 3.6-4 and 3.6-5 require that unique archaeological resources be avoided and preserved in place if feasible. If avoidance and preservation in place is not feasible, then data recovery is required to recover the scientifically consequential information contained in the resource, which would avoid or reduce significant adverse impacts on the resource. Mitigation Measure 3.6-6 provides for final disposition of archaeological materials, such as curation or donation to a Native American group or other entity, to reduce significant impacts on such resources by preserving the materials for those with research or educational interests.

Mitigation Measures:

Mitigation Measure 3.6-2. Archaeological Resources Assessment. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-3. Construction Worker Cultural Resources Sensitivity Training. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-4. Archaeological Resources Discoveries. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-5. Treatment of Archaeological Resources. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-6. Curation and Disposition of Cultural Materials. See Impact 3.6-1 for a description of this mitigation measure.

Impact 3.6-3: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Finding 1: Mitigation measures would reduce the Project's impacts relating to directly or indirectly destroying a unique paleontological resource or site or unique geologic feature to less-than-significant levels. The Board finds that Mitigation Measures 3.6-7, 3.6-8, and 3.6-9 are feasible and hereby adopts them. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would result in less-than-significant impacts on unique paleontological resources and unique geologic features after implementation of Mitigation Measures 3.6-7 through 3.6-9. These measures would reduce significant impacts on unique paleontological resources by avoiding or reducing the significant impact. Mitigation Measure 3.6-7 requires, prior to any construction activities that involve ground disturbance, identification of unique paleontological resources and unique geologic features to avoid or reduce inadvertent potentially significant impacts on such resources. The measure further requires that paleontological monitoring be considered to ensure that there is an opportunity to avoid or reduce inadvertent potentially significant impacts on such resources. Mitigation Measure 3.6-8 requires that construction personnel involved in ground-disturbing activities be trained in the identification of paleontological resources to assist in avoidance or minimizing of inadvertent potentially significant impacts on such resources. Mitigation Measure 3.6 9 requires that unique paleontological resources are recovered and curated.

Mitigation Measures:

Mitigation Measure 3.6-7: Paleontological Resources Assessment and Monitoring (Recirculated Draft PEIR, p. 3.6-28 et seq.)

For projects facilitated by 2045 CAP measures and actions that involve ground disturbance, the project proponent shall retain a paleontologist who meets the Society of Vertebrate Paleontology's (SVP 2010) definition for qualified professional paleontologist (Qualified Paleontologist) to prepare a paleontological resources assessment report prior to the start of construction activities. The report shall include methods and results of the paleontological resources assessment, monitoring requirements (including depths, frequency, and reporting), and maps that outline where monitoring is required. Monitoring shall follow SVP Guidelines: no monitoring of ground-disturbing activities within units of Low Sensitivity or No Potential; monitoring of all ground-disturbing activities (with depths specified) in units of Low to High Significance; and at all depths within units of High Significance unless the Qualified Paleontologist's report identifies previous disturbances or the use of construction methods which do not warrant monitoring; and monitoring at the initiation of excavation in units of Undetermined Significance. The report also shall stipulate whether screen washing is necessary to recover small specimens following SVP Guidelines and determine whether unique geologic features are present onsite. If monitoring is conducted, then the Qualified Paleontologist shall prepare a final report summarizing monitoring results and submit it to the project proponent and the County.

Mitigation Measure 3.6-8: Paleontological Resources Sensitivity Training (Recirculated Draft PEIR, p. 3.6-29)

Prior to the start of ground-disturbing activities for projects facilitated by 2045 CAP measures and actions with potentially significant impacts on paleontological resources, the Qualified Paleontologist or its designee shall conduct construction worker paleontological resources sensitivity training (or may be provided via digital recording) for all construction workers. Construction workers shall be informed on how to identify the types of paleontological resources that may be encountered, the proper procedures to be enacted in the event of an inadvertent discovery of paleontological resources, and safety precautions to be taken when working with paleontological monitors. The project proponent shall ensure that construction workers are made available for and attend the training. The project proponent shall retain documentation demonstrating attendance and provide it to the County.

Mitigation Measure 3.6-9: Paleontological Discoveries (Recirculated Draft PEIR, p. 3.6-29 et seq.)

If a potential fossil is found, the paleontological monitor shall be allowed to temporarily divert or redirect grading and excavation activities in the area of the exposed fossil to facilitate evaluation of the discovery. An appropriate buffer area determined by the paleontological monitor shall be established around the find where construction activities shall not be allowed to continue. Work shall be allowed to continue outside of the buffer area. At the monitor's discretion, and to reduce any construction delay, the grading/excavation contractor shall assist, where feasible, in removing rock/sediment samples for initial processing and evaluation. If a fossil is determined to be significant, the Qualified Paleontologist shall implement a paleontological salvage program to remove the resources from their location, following the guidelines of the SVP (2010). Any fossils encountered and recovered shall be prepared to the point of identification, catalogued, and curated at a public, nonprofit institution with a research interest in the material and with retrievable storage, such as the Natural History Museum of Los Angeles County, if such an institution agrees to accept the fossils. Accompanying notes, maps, and photographs shall also

be filed at the repository. If no institution accepts the fossil collection, it may be donated to a local school or other interested organization in the area for educational purposes.

If construction workers discover any potential fossils during construction while the paleontological monitor is not present, regardless of the depth of work or location, work at the discovery location shall cease in a 50-foot radius of the discovery until the Qualified Paleontologist has assessed the discovery and recommended and implemented appropriate treatment as described earlier in this measure.

Any salvage reports resulting from implementation of this measure shall be filed with the Natural History Museum of Los Angeles County.

Impact 3.6-4: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would disturb any human remains, including those interred outside of dedicated cemeteries.

Finding 1: Mitigation measures would reduce the Project's impacts relating to disturbing any human remains, including those interred outside of dedicated cemeteries to less-than-significant levels. The Board finds that Mitigation Measure 3.6-10 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would result in less-than-significant impacts on human remains after implementation of Mitigation Measure 3.6-10. This measure would reduce significant impacts on human remains by immediately halting construction activities in the event of a possible discovery to avoid or reduce significant impacts. Mitigation Measure 3.6-10 requires the project proponent and the County to follow Health and Safety Code Section 7050.5(c) and Public Resources Code Section 5097.98 in the event Native American human remains are encountered. As a result, next steps would include halting work, notifying the County Coroner, and consulting with the Native California Indian group or person(s) that the Native American Heritage Commission designates as most likely descended from ancestral Native Americans in an area or region of California, i.e., the most likely descendant (MLD). Further, the measure requires the project proponent, the County, and the landowner to work with the MLD for treatment of the remains to avoid or reduce significant impacts, or the landowner to reinter the remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance if an agreement cannot be reached to avoid or reduce significant impacts.

Mitigation Measures:

Mitigation Measure 3.6-10: Human Remains Discoveries (Recirculated Draft PEIR, p. 3.6-30)

If human remains are encountered, then the project proponent or its contractor shall immediately halt work within 50 feet of the discovery and contact the County Coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5, which require that no further disturbance shall occur until the County Coroner has made the necessary findings as to the remains' origin and disposition. If the County Coroner determines that the remains are Native American, then the County Coroner will notify the NAHC within 24 hours in accordance with Health and Safety Code Section 7050.5(c), and Public Resources Code Section 5097.98. The NAHC shall then identify the person(s) thought to be the MLD. The MLD may, with the permission of the land owner, or their authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person

responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The MLD shall complete their inspection and make their recommendation within 48 hours of being granted access by the landowner to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials. The project proponent, the County, and the landowner shall discuss and confer with the MLD on all reasonable options regarding the MLD's preferences for treatment.

Until the project proponent, the County, and the landowner have conferred with the MLD, the contractor shall ensure that the immediate vicinity where the discovery occurred is not disturbed by further activity and is adequately protected according to generally accepted cultural or archaeological standards or practices (e.g., the NAHC's A Professional Guide for the Preservation and Protection of Native American Human Remains and Associated Grave Goods [NAHC 2022], which reiterates statutory requirements), and that further activities take into account the possibility of multiple burials.

If the NAHC is unable to identify an MLD, or the MLD identified fails to make a recommendation, or the landowner rejects the recommendation of the MLD and the mediation provided for in Public Resources Code Section 5097.94(k), if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance.

Impact 3.6-5: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would incrementally contribute to a significant cumulative impact on historical resources.

Finding 1: Mitigation measures would reduce the incremental contribution of projects facilitated by the 2045 CAP to a significant cumulative impact on historical resources to less-than-significant levels. The Board finds that Mitigation Measures 3.6-1 through 3.6-6 are feasible and hereby adopts them. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: The Project, as a result of projects facilitated by the 2045 CAP measures and actions, would make a cumulatively considerable contribution to this significant cumulative impact that could be mitigated to a level that would be less than cumulatively considerable (i.e., less than significant) by the implementation of Mitigation Measures 3.6-1 through 3.6-6. With the implementation of these measures, the Project-specific, incremental contribution, combined with the cumulative projects' incremental impacts on historical resources over the timespan of the Project, would not be cumulatively considerable because they would specify that, before construction of aboveground infrastructure that might affect known historic architectural resources, an architectural historian must identify historical resources, provide recommendations, require archaeological monitoring, and prepare a plan for the treatment of historical resources. With the implementation of Mitigation Measures 3.6-1 through 3.6-6, a less-than-significant cumulative impact on historic resources would result.

Mitigation Measures:

Mitigation Measure 3.6-1. Historic Resources Assessment. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-2. Archaeological Resources Assessment. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-3. Construction Worker Cultural Resources Sensitivity Training. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-4. Archaeological Resources Discoveries. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-5. Treatment of Archaeological Resources. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-6. Curation and Disposition of Cultural Materials. See Impact 3.6-1 for a description of this mitigation measure.

Impact 3.6-6: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would incrementally contribute to a significant cumulative impact on unique archaeological resources.

Finding 1: Mitigation measures would reduce the Project's impacts relating to incrementally contributing to a significant cumulative impact on unique archaeological resources to less-than-significant levels. The Board finds that Mitigation Measures 3.6-2 through 3.6-6 are feasible and hereby adopts them. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would make a significant incremental contribution to this significant cumulative impact that could be mitigated to a level that would be less than cumulatively considerable (i.e., less than significant) by the implementation of Mitigation Measures 3.6-2 through 3.6-6. With the implementation of these measures, the Project-specific, incremental contribution, combined with the cumulative projects' impacts on unique archaeological resources over the span of the 2045 CAP, would not be cumulatively considerable because they would require identification and treatment of unique archaeological resources, and would thereby avoid or reduce significant impacts. With the implementation of these mitigation measures, a less-than-significant cumulative impact to unique archaeological resources would result.

Mitigation Measures:

Mitigation Measure 3.6-2. Archaeological Resources Assessment. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-3. Construction Worker Cultural Resources Sensitivity Training. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-4. Archaeological Resources Discoveries. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-5. Treatment of Archaeological Resources. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-6. Curation and Disposition of Cultural Materials. See Impact 3.6-1 for a description of this mitigation measure.

Impact 3.6-7: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would incrementally contribute to a significant cumulative impact on unique paleontological resources or sites or unique geologic features.

Finding 1: Mitigation measures would reduce the Project's impacts relating to incrementally contributing to a significant cumulative impact on unique paleontological resources or sites with unique geologic features to less-than-significant levels. The Board finds that Mitigation Measures 3.6-7 through 3.6-9 are feasible and hereby adopts them. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would make a significant incremental contribution to this significant cumulative impact that could be mitigated to a level that would be less than cumulatively considerable (i.e., less than significant) by the implementation of Mitigation Measures 3.6-7 through 3.6-9. With the implementation of these measures, the Project-specific, incremental contribution, combined with the cumulative projects' impacts on unique paleontological resources or sites or unique geologic features over the timespan of the Project, would not be cumulatively considerable because they would require identification and treatment of unique paleontological resources or sites or unique geologic features and would thereby avoid or reduce significant impacts. With the implementation of these mitigation measures, a less-than-significant cumulative impact on unique paleontological resources or sites or unique geologic features would result.

Mitigation Measures:

Mitigation Measure 3.6-7. Paleontological Resources Assessment and Monitoring. See Impact 3.6-3 for a description of this mitigation measure.

Mitigation Measure 3.6-8. Paleontological Resources Sensitivity Training. See Impact 3.6-3 for a description of this mitigation measure.

Mitigation Measure 3.6-9. Paleontological Discoveries. See Impact 3.6-3 for a description of this mitigation measure.

Impact 3.6-8: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would incrementally contribute to a significant cumulative impact on human remains, including those interred outside of dedicated cemeteries.

Finding 1: Mitigation measures would reduce the Project's impacts relating to incrementally contributing to a significant cumulative impact on human remains, including those interred outside of dedicated cemeteries to less-than-significant levels. The Board finds that Mitigation Measure 3.6-10 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would make a significant incremental contribution to this significant cumulative impact that could be mitigated to a level that would be less than cumulatively considerable (i.e., less than significant) by the implementation of Mitigation Measure 3.6-10. With the implementation of this measure, the Project-specific, incremental contribution, combined with the cumulative projects' impacts on human remains interred outside formal cemeteries over the timespan of the Project, would not be cumulatively considerable because the measure would require the project proponent and the County to follow the law governing such finds, including by halting work, notifying the County

Coroner, and consulting with the MLD or taking other specified, appropriate actions to assure treatment of the remains with appropriate dignity. If human remains of Native American origin are discovered during work associated with a project facilitated by the 2045 CAP, then the project proponent and/or the County would be required to comply with state laws related to the disposition of Native American burials (e.g., Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98). With the implementation of this mitigation measure, a less-than-significant cumulative impact would result.

Mitigation Measures:

Mitigation Measure 3.6-10. Human Remains Discoveries. See Impact 3.6-4 for a description of this mitigation measure.

v) Hazards and Hazardous Materials

Impact 3.10-2: The Project, as a result of solar photovoltaic (PV) and other projects facilitated by the 2045 CAP measures and actions, could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment.

Finding 1: Mitigation measures would reduce the Project's impacts relating to creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment to less-than-significant levels. The Board finds that Mitigation Measure 3.10-2 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: Implementation of Mitigation Measure 3.10-2 would ensure that hazardous waste from broken cadmium telluride (CdTe) modules is disposed of properly if not recycled. Implementing this measure would reduce the impact to a less-than-significant level.

Mitigation Measures:

Mitigation Measure 3.10-2 (Recirculated Draft PEIR, p. 3.10-23)

The County shall require applicants of solar PV installation projects that include the use of CdTe modules to dispose of panels or recycle panels in accordance with current local, state, and federal regulations. Broken and end-of-project life PV modules, materials, and components shall be:

- Stored on-site in a manner that complies with federal and state laws until recycling or disposal actions can be taken.
- Stored on-site no longer than allowed by federal and state laws.
- Recycled in accordance with federal and state laws applicable at that time.

Impact 3.10-3: Projects facilitated by the 2045 CAP would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of sensitive land uses.

Finding 1: Mitigation measures would reduce the Project's impacts relating to emitting hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of sensitive land uses to less-than-significant levels. The Board finds that Mitigation Measure

3.10-2 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: Several sensitive receptors and receptor locations are situated within the unincorporated County areas, and it is not known at the time of PEIR preparation whether projects facilitated by 2045 CAP measures and actions would be constructed near one or more of them. Projects facilitated by 2045 CAP measures and actions could create hazardous emissions. Impacts generated by the release of hazardous emissions near sensitive receptors would temporarily occur during construction phases of such projects. However, compliance with the Education Code and Public Resources Code would ensure that any prospective school site would be reviewed to determine that it is not a current or former hazardous waste disposal site, a hazardous substance release site, or the site of a hazardous substance pipeline. This would ensure that prospective sites located within 0.25 mile of a school that handle or emit hazardous substances would not endanger sensitive receptors, including students. This portion of the impact would be less than significant.

In addition, projects facilitated by 2045 CAP measures and actions may include small-scale distributed solar facilities or utility-scale solar energy generation facilities. These projects may include the use of CdTe solar technology modules, which contain elemental cadmium. Although elemental cadmium is an acutely toxic substance, human exposure from CdTe PV modules would likely occur only if CdTe fine particles are inhaled. Fine particles would not be generated unless the modules were ground up or vaporized in a fire. This impact would be significant.

Compliance with applicable federal, state, and local laws and regulations would assure that impacts on sensitive receptors would be less than significant, except for impacts from solar PV installation projects that include the use of CdTe modules if the panels are ground to the level of dust particles or experience fire that reaches the CdTe melting point. Implementation of Mitigation Measure 3.10-2 would ensure that hazardous waste from broken CdTe modules is disposed of properly if not recycled. Implementing this measure would reduce the impact to a less-than-significant level.

Mitigation Measures:

Mitigation Measure 3.10-2. See Impact 3.10-2 for a description of this mitigation measure.

Impact 3.10-6: Projects facilitated by the 2045 CAP would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

Finding 1: Mitigation measures would reduce the Project's impacts relating to impairing implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan to less-than-significant levels. The Board finds that Mitigation Measure 3.15-1 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: Implementing Mitigation Measure 3.15-1 would reduce the impact to a less-than-significant level because the traffic control plan would avoid or substantially reduce any potential impairment of an emergency response or evacuation plan that may result during construction activities associated with projects facilitated by the 2045 CAP measures and actions.

Mitigation Measures:

Mitigation Measure 3.15-1: Traffic Control Plan (Recirculated Draft PEIR, p. 3.15-22 et seq.)

LA County shall require project applicants and construction contractors to coordinate with relevant LA County departments, transit providers, and emergency service providers to develop a traffic control plan to reduce the impacts of construction traffic on transit service, roadway operations, emergency responders, pedestrian and bicycle facilities, and public safety in the surrounding area. (A traffic control plan may not be required for minor construction activities.) The project applicant shall be responsible for monitoring to ensure that the plan is effectively implemented by the construction contractor(s). Measures that may be employed throughout the course of the construction period include, but are not limited, to the following.

- Provide advance notice of lane and sidewalk closures, durations, and alternative routes to emergency service providers, motorists, bicyclists, and pedestrians.
- Provide clearly marked pedestrian detours if any sidewalk or pedestrian walkway closures are necessary.
- Provide clearly marked bicycle detours if heavily used bicycle routes must be closed, or if bicyclist safety may otherwise be comprised.
- Provide crossing-guards and/or flag persons as needed to avoid traffic conflicts and ensure pedestrian and bicyclist safety.
- Locate all stationary equipment as far as possible from areas used heavily by vehicles, bicyclists, and pedestrians.
- Use nonskid traffic plates over open trenches to reduce hazards.
- Implement traffic control measures to reduce vehicle travel delays through construction zones.
- Maintain acceptable response times and performance objectives for emergency response services.
- Avoid routing construction traffic through residential areas to the extent feasible.
- Prohibit mobilization and demobilization of heavy construction equipment during AM and PM peak traffic hours.
- Maintain access for driveways and private roads outside the immediate construction zone by using steel plates or temporary backfill, as necessary.
- Provide designated areas for construction worker parking wherever feasible to reduce use of parking on streets or in city center areas.

Impact 3.10-8: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would contribute to a significant cumulative adverse impact with regard to hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment.

Finding 1: Mitigation measures would reduce the incremental contributions of projects facilitated by the 2045 CAP to a significant cumulative impact with regard to hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment to less-than-significant levels. The Board finds that Mitigation Measure 3.10-2 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: If, one or more projects facilitated by the Project, in combination with past, present, and reasonably foreseeable future projects, accidentally released hazardous materials into the environment, then a potentially significant impact on the environment and/or public could result. Numerous laws and regulations regulate the transportation, handling, storage, and disposal of hazardous materials. Nonetheless, given the broad use and storage of hazardous materials, including panels containing CdTe at solar facilities in the Antelope Valley and other unincorporated areas of Los Angeles County, and the potential for their accidental release, the cumulative impact would be significant. However, the Project's incremental contribution would be brought to less than cumulatively considerable (i.e., less than significant) with the implementation of Mitigation Measure 3.10-2. This mitigation measure would ensure that hazardous waste from broken CdTe modules, the primary hazard generated by solar facilities, and likely hazard derived from projects facilitated by the 2045 CAP would be disposed of properly if not recycled. Thus, cumulative impacts would be less than significant.

Mitigation Measures:

Mitigation Measure 3.10-2. See Impact 3.10-2 for a description of this mitigation measure.

Impact 3.10-9: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would contribute to a significant cumulative adverse impact related to hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of sensitive land uses.

Finding 1: Mitigation measures would reduce the Project's impacts relating to contributing to a significant cumulative adverse impact related to hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of sensitive land uses to less-than-significant levels. The Board finds that Mitigation Measure 3.10-2 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: Cumulative projects that include solar facilities may include the use of CdTe solar technology modules, which can be toxic if released to the environment. Given the broad use and storage of hazardous materials, including CdTe cells at solar facilities in Antelope Valley and other unincorporated areas of Los Angeles County, and for the potential for their accidental release in the vicinity of sensitive land uses, when the Project's impacts are added, the cumulative impact would be significant. However, the Project's incremental contribution would be less than cumulatively considerable (i.e., less than significant) with implementation of Mitigation Measure 3.10-2. This mitigation measure would ensure that any hazardous waste from broken CdTe modules, toxic byproducts from solar facilities, from projects facilitated by the 2045 CAP would be disposed of properly if not recycled and would not result in an incremental contribution to a significant cumulative impact.

Mitigation Measures:

Mitigation Measure 3.10-2. See Impact 3.10-2 for a description of this mitigation measure.

Impact 3.10-12: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would contribute to cumulative impairment of the implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

Finding 1: Mitigation measures would reduce the Project's impacts relating to contributing to cumulative impairment of the implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan to less-than-significant levels. The Board finds that Mitigation Measure 3.15-1 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: The Project's incremental contribution would be less than cumulatively considerable (i.e., less than significant) because the traffic control plan required by Mitigation Measure 3.15-1 would avoid or substantially reduce any Project-specific potential impairment of an emergency response or evacuation plan that may result during construction activities associated projects facilitated by the 2045 CAP measures and actions.

Mitigation Measures:

Mitigation Measure 3.15-1: Traffic Control Plan. See Impact 3.10-6 for a description of this mitigation measure.

vi) Hydrology and Water Quality

Impact 3.11-5: Projects facilitated by the 2045 CAP would not, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

Finding 1: Mitigation measures would reduce the Project's impacts in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation to less-than-significant levels. The Board finds that Mitigation Measure 3.10-2 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: Projects facilitated by the 2045 CAP measures and actions would result in a less-than-significant impact regarding the potential to create a significant hazard to the public or the environment through the routine transport, storage, production, use, or disposal of hazardous materials. However, Impact 3.10-2 concludes that a significant impact would result (pre-mitigation) regarding the potential for projects facilitated by the 2045 CAP measures and actions to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste from solar PV projects, under specified circumstances (identified in Section 3.10) into the environment. Implementation of Mitigation Measure 3.10-2 would ensure that hazardous waste is properly managed. As a result, the impact resulting from a risk of release of pollutants due to project inundation flood hazard, tsunami, or seiche zones would be less than significant with mitigation incorporated.

Mitigation Measures:

Mitigation Measure 3.10-2. See Impact 3.10-2 for a description of this mitigation measure.

Impact 3.11-11: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would contribute to cumulative conditions of flood hazard, tsunami, or seiche zones, or risk release of pollutants due to project inundation.

Finding 1: Mitigation measures would reduce the Project's impacts contributing to cumulative conditions of flood hazard, tsunami, or seiche zones, or risk release of pollutants due to project inundation to less-than-significant levels. The Board finds that Mitigation Measure 3.10--2 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: The 2045 CAP would result in a less than cumulatively considerable contribution to cumulative impacts related to flood, tsunami, or seiche water quality hazards in the County, with the exception of risk of pollutant releases from solar PV project hazardous waste that is improperly stored or disposed of, which would be significant impact that is cumulatively considerable. Implementation of Mitigation Measure 3.10-2 would ensure that hazardous waste is properly managed. The impact would be less than cumulatively considerable and less than significant with mitigation incorporated.

Mitigation Measures:

Mitigation Measure 3.10-2. See Impact 3.10-2 for a description of this mitigation measure.

vii) Transportation

Impact 3.15-1: The Project, as a result of projects facilitated by the 2045 CAP measures and actions, would conflict with an applicable program plan, ordinance, or policy addressing the circulation system.

Finding 1: Mitigation measures would reduce the Project's impacts relating to conflicting conflict with an applicable program plan, ordinance, or policy addressing the circulation system to less-than-significant levels. The Board finds that Mitigation Measure 3.15-1 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: Projects facilitated by the 2045 CAP measures and goals could result in a significant impact with respect to consistency with applicable program plans, ordinances, or policies addressing the circulation system, including an emergency response or evacuation plan; thus, impacts would be significant. Mitigation Measure 3.15-1 would reduce this to a less-than-significant impact because the Traffic Control Plan would substantially reduce any safety and mobility concerns for motorists, transit operators, bicyclists, and/or pedestrians that may result during construction activities associated with projects facilitated by the 2045 CAP measures and actions.

Mitigation Measures:

Mitigation Measure 3.15-1: Traffic Control Plan. See Impact 3.10-6 for a description of this mitigation measure.

Impact 3.15-3: The Project, as a result of projects facilitated by the 2045 CAP measures and actions, would substantially increase hazards due to a road design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Finding 1: Mitigation measures would reduce the Project's impacts relating to substantially increasing hazards due to a road design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) to less-than-significant levels. The Board finds that Mitigation Measure 3.15-1 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: During the construction period, the presence of construction or the increased amount of heavy-duty construction vehicles on roadways could substantially increase hazards due to incompatible uses with normal vehicles on roadways. This could result in a significant impact. However, with the implementation of Mitigation Measure 3.15-1, this would be reduced to a less-than-significant impact because the Traffic Control Plan would avoid or substantially reduce any hazardous conditions for motorists, transit operators, bicyclists, and/or pedestrians that may result during construction activities associated projects facilitated by the 2045 CAP measures and actions.

Mitigation Measures:

Mitigation Measure 3.15-1: Traffic Control Plan. See Impact 3.10-6 for a description of this mitigation measure.

Impact 3.15-4: The Project, as a result of projects facilitated by the 2045 CAP measures and actions, would not cause a cumulatively considerable contribution to a significant cumulative impact relating to conflict with an applicable program plan, ordinance or policy addressing the circulation system.

Finding 1: Mitigation measures would reduce the Project's impacts relating to causing a cumulatively considerable contribution to a significant cumulative impact relating to conflict with an applicable program plan, ordinance or policy addressing the circulation system to less-than-significant levels. The Board finds that Mitigation Measure 3.15-1 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: With the implementation of the Traffic Control Plan required by Mitigation Measure 3.15-1 the Project-specific, incremental contribution, combined with the cumulative projects' impacts to transportation resources over the span of the 2045 CAP, would not be cumulatively considerable because the mitigation measure would avoid or substantially reduce any safety and mobility concerns for motorists, transit operators, bicyclists, and/or pedestrians that may result during construction activities associated with projects facilitated by the 2045 CAP measures and actions.

Mitigation Measures:

Mitigation Measure 3.15-1: Traffic Control Plan. See Impact 3.10-6 for a description of this mitigation measure.

Impact 3.15-6: The Project, as a result of projects facilitated by the 2045 CAP measures and actions, would not cause a cumulatively considerable contribution to a significant cumulative impact relating to a substantial increase in hazards due to a road design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Finding 1: Mitigation measures would reduce the Project's impacts relating to causing a cumulatively considerable contribution to a significant cumulative impact relating to a substantial increase in hazards due to a road design feature (e.g., sharp curves or dangerous intersections)

or incompatible uses (e.g., farm equipment) to less-than-significant levels. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: The number of traffic-related deaths and severe injuries that occur on unincorporated area roadways indicates that a significant cumulative impact exists regarding roadway hazards. Past, present, and reasonably foreseeable future projects, including projects implemented in accordance with the Regional Transportation Plan, General Plan, Vision Zero, and municipal code requirements have introduced or could introduce new roadways, roadway improvements, or incompatible uses that could result in substantially increased hazards that could result in significant impacts when cumulatively considered. However, with the implementation of the Traffic Control Plan required by Mitigation Measure 3.15-1 the Project-specific, incremental contribution, combined with the cumulative projects' impacts to transportation over the span of the 2045 CAP, would not be cumulatively considerable because the mitigation measure would avoid or substantially reduce any safety and mobility concerns for motorists, transit operators, bicyclists, and/or pedestrians that may result during construction activities associated with projects facilitated by 2045 CAP measures and actions.

Mitigation Measures:

Mitigation Measure 3.15-1: Traffic Control Plan. See Impact 3.10-6 for a description of this mitigation measure.

viii) Tribal Cultural Resources

Impact 3.16-1: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would cause a substantial adverse change in the significance of a tribal cultural resource or of a resource determined by the County, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Public Resources Code section 5024.1(c).

Finding 1: Mitigation measures would reduce the Project's impacts relating to causing a substantial adverse change in the significance of a tribal cultural resource or of a resource determined by the County, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Public Resources Code section 5024.1(c) to less-than-significant levels. The Board finds that Mitigation Measures 3.16-1 and 3.6-2 through 3.6-6 are feasible and hereby adopts them. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: Implementation of Mitigation Measure 3.16-1 would reduce impacts of projects facilitated by the 2045 CAP on tribal cultural resources to a less-than-significant level because it would require the County to consult with California Native American tribes pursuant to AB 52 to identify tribal cultural resources that could be affected by a project facilitated by the 2045 CAP. Further, if a tribal cultural resource is identified as a result of consultation, the County will implement mitigation measures or consider alternatives capable of avoiding or minimizing significant impacts on the tribal cultural resource. Additionally, Mitigation Measures 3.6-2 through 3.6-6 (identified in Section 3.6, Cultural Resources) require archaeological monitoring and preparation of a plan for the treatment of archaeological resources, including those that may also qualify as tribal cultural resources, which would further reduce the impact's significance.

Mitigation Measures:

Mitigation Measure 3.16-1: AB 52 Consultation. (Recirculated Draft PEIR, p. 3.16-10 et seq.)

Consistent with AB 52, before the release of a negative declaration, mitigated negative declaration, or EIR, the County shall initiate consultation within 14 days of a decision to undertake a project facilitated by Draft 2045 CAP measures or actions. The County shall provide formal notification to the designated contact of, or a tribal representative of, each traditionally and culturally affiliated California Native American tribe that has requested notice. The County shall begin the consultation process within 30 days after receiving a California Native American tribe's request for consultation.

If tribal cultural resources are identified, the County shall implement mitigation measures that would avoid or substantially lessen significant impacts on such resources, including but not limited to the measures recommended in Public Resources Code section 21084.3, or shall implement alternatives that would avoid significant impacts on the tribal cultural resources. Such measures shall be implemented in consultation with the California Native American tribe.

Mitigation Measure 3.6-2. Archaeological Resources Assessment. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-3. Construction Worker Cultural Resources Sensitivity Training. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-4. Archaeological Resources Discoveries. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-5. Treatment of Archaeological Resources. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-6. Curation and Disposition of Cultural Materials. See Impact 3.6-1 for a description of this mitigation measure.

Impact 3.16-2: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would cause a cumulatively considerable contribution to a significant cumulative impact caused by an adverse change in the significance of a tribal cultural resource or of a resource determined by the County, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Public Resources Code section 5024.1(c).

Finding 1: Mitigation measures would reduce the Project's impacts relating to causing a cumulatively considerable contribution to a significant cumulative impact caused by an adverse change in the significance of a tribal cultural resource or of a resource determined by the County, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Public Resources Code Section 5024.1(c) to less-than-significant levels. The Board finds that Mitigation Measures 3.16-1 through 3.16-6 are feasible and hereby adopts them. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: Mitigation Measure 3.16-1 and Mitigation Measures 3.6-2 through 3.6-6 would require the County to initiate consultation (within 14 days of a decision to undertake a project facilitated by 2045 CAP measures or actions) with California Native American tribes to avoid or lessen impacts on tribal cultural resources and would require archaeological monitoring and preparation of a plan for the treatment of such resources. As a result, with implementation of these measures, the Project-specific, incremental contribution, combined with the cumulative projects' impacts on tribal cultural resources over the span of the 2045 CAP, would not be cumulatively considerable, and therefore would be less than significant.

Mitigation Measures:

Mitigation Measure 3.16-1: See Impact 3.16-1 for a description of this mitigation measure.

Mitigation Measure 3.6-2. Archaeological Resources Assessment. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-3. Construction Worker Cultural Resources Sensitivity Training. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-4. Archaeological Resources Discoveries. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-5. Treatment of Archaeological Resources. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-6. Curation and Disposition of Cultural Materials. See Impact 3.6-1 for a description of this mitigation measure.

ix) Wildfire

Impact 3.18-1: Projects facilitated by the 2045 CAP would not substantially impair an adopted emergency response plan or emergency evacuation plan.

Finding 1: Mitigation measures would reduce the Project's impacts relating to substantially impairing an adopted emergency response plan or emergency evacuation plan to less-than-significant levels. The Board finds that Mitigation Measure 3.15-1is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: Implementation of the traffic control plan required by Mitigation Measure 3.15-1 would avoid or substantially reduce any potential impairment of an emergency response or evacuation plan that may result during construction activities associated with projects facilitated by the 2045 CAP measures and actions. Because any impacts related to the implementation of an emergency response or evacuation plan would be identified and addressed before a related impact would occur, implementing this mitigation measure would reduce the impacts to a less-than-significant level.

Mitigation Measures:

Mitigation Measure 3.15-1: Traffic Control Plan. See Impact 3.10-6 for a description of this mitigation measure.

Impact 3.18-3: Projects facilitated by the 2045 CAP could require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, composting facilities, power lines, or other utilities) that may exacerbate fire risk or may result in temporary or ongoing impacts on the environment.

Finding 1: Mitigation measures would reduce the Project's impacts relating to requiring the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, composting facilities, power lines, or other utilities) that may exacerbate fire risk or may result in temporary or ongoing impacts on the environment to less-than-significant levels. The Board finds that Mitigation Measure 3.18-3 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: The implementation of Mitigation Measure 3.18-3 would ensure that the risk of fire from infrastructure associated with projects facilitated by the 2045 CAP measures and actions would be managed through collaboration with the Los Angeles County Fire Department (LACoFD), and that the applicant and its contractors would implement fire safety measures to prevent wildland fire and would be prepared to respond immediately if a fire should ignite. Therefore, this impact of projects facilitated by the 2045 CAP would be reduced to a less-than-significant level.

Mitigation Measures:

Mitigation Measure 3.18-3: Fire Safety During Construction and Operation (Recirculated Draft PEIR, p. 3.18-23 et seq.).

Future applicants and/or their contractors shall prepare and implement project-specific fire protection plans for projects located in the VHFHSZ to ensure that wildfire-related hazards are not exacerbated by projects facilitated by the 2045 CAP measures or goals. The applicant shall prepare and submit a fire protection plan to the County for review and approval at least 60 days before the start of construction activities. The fire protection plan shall include or require, but not limited to, the following measures along with Fire Code compliance, as applicable to address construction and operation:

- A training module within the pre-construction worker training (e.g., Worker Environmental Awareness training, safety training, fire equipment and procedures) on the specifics of the approved plan for all construction crew members before the start of construction.
- List project site roles and responsibilities and identify appropriate emergency notification procedures and site-specific emergency response and evacuation measures and routes that would be followed during emergency situations. All construction vehicles shall have fire suppression equipment.
- Instruct construction personnel to park vehicles within roads, road shoulders, graveled areas, and/or cleared areas (i.e., away from dry vegetation) wherever such surfaces are present at the construction site. Protocol for the project contractor and/or the applicant to perform visual inspections daily to ensure that all ignition risks are reduced or eliminated before leaving the worksite. Identify fire safety and prevention measures for project-specific infrastructure that can ignite fires, such as power lines, battery storage facilities, and composting facilities.

Impact 3.18-5: Projects facilitated by the 2045 CAP could expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Finding 1: Mitigation measures would reduce the Project's impacts relating to exposing people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires to less-than-significant levels. The Board finds that Mitigation Measure 3.18-3 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: Implementation of Mitigation Measure 3.18-3 would ensure that the risks of fire from projects facilitated by the 2045 CAP measures and actions would be managed through collaboration with LACoFD and the California Department of Forestry and Fire Protection (CAL FIRE), and that the applicant and its contractors would implement fire safety measures to

prevent wildland fire and would be prepared to respond immediately if a fire should ignite. Therefore, this impact would be reduced to a less-than-significant level.

Mitigation Measures:

Mitigation Measure 3.18-3: Fire Safety During Construction and Operation. See Impact 3.18-3 for a description of this mitigation measure.

Impact 3.18-6: Projects facilitated by the 2045 CAP could result in significant cumulative impacts with regard to impairing an adopted emergency response plan or emergency evacuation plan.

Finding 1: Mitigation measures would reduce the Project's impacts relating to resulting in significant cumulative impacts with regard to impairing an adopted emergency response plan or emergency evacuation plan to less-than-significant levels. The Board finds that Mitigation Measure 3.15-1 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: The traffic control plan required by Mitigation Measure 3.15-1 would avoid or substantially reduce the contribution of projects facilitated by the 2045 CAP measures and actions to impairment of an emergency response or evacuation plan to less than cumulatively considerable. The cumulative impact on emergency access and emergency response would be reduced to a less than cumulatively considerable and therefore less-than-significant level.

Mitigation Measures:

Mitigation Measure 3.15-1: Traffic Control Plan. See Impact 3.10-6 for a description of this mitigation measure.

Impact 3.18-8: Projects facilitated by the 2045 CAP could require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, composting facilities, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing cumulative impacts on the environment.

Finding 1: Mitigation measures would reduce the Project's impacts relating to requiring the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, composting facilities, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing cumulative impacts on the environment to less-than-significant levels. The Board finds that Mitigation Measure 3.18-3 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: Implementation of Mitigation Measure 3.18-3 would ensure that the incremental cumulative risk of wildfire from projects facilitated by the 2045 CAP measures and actions would be managed through collaboration with LACoFD, fire safety measures to prevent wildland fires, and preparations for immediate responses if a fire should ignite. This measure would reduce the contribution of projects facilitated by 2045 CAP measures and actions to less than cumulatively considerable, and therefore to a less-than-significant level.

Mitigation Measures:

Mitigation Measure 3.18-3: Fire Safety During Construction and Operation. See Impact 3.18-3 for a description of this mitigation measure.

Impact 3.18-10: Projects facilitated by the 2045 CAP could expose people or structures, either directly or indirectly, to a significant cumulative risk of loss, injury, or death involving wildland fires.

Finding 1: Mitigation measures would reduce the Project's impacts relating to exposing people or structures, either directly or indirectly, to a significant cumulative risk of loss, injury, or death involving wildland fires to less-than-significant levels. The Board finds that Mitigation Measure 3.18-3 is feasible and hereby adopts it. The Board hereby makes Finding 1 and determines this impact to be less than significant.

Facts in Support of Finding: Implementation of Mitigation Measure 3.18-3 would ensure that the incremental cumulative risk of wildfire from projects facilitated by the 2045 CAP measures and actions would be managed through collaboration with LACoFD, implementation of fire safety measures to prevent wildland fires, and preparations for immediate responses if a fire should ignite. This measure would reduce the Project's incremental contribution to the cumulative impact to less than cumulatively considerable, and this cumulative impact would be reduced to a less-than-significant level.

Mitigation Measures:

Mitigation Measure 3.18-3: Fire Safety During Construction and Operation. See Impact 3.18-3 for a description of this mitigation measure.

b. Findings Regarding Project Impacts Determined to Be Significant and Unavoidable

Where, as a result of the environmental analysis of the Project, the County has determined that either: (1) even with compliance with existing laws, codes and statutes, and/or the identification of feasible mitigation measures, significant impacts cannot be reduced to a level of less than significant; or (2) no feasible mitigation measures or alternatives are available to mitigate the significant impact, the County has found in accordance with Public Resources Code section 21081(a)(3) and CEQA Guidelines section 15091(a)(3) that "Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR." This is referred to herein as "Finding 3."

i) Aesthetics

Impact 3.2-1: Projects facilitated by the 2045 CAP would have a substantial adverse effect on a scenic vista.

Finding 3: There are no feasible and reasonable mitigation measures that would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: The 2045 CAP is a policy document that does not include specific projects that would have a direct, adverse effect on scenic vistas. Nonetheless, many of the projects facilitated by 2045 CAP measures and actions would involve retrofitting of existing buildings, development along existing transit areas, infill projects in urban locations that are already developed, electric vehicle charging stations, or distributed energy resources like rooftop solar PV panels on existing structures. These projects would have significant impacts on the surrounding area due to the inherent change to scenic vistas that would result.

The implementation of Mitigation Measure 3.2-1 and Mitigation Measure 3.2-2 would reduce the severity of impact on scenic vistas; however, these measures would not on their own merits

ensure that the impact would be less than significant. Therefore, the County finds that even with implementation of these mitigation measures, potential impacts of projects facilitated by the 2045 CAP would remain significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.2-1: Alternative Design (Recirculated Draft PEIR, p. 3.2-11)

Projects facilitated by the 2045 CAP that would obstruct views from publicly-accessible vantage points as defined in this analysis (such as from a vista point or a regional riding, hiking, or multiuse trail) shall identify and protect public views and significant landscape features or landforms visible from such views, and shall implement project-specific mitigation as applicable. If it is determined that a project would obstruct scenic views, the County shall consider alternative designs that seek to avoid and/or minimize these impacts. Project-specific design measures may include reduction in height of improvements or width of improvements to reduce obstruction of views or other adverse visual effects, or relocation of improvements to reduce obstruction of views. The County shall consider taking the following (or equivalent) actions: i) Require that the scale and massing of new development provide appropriate transitions in structure height and bulk that are sensitive to the physical and visual character of the affected area; ii) ensure structure heights are stepped back to maintain appropriate transitions in scale and to protect scenic views; and iii) avoid siting electric towers, solar power facilities, wind power facilities, communication transmission facilities and/or above ground lines where they could obstruct views from public vantage points, such as a regional riding, hiking, or multiuse trail, along scenic roadways and routes, or scenic vista points.

Mitigation Measure 3.2-2: Visual Screening and Other View Protection Measures (Recirculated Draft PEIR, p. 3.2-11)

To partially screen views of projects facilitated by 2045 CAP measures and actions in locations where they would be visible from publicly accessible vantage points (e.g., scenic vistas, trails, scenic roadways and routes) and affect visual character or quality, if feasible and effective, the County shall (and other implementing state or local agencies can and should) require the construction of a berm, vegetative screening, or other form of visual barrier of sufficient height to provide a visual transition from ground level to surrounding hills or ridgelines. The color of proposed building facades and roofs shall be designed to visually blend in and minimize the potential for visual contrast between the project elements and their natural landscape surroundings. Bright or very light colors (including white) shall be avoided. Re-contouring and revegetation of temporarily disturbed, graded areas shall be completed to provide a natural appearing landform upon completion of construction.

Impact 3.2-2: Projects facilitated by the 2045 CAP would be visible from or obstruct views from a regional riding, hiking, or multiuse trail.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: The implementation of Mitigation Measure 3.2-1 and Mitigation Measure 3.2-2 would reduce the severity of an impact on a public regional riding, hiking, or multiuse trail by adjusting the scaling and massing of structures, using step-backs from sensitive

adjoining uses, planning for project/facility siting, and installing visual screening; however, these measures would not on their own merits ensure that the impact of projects facilitated by the 2045 CAP would be less than significant. The Board therefore finds that, even with implementation of Mitigation Measures 3.2-1 and 3.2-2, alternative design or visual screening measures may not be feasible or effective for every Project facilitated by the 2045 CAP measures and actions. Therefore, the Board finds that this impact would be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.2-1: Alternative Design. See Impact 3.2-1 for a discussion of this mitigation measure.

Mitigation Measure 3.2-2: Visual Screening and Other View Protection Measures. See Impact 3.2-1 for a discussion of this mitigation measure.

Impact 3.2-3: Projects facilitated by the 2045 CAP would substantially damage scenic resources, including, but not limited to, trees, rocks, outcropping, and historic building within a state scenic highway.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: The implementation of Mitigation Measure 3.2-1 and Mitigation Measure 3.2-2 would reduce the severity of an impact relating to substantial damage to scenic resources within a state scenic highway by adjusting the scaling and massing of structures, using step-backs from sensitive adjoining uses, planning for project/facility siting, and installing visual screening; however, these measures would not on their own merits ensure that the impact of projects facilitated by the 2045 CAP would be less than significant. For example, details about the siting and design of future utility-scale solar PV projects facilitated by the 2045 CAP, and the feasibility and effectiveness of mitigation measures, are unavailable. No additional feasible mitigation measures are available. The Board, therefore, finds that even with implementation of Mitigation Measure 3.2-1 and Mitigation Measure 3.2-2, impacts may include substantial damage to scenic resources. Therefore, the Board finds Impact 3.2-3 would remain significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.2-1: Alternative Design. See Impact 3.2-1 for a discussion of this mitigation measure.

Mitigation Measure 3.2-2: Visual Screening and Other View Protection Measures. See Impact 3.2-1 for a discussion of this mitigation measure.

Impact 3.2-4: Projects facilitated by the 2045 CAP would substantially degrade the existing visual character or quality of public views of the site and its surroundings because of height, bulk, pattern, scale, character, or other features and/or conflict with applicable zoning and other regulations of governing scenic quality.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: The implementation of Mitigation Measure 3.2-1 and Mitigation Measure 3.2-2 would reduce the significance of project-caused changes to existing visual character or quality by adjusting the scaling and massing of structures, using step-backs from sensitive adjoining uses, planning for project/facility siting, and installing visual screening; however, these measures would not on their own merits ensure that the impact would be less than significant. For example, details about the siting of future utility-scale solar PV projects facilitated by the 2045 CAP, and the feasibility and effectiveness of mitigation measures, are unavailable. Therefore, the impacts of such projects relative to visual character or quality cannot be accurately assessed at this time, nor can project-specific mitigation be developed. No additional feasible mitigation measures are available. The Board, therefore, finds that even with implementation of these two mitigation measures, impacts may include substantial degradation of the existing visual character or quality of public views. Therefore, the Board finds Impact 3.2-4 would remain significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.2-1: Alternative Design. See Impact 3.2-1 for a discussion of this mitigation measure.

Mitigation Measure 3.2-2: Visual Screening and Other View Protection Measures. See Impact 3.2-1 for a discussion of this mitigation measure.

Impact 3.2-6: Projects facilitated by the 2045 CAP would cause or contribute to a significant cumulative impact to scenic vistas.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: In locations where scenic vistas are of exceptionally high quality, such as in the Antelope Valley, the addition of incremental impacts from projects facilitated by 2045 CAP measures and actions could be more likely to cause or make a cumulatively considerable contribution to a significant cumulative impact on scenic vistas. By contrast, in locations where the quality of scenic vistas is of lesser quality and more mundane, there is a decreased likelihood that projects facilitated by the 2045 CAP measures and actions would cause or contribute to a significant cumulative impact on scenic vistas. The Board, therefore, finds that even with implementation of these two mitigation measures, significant cumulative impacts on scenic vistas would remain. Therefore, the Board finds projects facilitated by the 2045 CAP would cause a cumulatively considerable contribution to significant cumulative impacts to scenic vistas. The Board, therefore, finds that even with implementation of Mitigation Measure 3.2-1 and Mitigation Measure 3.2-2, a significant unavoidable impact to scenic vistas would remain. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.2-1: Alternative Design. See Impact 3.2-1 for a discussion of this mitigation measure.

Mitigation Measure 3.2-2: Visual Screening and Other View Protection Measures. See Impact 3.2-1 for a discussion of this mitigation measure.

Impact 3.2-7: Projects facilitated by the 2045 CAP would cause or contribute to significant cumulative impacts on views from a regional riding, hiking, or multiuse trail.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: The Project's incremental contribution to cumulative impacts, in combination with the incremental impacts of other cumulative projects, would cause (or result in a cumulatively considerable contribution to) a significant cumulative impact on views from regional trails. The Project's contribution to this impact would be cumulatively considerable. The implementation of Mitigation Measure 3.2-1 and Mitigation Measure 3.2-2 would reduce the severity of the Project's incremental contribution to cumulative impacts but would not ensure that the Project's contribution would be less than cumulatively considerable. The Board, therefore, finds that even with implementation of these two mitigation measures, a significant cumulative impact to views from a regional riding, hiking, or multiuse trail would remain. Therefore, the Board finds that this cumulative impact would remain significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.2-1: Alternative Design. See Impact 3.2-1 for a discussion of this mitigation measure.

Mitigation Measure 3.2-2: Visual Screening and Other View Protection Measures. See Impact 3.2-1 for a discussion of this mitigation measure.

Impact 3.2-8: Projects facilitated by the 2045 CAP would cause or contribute to a significant cumulative impact due to substantial cumulative damage to scenic resources, including, but not limited to, trees, rocks, outcropping, and historic building within a state scenic highway.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: In combination with the incremental contributions of other closely related past, present, and reasonably foreseeable future projects that have been or may be approved within these state routes or within the areas to contribute to their eligibility for designation as a scenic highway, the incremental contribution of projects facilitated by the 2045 CAP could cause a significant cumulative impact to occur. The Project's contribution to this impact would be cumulatively considerable. The implementation of Mitigation Measure 3.2-1 and Mitigation Measure 3.2-2 would reduce the severity of the Project's incremental contribution relating to substantial damage to scenic resources within a state scenic highway but would ensure that, in combination with the incremental impacts of other projects, the resulting cumulative impact would be less than significant. Accordingly, even with the implementation of these mitigation measures, the Project's contribution to significant cumulative impacts to scenic resources, including, but not limited to, trees, rocks, outcropping, and historic building within a state scenic highway would remain. Therefore, the Board finds this significant cumulative impact to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.2-1: Alternative Design. See Impact 3.2-1 for a discussion of this mitigation measure.

Mitigation Measure 3.2-2: Visual Screening and Other View Protection Measures. See Impact 3.2-1 for a discussion of this mitigation measure.

Impact 3.2-9: Projects facilitated by the 2045 CAP would cause or contribute to significant cumulative degradation of the existing visual character or quality of public views of the site and its surroundings because of height, bulk, pattern, scale, character, or other features and/or conflict with applicable zoning and other regulations governing scenic quality.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: The incremental impacts of the Project, in combination with the incremental contributions of other closely related past present and reasonably foreseeable future projects, could cause or contribute to a significant cumulative impact regarding the degradation of the existing visual character or quality of public views of the site and its surroundings as a result of the transformation of existing undeveloped landscape to a more industrial look and feel as would be associated with the development of a water recycling, waste management, or compost processing facility or with the development of utility-scale, ground-mounted renewable energy generation or infrastructure projects if proposed in more rural areas. The implementation of Mitigation Measure 3.2-1 and Mitigation Measure 3.2-2 would reduce the Project's incremental contribution to cumulative impacts but would not ensure that the contribution would not be cumulatively considerable. The Board, therefore, finds that even with the implementation of these mitigation measures, impacts may include significant cumulative degradation of the existing visual character or quality of public views of the site and its surroundings. Therefore, the Board finds this cumulative impact to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.2-1: Alternative Design. See Impact 3.2-1 for a discussion of this mitigation measure.

Mitigation Measure 3.2-2: Visual Screening and Other View Protection Measures. See Impact 3.2-1 for a discussion of this mitigation measure.

ii) Agriculture and Forestry

Impact 3.3-1: Projects facilitated by the 2045 CAP would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Implementing Mitigation Measure 3.3-1 would lessen the impact of the conversion of mapped Farmland to nonagricultural uses by avoiding the development of

actively farmed lands for purposes of utility-scale solar and energy storage when there is an otherwise suitable site available. However, this measure would not ensure that such conversion could be avoided. The Board, therefore, finds that even with implementation of Mitigation Measure 3.3-1, impacts may include the conversion of Farmland, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. Therefore, the Board finds that this significant cumulative impact would be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.3-1: Avoidance of Actively Farmed Lands When Siting Utility-Scale Solar and Energy Storage Development (Recirculated Draft PEIR, p. 3.3-14)

To reduce the impacts of converting Farmland in physical use for agriculture to nonagricultural uses when a utility-scale solar development is proposed on actively farmed land, the County shall require renewable energy project applicants to demonstrate their consideration of alternate sites consisting of formerly developed and/or contaminated lands such as landfills and mine sites located within one mile of the proposed project site when such development is consistent with General Plan and zoning requirements.

Impact 3.3-2: Projects facilitated by the 2045 CAP would conflict with the existing zoning for agricultural use, with a designated Agricultural Resource Area, or with a Williamson Act contract.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Implementing Mitigation Measure 3.3-1 would lessen impacts caused by a conflict with a designated Agricultural Resource Area but would not ensure that no such conflict would occur. The Board, therefore, finds that even with implementation of Mitigation Measure 3.3-1, impacts may include conflicts with the existing zoning for agricultural use, with a designated Agricultural Resource Area, or with a Williamson Act contract. Therefore, the Board finds Impact 3.3-2 would be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.3-1: Avoidance of Actively Farmed Lands When Siting Utility-Scale Solar and Energy Storage Development. See Impact 3.3-1 for a description of this mitigation measure.

Impact 3.3-5: Projects facilitated by the 2045 CAP would involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Implementing Mitigation Measure 3.3-1 would lessen impacts related to the conversion of Farmland to utility-scale solar development (a nonagricultural use) but would not ensure that land in agricultural use would not be converted. The Board, therefore, finds that even with the implementation of Mitigation Measure 3.3-1, impacts may involve other changes in

the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. Therefore, the Board finds Impact 3.3-5 would be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.3-1: Avoidance of Actively Farmed Lands When Siting Utility-Scale Solar and Energy Storage Development. See Impact 3.3-1 for a description of this mitigation measure.

Impact 3.3-7: Projects facilitated by the 2045 CAP would result in a significant cumulative impact related to the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Implementing Mitigation Measure 3.3-1 would lessen the Project's contribution to the significant cumulative impact. However, implementation of this measure would not ensure that the conversion of mapped Farmland could be avoided and would have no impact on the conversion of mapped Farmland for residential or other uses of that land consistent with General Plan and zoning provisions. The Board, therefore, finds that even with implementation of Mitigation Measure 3.3-1, impacts may include a significant cumulative conversion of Farmland, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use. Therefore, the Board finds that Impact 3.3-7 would be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.3-1: Avoidance of Actively Farmed Lands When Siting Utility-Scale Solar and Energy Storage Development. See Impact 3.3-1 for a description of this mitigation measure.

Impact 3.3-8: Projects facilitated by the 2045 CAP would result in a cumulative significant impact related to conflicts with existing zoning for agricultural use, or with a designated Agricultural Resource Area.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Implementing Mitigation Measure 3.3-1 would lessen the Project's contribution to the significant cumulative impact but would not ensure that a conflict with a designated Agricultural Resource Area would be avoided. The Board, therefore, finds that even with implementation of Mitigation Measure 3.3-1, the Project's incremental contribution to the cumulative impact to existing zoning for agricultural use, or with a designated Agricultural Resource Area would be cumulatively considerable. Therefore, the Board finds that Impact 3.3-8 would be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.3-1: Avoidance of Actively Farmed Lands When Siting Utility-Scale Solar and Energy Storage Development. See Impact 3.3-1 for a description of this mitigation measure.

Impact 3.3-11: Projects facilitated by the 2045 CAP would involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Implementing Mitigation Measure 3.3-1 would lessen the Project's cumulative contribution to conversion-related impacts but would not ensure that other changes resulting in conversion would not occur. The Board, therefore, finds that even with the implementation of Mitigation Measure 3.3-1, the Project's incremental contribution to cumulative impacts involving other changes in the existing environment that could result in conversion of Farmland would be cumulatively considerable. Therefore, the Board finds that Impact 3.3-5 would be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.3-1: Avoidance of Actively Farmed Lands When Siting Utility-Scale Solar and Energy Storage Development. See Impact 3.3-1 for a description of this mitigation measure.

iii) Air Quality

Impact 3.4-1: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would conflict with or obstruct implementation of the applicable air quality plan.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Future projects in the unincorporated County that would implement 2045 CAP measures and actions would result in a significant and unavoidable impact related to conflict with or obstruction of the implementation of the applicable air quality plan. Implementation of Mitigation Measures 3.4-1 through 3.4-3 would reduce the severity of construction and operational emissions. However, even with the implementation of the measures, these impacts are not accurately quantifiable at this time and may not be reduced to below the thresholds. As a result, the impact for construction and operation of projects facilitated by 2045 CAP would remain significant and unavoidable. No feasible mitigation measures are available that would reduce impacts below South Coast Air Quality Management District (SCAQMD) or Antelope Valley Air Quality Management District (AVAQMD) thresholds on a programmatic level, and feasible mitigation may not be available for individual projects facilitated by the 2045 CAP measures and actions. Impacts would be significant and unavoidable. No additional feasible mitigation measures are available. The magnitude of long-term impacts would increase over time to the extent that more projects would be facilitated by CAP measures and actions to meet the 2045 CAP's increasingly aggressive 2030, 2035, and 2045 GHG reduction targets. Because the exact specifications for projects that may be facilitated by the 2045 CAP are unknown, this determination applies to horizon years 2030, 2035, and 2045. The Board, therefore, finds that

even with implementation of the identified mitigation measures, impacts due to conflict with or obstruction of the implementation of the applicable air quality plan would remain. Therefore, the Board finds No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.4-1: Construction Emissions. See Impact 3.4-3b for a discussion of this mitigation measure.

Mitigation Measure 3.4-2: Operational Fugitive Dust Emissions. See Impact 3.4-3b for a discussion of this mitigation measure.

Mitigation Measure 3.4-3: Architectural Coating VOC Emissions (Recirculated Draft PEIR, p. 3.4-54)

If, during subsequent project-level environmental review, it is determined that VOC emissions impacts may be significant, the lead agency shall require Super-Compliant VOC-content architectural coatings (0 grams per liter to less than 10 grams per liter VOC) to be used during construction and operational application of paints and other architectural coatings to reduce ozone precursors. If paints and coatings with VOC content of 0 grams/liter to less than 10 grams/liter cannot be utilized, the developer shall avoid application of architectural coatings during days when the USEPA, CARB, or SCAQMD has forecasted the Air Quality Index for ozone to be greater than 100 for the project location.

Impact 3.4-2: The Project, as a result of projects facilitated by 2045 CAP measures and actions, could result in a cumulatively considerable net increase of a criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Future projects in the unincorporated areas of the County facilitated by 2045 CAP measures and actions would result in a significant and unavoidable impact related to a cumulatively considerable net increase of a criteria pollutant for which the region is nonattainment during construction and operations due to the potential for individual future projects facilitated by 2045 CAP measures and actions to exceed the significance thresholds. Implementation of Mitigation Measures 3.4-1, 3.4-2, 3.4-3, 3.4-4, and 3.4-5 would help to reduce the severity of the impacts. However, even with implementation of the measures, impacts may not be reduced to below the thresholds (and impacts would remain significant and unavoidable) because no feasible mitigation measures are available that would reduce impacts below SCAQMD's or AVAQMD's thresholds on a programmatic level and because feasible mitigation may not be available for individual projects facilitated by the 2045 CAP. Impacts would be significant and unavoidable. No additional feasible mitigation measures are available. Because the exact specifications for projects that may be facilitated by the 2045 CAP are unknown, this determination applies to horizon years 2030, 2035, and 2045. The magnitude of long-term impacts may increase over time to the extent that more projects would be facilitated by 2045 CAP measures and actions to meet the 2045 CAP's increasingly aggressive 2030, 2035, and 2045 GHG reduction targets. The Board, therefore, finds that even with implementation of the identified mitigation measures, a cumulatively considerable net increase of a criteria pollutant for which the

Project region is nonattainment would remain. Therefore, the Board finds Impact 3.4-2 to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.4-1: Construction Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-2: Operational Fugitive Dust Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-3: Architectural Coating VOC Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-4: Enhanced Energy Conservation (Recirculated Draft PEIR, p. 3.4-61)

If, during subsequent project-level environmental review, it is determined that operational emissions impacts are significant, the lead agency shall require the project to incorporate enhanced energy conservation measures beyond those required by federal or state law, County ordinance, and the 2045 CAP measures and actions to reduce energy-related emissions. Enhanced energy conservation measures shall include one or more of the following as applicable:

- Install Energy Star rated heating, cooling, lighting, and appliances.
- Use of heating, ventilation, and air conditioning equipment with a Seasonal Energy Efficiency Ratio of 12 or higher.
- Installation of water heaters with an energy factor of 0.92 or higher.
- Install solar water heaters or tankless water heaters.
- Use passive solar cooling/heating.
- Reduce building natural gas infrastructure, use renewable natural gas in place of fossil fuel–derived natural gas, or eliminate building natural gas infrastructure and fully electrify buildings.

Mitigation Measure 3.4-5: Low-VOC/Green Cleaning Product Educational Program (Recirculated Draft PEIR, p. 3.4-61)

If, during subsequent project-level environmental review, it is determined that operational emissions impacts may be significant, the lead agency shall require the project applicant or developer to provide tenants and residents with information about low-VOC/green cleaning products and paints, including materials educating how to identify low-VOC cleaners and products.

Impact 3.4-3a: The Project, as a result of projects facilitated by the 2045 CAP measures and actions, would expose sensitive receptors to substantial pollutant concentrations for localized air pollutants and Toxic Air Contaminants (TAC) emissions.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: The 2045 CAP would result in a significant and unavoidable impact related to exposure of sensitive receptors to substantial pollutant concentrations. The implementation of Mitigation Measure 3.4-6 and Mitigation Measure 3.4-7 would help to reduce the severity of the impacts related to localized emissions and TAC emissions. However, impacts from construction- and operational-related localized emissions and TAC emissions may not be reduced to below the thresholds and, under such conditions, impacts would remain significant and unavoidable. No feasible mitigation measures are available that would reduce impacts related to construction-related localized emissions and TAC emissions to below SCAQMD's or AVAQMD's thresholds on a Program level and feasible mitigation may not be available for individual projects facilitated by 2045 CAP measures and actions. Impacts would be significant and unavoidable. No additional feasible mitigation measures are available. Because the exact specifications for projects that may be facilitated by the 2045 CAP are unknown, this determination applies to horizon years 2030, 2035, and 2045. The magnitude of long-term impacts would increase over time to the extent that more projects would be facilitated by CAP measures and actions to meet the 2045 CAP's increasingly aggressive 2030, 2035, and 2045 GHG reduction targets. The Board, therefore, finds that even with implementation of the identified mitigation measures, the Project would expose sensitive receptors to substantial pollutant concentrations for localized air pollutants and TAC emissions. Therefore, the Board finds Impact 3.4-3a to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.4-1: Construction Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-2: Operational Fugitive Dust Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-3: Architectural Coating VOC Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-4: Enhanced Energy Conservation. See Impact 3.4-2 for a description of this mitigation measure.

Mitigation Measure 3.4-5: Low-VOC/Green Cleaning Product Educational Program. See Impact 3.4-2 for a description of this mitigation measure.

Mitigation Measure 3.4-6: Stationary Sources (Recirculated Draft PEIR, p. 3.4-68)

Applicants for new or modified stationary sources facilitated by the 2045 CAP measures and actions that: (1) have the potential to generate 40 or more diesel trucks per day and (2) are located within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, nursing homes), as measured from the property line of the project to the property line of the nearest sensitive use, shall submit a health risk assessment (HRA) to the County Department of Regional Planning prior to future discretionary project approval. The HRA shall be prepared in accordance with policies and procedures of the state Office of Environmental Health Hazard Assessment and the applicable air quality management district. If the HRA shows that the incremental cancer risk

exceeds ten in one million (10E-06), particulate matter concentrations would exceed 2.5 µg/m3, or the appropriate noncancer hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that best available control technologies for toxics (T-BACTs) are capable of reducing potential cancer and noncancer risks to an acceptable level, including appropriate enforcement mechanisms. T-BACTs may include, but are not limited to, restricting idling onsite or electrifying warehousing docks to reduce diesel particulate matter, or requiring use of newer equipment and/or vehicles. T-BACTs identified in the HRA shall be identified as mitigation measures in the environmental document and/or incorporated into the site development plan as a component of the project.

Mitigation Measure 3.4-7: Health Risk Assessment (Recirculated Draft PEIR, p. 3.4-68 et seq.)

Applicants shall submit a health risk assessment (HRA) to the County prior to future discretionary project approval for sensitive land uses facilitated by the 2045 CAP measures and actions within the following distances as measured from the property line of the project to the property line of the source/edge of the nearest travel lane, from these facilities or similar types of facilities that produce TAC emissions:

- Industrial facilities within 1,000 feet
- Distribution centers (40 or more trucks per day) within 1,000 feet
- Major transportation projects (50,000 or more vehicles per day) within 1,000 feet
- Gasoline dispensing facilities within 300 feet

Applicants proposing projects facilitated by the 2045 CAP measures and actions which produce TAC emissions may be required to submit an HRA based on local rules and regulations, and/or at the discretion of the lead agency.

The HRA shall be prepared in accordance with policies and procedures of the applicable Air Quality Management District. If the HRA shows that the incremental cancer risk exceeds ten in one million (10E-06) or the appropriate noncancer hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and non-cancer risks to an acceptable level (i.e., below ten in one million or a hazard index of 1.0), including appropriate enforcement mechanisms. Measures to reduce risk may include but are not limited to:

- Air intakes located away from high-volume roadways and/or truck loading zones, unless it can be demonstrated to the County Department of Regional Planning that there are operational limitations.
- Heating, ventilation, and air conditioning systems of the buildings provided with appropriately sized maximum efficiency rating value (MERV) filters.

Mitigation measures identified in the HRA shall be identified as mitigation measures in the environmental document and/or incorporated into the site development plan as a component of the Project. The air intake design and MERV filter requirements shall be noted and/or reflected on all building plans submitted to the County and shall be verified by the County Department of Regional Planning.

Impact 3.4-5: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would make a cumulatively considerable contribution to a significant cumulative impact due to a conflict with or obstruction of implementation of the applicable air quality plan.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Future projects in the unincorporated County that would be facilitated by the 2045 CAP measures and actions would result in a significant and unavoidable cumulative impact related to construction emissions and conflict with or obstruction of the implementation of the applicable air quality plan. The implementation of Mitigation Measures 3.4-1, 3.4-2, and 3.4-3 would reduce the severity of construction emissions. However, even with the implementation of the measures, these cumulative impacts are not accurately quantifiable at this time and may not be reduced to below the thresholds. No feasible mitigation measures are available that would reduce impacts below SCAQMD's or AVAQMD's thresholds on a program level, and feasible mitigation may not be available for individual projects facilitated by the 2045 CAP measures and actions for horizon years 2030, 2035, and 2045. Impacts would be cumulatively considerable, and significant and unavoidable. The Board, therefore, finds that even with implementation of the identified mitigation measures, the Project would cause a cumulatively considerable contribution to a significant cumulative impact due to a conflict with or obstruction of implementation of the applicable air quality plan. Therefore, the Board finds Impact 3.4-5 to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.4-1: Construction Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-2: Operational Fugitive Dust Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-3: Architectural Coating VOC Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Impact 3.4-6: The Draft 2045 CAP would make a cumulatively considerable contribution to a significant cumulative impact to air quality associated with criteria pollutants.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Future projects in the unincorporated areas of the County facilitated by 2045 CAP measures and actions would result in a significant and unavoidable impact related to a cumulatively considerable net increase of a criteria pollutant for which the region is nonattainment during construction and operations. The implementation of Mitigation Measures 3.4-1, 3.4-2, 3.4-3, 3.4-4, and 3.4-5 would help to reduce the severity of the impacts. However, even with implementation of these measures, impacts may not be reduced to below the thresholds (and impacts would remain significant and unavoidable) because no feasible mitigation measures are available that would reduce impacts below SCAQMD's or AVAQMD's thresholds on a program level and because feasible mitigation may not be available for individual

projects facilitated by the 2045 CAP for horizon years 2030, 2035, and 2045. Impacts would be significant and unavoidable. The magnitude of long-term impacts may increase over time to the extent that more projects would be facilitated by CAP measures and actions to meet the 2045 CAP's increasingly aggressive 2030, 2035, and 2045 GHG reduction targets. The Board, therefore, finds that even with implementation of the identified mitigation measures, the Project would cause a cumulatively considerable contribution to a significant cumulative impact to air quality associated with criteria pollutants. Therefore, the Board finds Impact 3.4-6 to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.4-1: Construction Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-2: Operational Fugitive Dust Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-3: Architectural Coating VOC Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-4: Enhanced Energy Conservation. See Impact 3.4-2 for a description of this mitigation measure.

Mitigation Measure 3.4-5: Low-VOC/Green Cleaning Product Educational Program. See Impact 3.4-2 for a description of this mitigation measure.

Impact 3.4-7: The Project, as a result of projects facilitated by the 2045 CAP, could contribute to a significant cumulative impact to air quality associated with localized air pollutant and TAC emissions.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Future projects facilitated by 2045 CAP measures and actions may result in localized air pollutant and TAC emissions that could exceed the SCAQMD and AVAQMD significance thresholds for each of the horizon years. However, even with implementation of Mitigation Measures 3.4-1, 3.4-2, 3.4-3, 3.4-4, 3.4-5, 3.4-6, 3.4-7, and 3.4-8, the impacts related to fugitive dust, localized TAC emissions, and associated health risk impacts would be cumulatively considerable and thus significant and unavoidable. No feasible mitigation measures are available that would reduce impacts below SCAQMD's or AVAQMD's thresholds on a program level, and feasible mitigation may not be available for future projects facilitated by the 2045 CAP for horizon years 2030, 2035, and 2045. Impacts would be significant and unavoidable. The magnitude of long-term impacts may increase over time to the extent that more projects would be facilitated by CAP measures and actions to meet the 2045 CAP's increasingly aggressive 2030, 2035, and 2045 GHG reduction targets. The Board, therefore, finds that even with implementation of the identified mitigation measures, the Project would contribute to a significant cumulative impact to air quality associated with localized air pollutant and TAC emissions. Therefore, the Board finds Impact 3.4-7 to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.4-1: Construction Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-2: Operational Fugitive Dust Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-3: Architectural Coating VOC Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-4: Enhanced Energy Conservation. See Impact 3.4-2 for a description of this mitigation measure.

Mitigation Measure 3.4-5: Low-VOC/Green Cleaning Product Educational Program. See Impact 3.4-2 for a description of this mitigation measure.

Mitigation Measure 3.4-6: Stationary Sources. See Impact 3.4-3a for a description of this mitigation measure.

Mitigation Measure 3.4-7: Health Risk Assessment. See Impact 3.4-3a for a description of this mitigation measure.

Mitigation Measure 3.4-8: Valley Fever. See Impact 3.4-3b for a description of this mitigation measure.

iv) Biological Resources

Impact 3.5-2: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would have a substantial adverse indirect impact (i.e., through habitat modifications) on one or more species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS).

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Although direct impacts on special-status species would be mitigated, significant indirect impacts on special-status species would occur due to the loss of common, non-sensitive habitat. Special-status species are dependent on both sensitive and common habitats and with the development facilitated by 2045 CAP measures and actions, habitat and resources to support special-status species could be reduced. The Board, therefore, finds that even with implementation of the identified mitigation measures, the Project would have a substantial adverse indirect impact on one or more species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS. Therefore, the Board finds Impact 3.5-2 to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.5-1 (Recirculated Draft PEIR, p. 3.5-19)

The County shall require biological resources to be analyzed on a project-specific level by a qualified biological consultant. Prior to or during the preparation of project-level environmental documents, and prior to the start of construction activities, a biological resources assessment shall be conducted to characterize the project site. Suitable buffer areas surrounding the project site shall be included where native habitat is contiguous with off-site habitat areas. The assessment and analysis shall emphasize identifying endangered, threatened, rare, and other special-status species; regionally and locally unique species; and sensitive natural communities, jurisdictional waters, and oak woodlands. Focused surveys shall be conducted as necessary to determine the presence of special-status species (e.g., focused sensitive plant or wildlife surveys). Focused surveys shall be conducted according to established CDFW or USFWS protocols, if available for the object species. Natural communities shall be mapped and identified according to floristic alliance- and/or association-based mapping protocols consistent with CDFW natural communities. A jurisdictional delineation may be required if there are signs of potentially regulated wetlands and non-wetland waters. A biological resources assessment report shall be prepared to characterize the biological resources on-site, analyze direct and indirect impacts on biological resources, and propose mitigation measures to offset those impacts. The report shall include site location, literature sources, methodology, timing of surveys, vegetation map, site photographs, and descriptions of biological resources on-site (e.g., observed and detected species as well as those species with potential to occur on-site).

Mitigation Measure 3.5-2 (Recirculated Draft PEIR, p. 3.5-19et seq.)

If there is potential for direct impacts to special-status species with implementation of construction activities, the project-specific biological resources assessment report (as described in Mitigation Measure 3.5-1) shall include a mitigation measure requiring pre-construction surveys for special-status species and/or construction monitoring to ensure avoidance, relocation, or safe escape of special-status species from the construction activities, as appropriate. The mitigation measures shall also include consultation with and obtaining permits from USFWS or CDFW prior to construction, if required by FESA or CESA for listed endangered and threatened species. If special-status species are found to be nesting, brooding, denning, etc. on-site during the pre-construction survey or monitoring, construction activity shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate offsite habitat areas. Relocation of such species into areas of appropriate restored habitat would have the best chance of replacing/incrementing populations that are lost due to habitat converted to development. Relocation to restored habitat areas shall be the preferred goal of this measure. A qualified biologist shall be on site to conduct surveys, to perform or oversee implementation of protective measures, and to determine when construction activity may resume.

Impact 3.5-3: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would have a substantial adverse impact on sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations or by CDFW or USFWS.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Although direct impacts on sensitive natural communities would be mitigated, no mitigation is provided for indirect impacts on sensitive natural communities through the loss of common, non-sensitive habitat. Sensitive natural communities are dependent on both sensitive and common habitats, and with the potential increase in development to implement the 2045 CAP, measures and actions could reduce common habitat and resources to support sensitive natural communities. The Board, therefore, finds that even with implementation of the identified mitigation measures, the Project would have a substantial adverse impact on sensitive natural communities identified in local or regional plans, policies, regulations or by CDFW or USFWS. Therefore, the Board finds Impact 3.5-3 to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.5-1. See Impact 3.5-2 for a description of this mitigation measure.

Mitigation Measure 3.5-5 (Recirculated Draft PEIR, p. 3.5-26)

Proponents of projects resulting in the loss of oak woodlands shall mitigate with in-kind replacement habitat at a minimum of 1:1 mitigation ratio documented through a County–approved habitat mitigation plan. The plan shall include the number of replacement trees (or acreage and average density of woodland), location of replacement woodland, understory habitat components, sequencing for any phased tree removal, and performance standards for mitigation. The plan shall include monitoring for a minimum of five years, with annual reports submitted to the County.

For oak woodlands impacts, project mitigation shall be consistent with recommendations in the County's Oak Woodland Conservation Management Plan and its 2014 Guide. If a project cannot be redesigned to avoid impacts to oak woodlands, an appropriate mitigation strategy would be developed by selecting from the Guide's list of recommended mitigation measures prioritizing the acquisition of oak woodland habitat comparable to the habitat that was affected over the restoration of degraded off-site and in-lieu fees. A Mitigation Monitoring Plan consistent with the Guide's recommendations would be prepared and implemented.

Impact 3.5-5: The Project, as a result of projects facilitated by the 2045 CAP measures and actions, would interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Projects facilitated by 2045 CAP measures and actions could adversely affect wildlife corridors, habitat linkages, and native wildlife nursery sites when expanding bicycle and pedestrian networks within recreational areas, procuring zero-carbon electricity, electrifying all new development, increasing renewable energy production on new development, and expanding energy resilience. These measures may facilitate new development such as large utility-scale energy projects (e.g., solar, battery storage, substation, transmission infrastructure) in the Antelope Valley or other rural areas and would affect wildlife corridors, habitat linkages, and native wildlife nursery sites if they narrow existing corridors or remove them completely. Impacts associated with narrowing or removing existing wildlife corridors, habitat

linkages, and/or native wildlife nursery sites would remain. The Board, therefore, finds that even with implementation of the identified mitigation measures, the Project would interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Therefore, the Board finds Impact 3.5-5 to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.5-1. See Impact 3.5-2 for a description of this mitigation measure.

Mitigation Measure 3.5-4 (Recirculated Draft PEIR, p. 3.5-25)

Proponents for individual projects facilitated by the 2045 CAP provisions shall analyze impacts on wildlife movement and corridors that may introduce new or additional barriers to wildlife dispersal or constrain existing wildlife corridors to future movement, or indirect impacts constraining future wildlife movement. Where projects may interfere with wildlife movement, alternative designs shall be included in the analysis to reduce wildlife movement impacts. Corridors, linkages, and pinch points shall not be entirely closed by any development, and partial mitigation shall be mandatory for project-specific impacts on wildlife corridors and wildlife nursery sites. This shall include provision of a minimum of half the corridor width. (The width shall be at least what is needed to remain connective for the top predators using the corridor.) Mitigation can include preservation by deed in perpetuity of other parts of the wildlife corridor connecting through the development area; it can include native landscaping to provide cover on the corridor. For nursery site impacts, mitigation shall include preservation by deed in perpetuity for another comparable nursery site of the same species.

Impact 3.5-7: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would result in a cumulatively considerable contribution to a significant cumulative impact through habitat modifications on one or more species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: For indirect impacts resulting in part from the loss of common habitats and diminished resource availability, the implementation of Mitigation Measures 3.5-1 and 3.5-2 would not be sufficient to reduce the level of the Project-specific impact (as a result of projects facilitated by the 2045 CAP) to a less-than-significant level. The Board, therefore, finds that even with implementation of the identified mitigation measures, the Project would result in a cumulatively considerable contribution to a significant cumulative impact through habitat modifications on one or more species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS. Therefore, the Board finds Impact 3.5-7 to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.5-1. See Impact 3.5-2 for a description of this mitigation measure.

Mitigation Measure 3.5-2. See Impact 3.5-2 for a description of this mitigation measure.

Impact 3.5-8: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would result in a cumulatively considerable contribution to a significant cumulative impact on sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations or by CDFW or USFWS.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: The 2045 CAP would contribute a significant and unavoidable incremental contribution to this significant cumulative impact. No further mitigation is available to reduce the significance of this incremental contribution because riparian habitat and sensitive natural communities are limited in distribution; therefore, the ability to replace or mitigate the loss of these areas are equally limited in opportunity and new habitats, especially riparian, cannot readily be created. Accordingly, the Project-specific, incremental contribution, combined with the cumulative projects' impacts on sensitive natural communities over the span of the 2045 CAP, would remain. The Board, therefore, finds that even with implementation of the identified mitigation measures, the Project would result in a cumulatively considerable contribution to a significant cumulative impact on sensitive natural communities identified in local or regional plans, policies, regulations or by CDFW or USFWS. Therefore, the Board finds Impact 3.5-8 to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.5-1. See Impact 3.5-2 for a description of this mitigation measure.

Mitigation Measure 3.5-5. See Impact 3.5-3 for a description of this mitigation measure.

Impact 3.5-10: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would contribute to a significant cumulative impact relating to substantial interference with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Projects facilitated by the 2045 CAP would contribute a significant unavoidable incremental contribution to this significant cumulative impact. Even with the implementation of Mitigation Measures 3.5-1 and 3.5-4, the Project-specific, incremental contribution, combined with the cumulative projects' impacts on special-status species over the span of the 2045 CAP, would be cumulatively considerable. Additional mitigation opportunities for wildlife movement are limited or unavailable. A significant cumulative impact from interference with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites would result. The Board, therefore, finds that even with implementation of the identified mitigation measures, Impact 3.5-10 would be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.5-1. See Impact 3.5-2 for a description of this mitigation measure.

Mitigation Measure 3.5-4. See Impact 3.5-5 for a description of this mitigation measure.

Impact 3.5-11: The Project, as a result of projects facilitated by 2045 CAP measures and actions, would contribute to the cumulative conversion of oak woodlands or other unique native woodlands.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Projects facilitated by 2045 CAP measures and actions would result in a cumulatively considerable contribution to significant cumulative impacts when combined with the incremental impacts of other projects over the span of the 2045 CAP and with the impacts of other natural factors beyond the County's control that contribute to the conversion of oak woodlands and other unique woodlands (e.g., wildfires, climate change, introduced plant diseases, insect pests). The implementation of Mitigation Measures 3.5-1 and 3.5-5 would not reduce the significance of the Project's contribution to a less than cumulatively considerable level. The Board, therefore, finds that even with implementation of the identified mitigation measures, a significant cumulative impact related to a cumulative conversion of oak woodlands or other unique native woodlands would remain. Therefore, the Board finds Impact 3.5-11 to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.5-1. See Impact 3.5-2 for a description of this mitigation measure.

Mitigation Measure 3.5-5. See Impact 3.5-3 for a description of this mitigation measure.

v) Noise and Vibration

Impact 3.13-1: Projects facilitated by the 2045 CAP could generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Mitigation Measure 3.13-1 would reduce impacts associated with construction activities. However, because of the potential for construction activities to occur near sensitive uses, and because of the potential intensity of construction activities, it may not be feasible to reduce the impact to a less-than-significant level. Accordingly, the impact would remain significant and unavoidable. Mitigation Measure 3.13-2 would reduce impacts associated with stationary-source noise, but because exterior noise levels may still exceed the County's noise land use compatibility criteria despite exterior noise attenuation (e.g., noise controls, sound walls, and/or berms), the impact would remain significant and unavoidable. No additional feasible mitigation measures have been identified to further reduce Project-specific incremental contributions to significant noise impacts. Residential land uses comprise the majority of existing sensitive uses in Los Angeles County that would be affected by the increase in noise generated

by projects facilitated by the 2045 CAP. Construction of sound barriers would be inappropriate to reduce traffic noise impacts for residential land uses that face the roadway because such a measure would create aesthetic and access concerns. Furthermore, for individual development projects, the cost to mitigate off-site noise impacts on existing uses (for example, by implementing noise controls such as sound walls, berms, or the replacement of existing single-paned windows) often is out of proportion with the level of impact. The Board, therefore, finds that even with implementation of the identified mitigation measures, the Project could generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Therefore, the Board finds Impact 3.13-1 to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.13-1: Construction Noise (Recirculated Draft PEIR, p. 3.13-20)

Construction activities associated with new projects facilitated by the 2045 CAP that occur within 500 feet of noise-sensitive receptors (i.e., residences, parks, schools, historic sites, cemeteries, and recreation areas) shall be evaluated by the project applicant for noise impacts that would result in a 5 dBA increase over existing ambient noise levels at any sensitive receptor. Mitigation measures such as installing temporary sound barriers for construction activities that occur adjacent to occupied noise-sensitive structures; equipping construction equipment with more effective mufflers, sound-insulating hoods or enclosures, vibration dampers, and other Best Available Control Technology (BACT); and reducing non-essential idling of construction equipment to no more than five minutes shall be incorporated into construction activities to reduce construction-related noise.

Mitigation Measure 3.13-2: Stationary-Noise Source (Recirculated Draft PEIR, p. 3.13-20)

For any project that involves a noise-sensitive use within the 65 dBA CNEL contour (i.e., areas in or above 65 dBA CNEL) exposed to project stationary-source noise levels in excess of applicable standards in the Los Angeles County Noise Ordinance, the project applicant shall submit an acoustic analysis prior to project approval. The acoustic analysis shall identify site design features (e.g., setbacks, berms, parapets, equipment enclosures, equipment mufflers, sound walls, or other similar noise control device or noise barrier) and/or required building acoustical improvements (e.g., sound transmission class rated windows, doors, and attic baffling) to ensure compliance with the County's Noise Compatibility Criteria, the California Building Code, and the California Noise Insulation Standards (Title 24 of the California Code of Regulations).

Impact 3.13-2: Projects facilitated by the 2045 CAP could generate excessive groundborne vibration or groundborne noise levels.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: The implementation of Mitigation Measure 3.13-3 would reduce vibration impacts associated with construction activities. However, because of the potential for construction activities to occur near sensitive uses, and because of the potential intensity of construction activities, it may not be feasible to reduce the impact to a less-than-significant level.

The Board, therefore, finds that even with implementation of Mitigation Measure 3.13-3, the Project could generate excessive groundborne vibration. Therefore, the Board finds Impact 3.13-2 to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.13-3: Construction Vibration (Recirculated Draft PEIR, p. 3.13-23)

Individual projects that use vibration-intensive construction equipment, such as pile drivers, jackhammers, and vibratory rollers near vibration-sensitive receptors shall be evaluated by the applicant for potential vibration impacts. If construction-related vibration is determined to be perceptible at vibration-sensitive uses (i.e., exceed the County's standard of 0.01 inches per second (in/sec) vibration velocity [within the range of 1 to 100 Hz frequency]), additional requirements shall be implemented during construction, such as the use of less-vibration-intensive equipment or vibration-reduction construction techniques or strategies (e.g., drilled piles to eliminate the use of a vibration-intensive pile driver, increased setback distances).

Impact 3.13-3: Projects facilitated by the 2045 CAP could make a cumulatively considerable contribution to a significant cumulative impact related to the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: While the implementation of Mitigation Measure 3.13-1 and Mitigation Measure 3.13-2 would reduce the significance of the Project-specific incremental contribution, it may not be feasible to reduce the Project-specific contribution to the significant cumulative impact to a less than cumulatively considerable / less-than-significant level. Thus, post-mitigation cumulative noise impacts would remain significant and unavoidable. No additional feasible mitigation measures have been identified to further reduce Project-specific incremental contributions to significant cumulative noise impacts. For residential land uses, which comprise the majority of existing sensitive uses in Los Angeles County that would be affected by the increase in noise generated by projects facilitated by the 2045 CAP, the construction of sound barriers would be inappropriate to reduce traffic noise impacts because such barriers would create aesthetic and access concerns. For other individual development project types, the cost to mitigate off-site noise impacts on existing uses often is out of proportion with the level of impact. The Board, therefore, finds that even with implementation of the identified mitigation measures, the Project could make a cumulatively considerable contribution to a significant cumulative impact related to the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Therefore, the Board finds Impact 3.13-3 to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.13-1. Construction Noise. See Impact 3.13-1 for a description of this mitigation measure.

Mitigation Measure 3.13-2. Stationary-Noise Source. See Impact 3.13-1 for a description of this mitigation measure.

Impact 3.13-4: Projects facilitated by the 2045 CAP could make a cumulatively considerable contribution to a significant cumulative impact relating to the generation of excessive groundborne vibration or groundborne noise levels from construction activities.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Although the implementation of Mitigation Measure 3.13-3 and Mitigation Measure 3.13-4 would reduce the Project-specific incremental contribution to significant cumulative vibration impacts, it may not be feasible to reduce the cumulative impact to a less-than-significant level. The Board, therefore, finds that even with implementation of the identified mitigation measures, a cumulatively considerable contribution to a significant cumulative impact relating to the generation of excessive groundborne vibration or groundborne noise levels from construction activities would remain. Therefore, the Board finds Impact 3.13-4, as a result of projects facilitated by the Draft 2045 CAP, to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.13-3. Measure 3.13-3. See Impact 3.13-2 for a description of this mitigation measure.

Mitigation Measure 3.13-4: New Development Near Railroad Tracks (Recirculated Draft PEIR, p. 3.13-25)

New development that occurs within 200 feet of a railroad track (according to the FTA's vibration screening distances) shall be evaluated for potential vibration impacts. The project property owner/developers shall retain an acoustical engineer to conduct an acoustic analysis and identify, where appropriate, site design features and/or required building construction improvements to ensure that vibration impacts would remain below acceptable levels of 0.08 in/sec RMS for residential uses.

vi) Utilities and Service Systems

Impact 3.17-1: Projects facilitated by the 2045 CAP would require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Construction of some utility projects, in particular utility-scale energy projects, could result in significant impacts on environmental resources including air quality, biological resources, cultural resources, water quality, transportation, and noise. Mitigation measures outlined in the PEIR would reduce these impacts. (See Section 3.4, Air Quality; Section 3.5, Biological Resources; Section 3.6, Cultural Resources; Section 3.10, Hazards and

Hazardous Materials; Section 3.13, Noise; and Section 3.15, Transportation.) Nonetheless, as described in these sections of the EIR, construction of new water, wastewater, stormwater drainage, electric power, natural gas power, or telecommunications utilities would result in significant and unavoidable impacts. The Board, therefore, finds that even with implementation of the identified mitigation measures, the Project could cause significant environmental effects due to the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunication facilities. Therefore, the Board finds Impact 3.17-1 to be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.4-1. Construction Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-2. Operational Fugitive Dust Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-3. Architectural Coating VOC Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-4. Enhanced Energy Conservation. See Impact 3.4-2 for a description of this mitigation measure.

Mitigation Measure 3.5-1. See Impact 3.5-2 for a description of this mitigation measure.

Mitigation Measure 3.5-2. See Impact 3.5-2 for a description of this mitigation measure.

Mitigation Measure 3.5-3. See Impact 3.5-4 for a description of this mitigation measure.

Mitigation Measure 3.5-4. See Impact 3.5-9 for a description of this mitigation measure.

Mitigation Measure 3.5-5. See Impact 3.5-6 for a description of this mitigation measure.

Mitigation Measure 3.6-1: Historic Resources Assessment. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-2. Archaeological Resources Assessment. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-3. Construction Worker Cultural Resources Sensitivity Training. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-4. Archaeological Resources Discoveries. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-5. Treatment of Archaeological Resources. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-6. Curation and Disposition of Cultural Materials. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-7. Paleontological Resources Assessment and Monitoring. See Impact 3.6-3 for a description of this mitigation measure.

Mitigation Measure 3.6-8. Paleontological Resources Sensitivity Training. See Impact 3.6-3 for a description of this mitigation measure.

Mitigation Measure 3.6-9. Paleontological Discoveries. See Impact 3.6-3 for a description of this mitigation measure.

Mitigation Measure 3.6-10. Human Remains Discoveries. See Impact 3.6-4 for a description of this mitigation measure.

Mitigation Measure 3.13-1. Construction Noise. See Impact 3.13-1 for a description of this mitigation measure.

Mitigation Measure 3.13-2. Stationary-Noise Source. See Impact 3.13-1 for a description of this mitigation measure.

Mitigation Measure 3.13-3. Measure 3.13-3. See Impact 3.13-2 for a description of this mitigation measure.

Mitigation Measure 3.13-4. New Development Near Railroad Tracks. See Impact 3.13-4 for a description of this mitigation measure.

Mitigation Measure 3.15-1. Traffic Control Plan. See Impact 3.10.6 for a description of this mitigation measure.

Impact 3.17-3: Projects facilitated by the 2045 CAP would result in a determination by the wastewater treatment provider which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Measures and actions facilitated by the 2045 CAP would lead to increased use of recycled and gray water systems, requiring the development of new water recycling and direct potable reuse facilities. The development of these new facilities would allow for wastewater treatment providers to adequately serve their existing and projected commitments; however, this would lead to significant and unavoidable impacts. Mitigation measures outlined in the PEIR that would reduce these impacts have been developed. (See Section 3.4, Air Quality; Section 3.5, Biological Resources; Section 3.6, Cultural Resources; Section 3.10, Hazards and Hazardous Materials; Section 3.13, Noise; and Section 3.15, Transportation.) Nonetheless, as described in these sections of the EIR, construction of new water recycling and direct potable reuse facilities would result in a determination by the wastewater treatment provider that serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. The Board, therefore, finds that even with implementation of the identified mitigation measures, Impact 3.17-3 would be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.4-1. Construction Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-2. Operational Fugitive Dust Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-3. Architectural Coating VOC Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-4. Enhanced Energy Conservation. See Impact 3.4-2 for a description of this mitigation measure.

Mitigation Measure 3.5-1. See Impact 3.5-2 for a description of this mitigation measure.

Mitigation Measure 3.5-2. See Impact 3.5-2 for a description of this mitigation measure.

Mitigation Measure 3.5-3. See Impact 3.5-4 for a description of this mitigation measure.

Mitigation Measure 3.5-4. See Impact 3.5-9 for a description of this mitigation measure.

Mitigation Measure 3.5-5. See Impact 3.5-6 for a description of this mitigation measure.

Mitigation Measure 3.6-1: Historic Resources Assessment. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-2. Archaeological Resources Assessment. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-3. Construction Worker Cultural Resources Sensitivity Training. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-4. Archaeological Resources Discoveries. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-5. Treatment of Archaeological Resources. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-6. Curation and Disposition of Cultural Materials. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-7. Paleontological Resources Assessment and Monitoring. See Impact 3.6-3 for a description of this mitigation measure.

Mitigation Measure 3.6-8. Paleontological Resources Sensitivity Training. See Impact 3.6-3 for a description of this mitigation measure.

Mitigation Measure 3.6-9. Paleontological Discoveries. See Impact 3.6-3 for a description of this mitigation measure.

Mitigation Measure 3.6-10. Human Remains Discoveries. See Impact 3.6-4 for a description of this mitigation measure.

Mitigation Measure 3.10-2. See Impact 3.10-2 for a description of this mitigation measure.

Mitigation Measure 3.13-1. Construction Noise. See Impact 3.13-1 for a description of this mitigation measure.

Mitigation Measure 3.13-2. Stationary-Noise Source. See Impact 3.13-1 for a description of this mitigation measure.

Mitigation Measure 3.13-3. Measure 3.13-3. See Impact 3.13-2 for a description of this mitigation measure.

Mitigation Measure 3.13-4. New Development Near Railroad Tracks. See Impact 3.13-4 for a description of this mitigation measure.

Mitigation Measure 3.15-1. Traffic Control Plan. See Impact 3.10.6 for a description of this mitigation measure.

Impact 3.17-5: Projects facilitated by the 2045 CAP would result in a cumulatively considerable contribution to a significant cumulative impact relating to the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Construction of new water, wastewater, stormwater drainage, electric power, natural gas power, or telecommunications utilities would result in significant and unavoidable impacts and the incremental impacts contributed by projects facilitated by the 2045 CAP would be cumulatively considerable. In an attempt to reduce these impacts, the Project would necessitate the implementation of Mitigation Measure 3.4-1 through Mitigation Measure 3.4-4 from *Air Quality*, Mitigation Measure 3.5-1 through Mitigation Measure 3.5-5 from *Biological Resources,* Mitigation Measure 3.6-1 through Mitigation Measure 3.6-10 from *Cultural Resources*, Mitigation Measure 3.10-2 from *Hazards and Hazardous Materials*, Mitigation Measure 3.13-1 through Mitigation Measure 3.13-4 from *Noise*, and Mitigation Measure 3.15-1 from *Transportation*. Although these mitigation measures would reduce the incremental impacts of the Project, the Project's contribution to cumulative impacts in many instances would remain cumulatively considerable. The Board, therefore, finds that even with implementation of the identified mitigation measures, Impact 3.17-5 would be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.4-1. Construction Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-2. Operational Fugitive Dust Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-3. Architectural Coating VOC Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-4. Enhanced Energy Conservation. See Impact 3.4-2 for a description of this mitigation measure.

Mitigation Measure 3.5-1. See Impact 3.5-2 for a description of this mitigation measure.

Mitigation Measure 3.5-2. See Impact 3.5-2 for a description of this mitigation measure.

Mitigation Measure 3.5-3. See Impact 3.5-4 for a description of this mitigation measure.

Mitigation Measure 3.5-4. See Impact 3.5-9 for a description of this mitigation measure.

Mitigation Measure 3.5-5. See Impact 3.5-6 for a description of this mitigation measure.

Mitigation Measure 3.6-1: Historic Resources Assessment. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-2. Archaeological Resources Assessment. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-3. Construction Worker Cultural Resources Sensitivity Training. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-4. Archaeological Resources Discoveries. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-5. Treatment of Archaeological Resources. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-6. Curation and Disposition of Cultural Materials. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-7. Paleontological Resources Assessment and Monitoring. See Impact 3.6-3 for a description of this mitigation measure.

Mitigation Measure 3.6-8. Paleontological Resources Sensitivity Training. See Impact 3.6-3 for a description of this mitigation measure.

Mitigation Measure 3.6-9. Paleontological Discoveries. See Impact 3.6-3 for a description of this mitigation measure.

Mitigation Measure 3.6-10. Human Remains Discoveries. See Impact 3.6-4 for a description of this mitigation measure.

Mitigation Measure 3.10-2. See Impact 3.10-2 for a description of this mitigation measure.

Mitigation Measure 3.13-1. Construction Noise. See Impact 3.13-1 for a description of this mitigation measure.

Mitigation Measure 3.13-2. Stationary-Noise Source. See Impact 3.13-1 for a description of this mitigation measure.

Mitigation Measure 3.13-3. Measure 3.13-3. See Impact 3.13-2 for a description of this mitigation measure.

Mitigation Measure 3.13-4. New Development Near Railroad Tracks. See Impact 3.13-4 for a description of this mitigation measure.

Mitigation Measure 3.15-1. Traffic Control Plan. See Impact 3.10.6 for a description of this mitigation measure.

Impact 3.17-7: Projects facilitated by the 2045 CAP would cause or contribute a cumulatively considerable contribution to a significant cumulative impact relating to inadequate wastewater treatment capacity.

Finding 3: There are no feasible and reasonable mitigation measures which would reduce this impact to a less-than-significant level. The Board hereby makes Finding 3 and determines that this impact would be significant and unavoidable.

Facts in Support of Finding: Construction of new water recycling and direct potable reuse facilities would result in significant and unavoidable impacts and the incremental impacts contributed by projects facilitated by the 2045 CAP would be cumulatively considerable. To reduce these impacts, implementation of the following mitigation measures is recommended at the Program level: Mitigation Measure 3.4-1 through Mitigation Measure 3.4-4 from *Air Quality*, Mitigation Measure 3.5-1 through Mitigation Measure 3.5-5 from *Biological Resources,* Mitigation Measure 3.6-1 through Mitigation Measure 3.6-10 from *Cultural Resources*, Mitigation Measure 3.10-2 from *Hazards and Hazardous Materials*, Mitigation Measure 3.13-1 through Mitigation Measure 3.13-4 from *Noise*, and Mitigation Measure 3.15-1 from *Transportation*. Although these mitigation measures would reduce the incremental impacts of the Project, the Project's contribution to cumulative impacts in many instances would remain cumulatively considerable. The Board, therefore, finds that even with implementation of the identified mitigation measures, Impact 3.17-7 would be significant and unavoidable. No additional feasible mitigation is available.

Mitigation Measures:

Mitigation Measure 3.4-1. Construction Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-2. Operational Fugitive Dust Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-3. Architectural Coating VOC Emissions. See Impact 3.4-1 for a description of this mitigation measure.

Mitigation Measure 3.4-4. Enhanced Energy Conservation. See Impact 3.4-2 for a description of this mitigation measure.

Mitigation Measure 3.5-1. See Impact 3.5-2 for a description of this mitigation measure.

Mitigation Measure 3.5-2. See Impact 3.5-2 for a description of this mitigation measure.

Mitigation Measure 3.5-3. See Impact 3.5-4 for a description of this mitigation measure.

Mitigation Measure 3.5-4. See Impact 3.5-9 for a description of this mitigation measure.

Mitigation Measure 3.5-5. See Impact 3.5-6 for a description of this mitigation measure.

Mitigation Measure 3.6-1: Historic Resources Assessment. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-2. Archaeological Resources Assessment. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-3. Construction Worker Cultural Resources Sensitivity Training. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-4. Archaeological Resources Discoveries. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-5. Treatment of Archaeological Resources. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-6. Curation and Disposition of Cultural Materials. See Impact 3.6-1 for a description of this mitigation measure.

Mitigation Measure 3.6-7. Paleontological Resources Assessment and Monitoring. See Impact 3.6-3 for a description of this mitigation measure.

Mitigation Measure 3.6-8. Paleontological Resources Sensitivity Training. See Impact 3.6-3 for a description of this mitigation measure.

Mitigation Measure 3.6-9. Paleontological Discoveries. See Impact 3.6-3 for a description of this mitigation measure.

Mitigation Measure 3.6-10. Human Remains Discoveries. See Impact 3.6-4 for a description of this mitigation measure.

Mitigation Measure 3.10-2. See Impact 3.10-2 for a description of this mitigation measure.

Mitigation Measure 3.13-1. Construction Noise. See Impact 3.13-1 for a description of this mitigation measure.

Mitigation Measure 3.13-2. Stationary-Noise Source. See Impact 3.13-1 for a description of this mitigation measure.

Mitigation Measure 3.13-3. Measure 3.13-3. See Impact 3.13-2 for a description of this mitigation measure.

Mitigation Measure 3.13-4. New Development Near Railroad Tracks. See Impact 3.13-4 for a description of this mitigation measure.

Mitigation Measure 3.15-1. Traffic Control Plan. See Impact 3.10.6 for a description of this mitigation measure.

VII. FINDINGS REGARDING ALTERNATIVES

An EIR must contain a discussion of “a range of reasonable alternatives to a project, or the location of a project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives.” (CEQA Guidelines, § 15126.6(a).) CEQA further states that "the range of alternatives in an EIR is governed by the 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice." (CEQA Guidelines, § 15126.6(f).) Thus, the following discussion focuses on project alternatives that are capable of eliminating significant environmental impacts or substantially reducing them as compared to the Project, even if the alternative would impede the attainment of some project objectives or would be more costly. Among the factors that may be taken into account when

addressing the feasibility of alternatives are: (1) site suitability; (2) economic viability; (3) availability of infrastructure; (4) general plan consistency; (5) other plans or regulatory limitations; (6) jurisdictional boundaries; and (7) whether the proponent can reasonably acquire, control or otherwise have access to the alternative site. (CEQA Guidelines, § 15126.6(f)(1).)

The objectives of the Project listed in the Recirculated Draft PEIR (Project Objectives) include: (1) Identify detailed programs, actions, and performance goals to achieve the climate action policies of the General Plan. (2) Identify GHG emissions reduction targets tailored to the unincorporated County that closely align with state and County climate goals. (3) Provide a road map for reducing GHG emissions to achieve the County's GHG emissions reduction targets. (4) Encourage sustainable housing production at all levels of affordability, including increasing housing densities near transit to the extent allowed in the General Plan. (5) Demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide CEQA streamlining for development projects (serve as a "qualified CAP") via a Draft 2045 CAP CEQA Streamlining Checklist.

As required by CEQA, in developing the alternatives to be addressed in this section, consideration was given to an alternative's ability to meet most of the basic objectives of the project. (CEQA Guidelines, § 15126.6(a).) Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce any significant environmental effects. (CEQA Guidelines, § 15126.6(c).) The concept of "feasibility" encompasses the question of whether a particular alternative or mitigation measure promotes the underlying goals and objectives of a project. (*City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 410, 417 (*City of Del Mar*); *Sierra Club v. County of Napa* (2004) 121 Cal.App.4th 1490, 1506-1509 [court upholds CEQA findings rejecting alternatives in reliance on applicant's project objectives]; see also *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 1001 (*CNPS*) ["an alternative 'may be found infeasible on the ground it is inconsistent with the project objectives as long as the finding is supported by substantial evidence in the record'"] (quoting Kostka & Zischke, *Practice Under the Cal. Environmental Quality Act* [Cont.Ed.Bar 2d ed. 2009] (*Kostka*), § 17.39, p. 825); *In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1165, 1166 ["[i]n the CALFED program, feasibility is strongly linked to achievement of each of the primary project objectives"; "a lead agency may structure its EIR alternative analysis around a reasonable definition of underlying purpose and need not study alternatives that cannot achieve that basic goal"].) Moreover, "'feasibility' under CEQA encompasses 'desirability' to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, legal, and technological factors." (*City of Del Mar, supra,* 133 Cal.App.3d at p. 417; see also *CNPS, supra,* 177 Cal.App.4th at p. 1001 ["an alternative that 'is impractical or undesirable from a policy standpoint' may be rejected as infeasible"] [quoting *Kostka, supra,* § 17.29, p. 824]; *San Diego Citizenry Group v. County of San Diego* (2013) 219 Cal.App.4th 1, 17.) Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, also do not need to be considered. (CEQA Guidelines, § 15126(f)(2).)

a. Findings Regarding Alternatives Considered But Rejected

During public review of the Recirculated Draft PEIR, some commenters suggested that the PEIR analyze an alternative to the Project for the development of small-scale renewable resource generation. (See Recirculated Draft PEIR Comment O2-8.) The Board rejects a Project alternative for the development of small-scale renewable resource generation on the basis that such an alternative is infeasible, the suggestion pertains to a component of the Project rather than the Project as a whole, and such an alternative would not substantially reduce the Project's significant environmental impacts for the reasons

set forth in General Response 1 and Response to Comment O2-8. Other comments suggested a Project alternative for battery storage resources to be distributed throughout urban load pockets to supply local energy needs and for expanding and streamlining battery storage. (See Recirculated Draft PEIR Comments O2-8, O2-11, O2-24, O2-25, O2-26, and O2-28.) The Board rejects as infeasible a Project alternative for distributed battery storage resources throughout urban load pockets and for expanding and streamlining battery storage on the basis that such an alternative is infeasible, the suggestion pertains to a component of the Project rather than the Project as a whole, and this suggested alternative would not substantially reduce the Project's significant environmental impacts for the reasons set forth in General Response 1 and Response to Comments O2-8, O2-11, O2-24, O2-25, O2-26, and O2-28. One comment suggested an alternative to replace roadways with cool or green surfaces. (See Recirculated Draft PEIR Comment O2-42.) The Board rejects as infeasible a Project alternative for replacing roadways with cool or green surfaces on the basis that such an alternative is infeasible, the suggestion pertains to a component of the Project rather than the Project as a whole, and such an alternative would not substantially reduce the Project's significant environmental impacts for the reasons set forth in General Response 1 and Response to Comment O2-42. One comment suggested the PEIR analyze an alternative to the Project for distributed energy resources. (See Recirculated Draft PEIR Comment O7-50.) The Board rejects as infeasible a Project alternative for distributed energy resources on the basis that such an alternative is infeasible, the suggestion pertains to a component of the Project rather than the Project as a whole, and the suggested alternative would not substantially reduce the Project's significant environmental impacts for the reasons set forth in General Response 1 and Response to Comment O7-50.

The alternatives listed below were originally considered but eliminated from further consideration in the PEIR because they failed to feasibly attain most of the basic objectives of the Project, were infeasible, or failed to avoid or substantially reduce any significant environmental effects. They are as follows:

- Carbon Neutrality Target by 2045 Alternative
    - What would be required to achieve a target of carbon neutrality by 2045 would be beyond what the County alone could implement, and it would be speculative to assume that technological advancements to achieve carbon neutrality would become available within the next 25 years. Accordingly, a Carbon Neutrality Target by 2045 Alternative was not carried forward for more detailed evaluation because it is speculative and potentially infeasible: There is no present basis to assume that it could be accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.
- More Aggressive Timeline to Carbon Neutrality Alternative
    - As discussed above as to why the Carbon Neutrality Target by 2045 Alternative was not carried forward, as there is no present basis to assume that it could be accomplished in a successful manner within a reasonable period of time. An even more aggressive timeline to achieving carbon neutrality than 2045 also was not carried forward for more detailed review because it would be even more speculative to assume that the technological advancements needed to achieve carbon neutrality, in addition to those identified above, would become available in time.
- Minimize Loss of Carbon Sequestration Caused by Development Alternative
    - This potential alternative was not carried forward because it would not meet most of the basic Project Objectives. More specifically, a Minimize Loss of Carbon Sequestration Caused by Development Alternative would not implement the climate action policies of the General Plan (Objective 1); would not encourage sustainable housing production (Objective 4); and would not demonstrate a level of GHG emissions below which the

County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide CEQA streamlining for development projects ("qualified CAP") (Objective 5). The Minimize Loss of Carbon Sequestration Caused by Development Alternative has also been rejected from more detailed consideration because it is legally infeasible: it would not permit the County to fully meet its Regional Housing Needs Allocation (as mandated by state housing law) within the unincorporated areas.

- Substantially Reduced Vehicle Miles Traveled Alternative
    - The Substantially Reduced Vehicle Miles Traveled Alternative was not carried forward for more detailed review because its implementation would be remote or speculative. Total VMT in California and in the County is the product of myriad individual decisions made daily by households and businesses. Achieving a substantial reduction in VMT would require a major shift in decision-making by households and businesses alike, beyond the ability of the County to implement. Significantly improved transit and alternative transportation infrastructure, widespread and inexpensive access to single-occupancy vehicle alternatives, and substantial financial incentives to use these transportation alternatives or (alternatively) providing considerable disincentives to drive could all be part of the solution. However, there is no basis to assume that this alternative could be accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. The time and expense required to implement this alternative, such as substantially upgrading transportation infrastructure, would compete with the County's pursuit of other community priorities, such as health, bridging the digital divide, child welfare, affordable housing, justice reform, and support for immigrant residents and their families.
- Aquatic Impact Avoidance Alternative
    - The Aquatic Impact Avoidance Alternative has not been carried forward for more detailed review because it would not meet most of the basic Project Objectives. Such an alternative would not implement the climate action policies of the General Plan (Objective 1); would not identify appropriate GHG emissions reduction targets that closely align with state and local climate goals (Objective 2); would not provide a road map to achieve GHG reductions to meet the GHG emissions reduction targets (Objective 3); and would not encourage sustainable housing production at all levels of affordability, including increasing housing densities near transit to the extent allowed in the General Plan (Objective 4).
    - This alternative also was not carried forward for more detailed review because its implementation is remote or speculative. Opportunities to successfully address those challenges have not been developed; therefore, the impacts of implementing the alternative cannot be reasonably ascertained.
    - Further, this alternative would not avoid or substantially lessen a significant impact of the Project. As analyzed in the context of Impact 3.11-3 in Section 3.11, Hydrology and Water Quality, approval of the 2045 CAP would not substantially alter the existing drainage pattern of the site or area, alter the course of a stream or river, or add impervious surfaces in a manner that would result in a significant impact. As analyzed in the context of criterion c) in Section 3.5, Biological Resources, approval of the 2045 CAP could incentivize future projects—such as those supporting the electrification of new development—that could cause a significant adverse impact on state or federally protected wetlands (e.g., marshes, vernal pools, or coastal wetlands) through direct removal, filling, hydrological interruption, or other means.
- Complete Phase-Out of Oil and Gas Operations by 2030 Alternative

- The Complete Phase-Out of Oil and Gas Operations by 2030 Alternative was not carried forward for more detailed review for several reasons. First, this alternative would not clearly avoid or substantially lessen any of the potential significant impacts of the Project. It is possible that this alternative could worsen or increase the Project's potential short-term significant impacts, such as localized construction-related air quality and health risk impacts from decommissioning of oil and gas wells and remediation activities at contaminated sites, though there would be future benefits.
- Second, the implementation of this alternative would be remote or speculative, given that without the amortization study, it is not possible to know whether the alternative is feasible. Without more information from this detailed study, it is speculative to assume that implementing this alternative is possible. There is no basis to assume that this alternative could be accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.
- Third, this alternative addresses only one of the CAP's many measures, Measure ES 1 (Sunset Strategy for All Oil and Gas Operations). An EIR is required to consider alternatives to the project as whole, and is not required to consider alternatives to each project component.

- Limited-Scope CAP Alternative
  - This alternative would not implement the climate action policies of the General Plan (Objective 1) because, for example:
    - Its lower performance goal for Measure ES2 would conflict with Policy AQ 3.9 to "Ensure the availability of zero-carbon electricity to serve unincorporated Los Angeles County."
    - Its lower performance goal for Measure T6 would conflict with Policy AQ 2.7 to "Encourage and support the development and implementation of Zero-Emission technology and infrastructure."
    - Its lower performance goal for Measure E1 would conflict with Policy AQ 3.5 to "Require the full electrification of new development."
  - This alternative would not provide a feasible and realistic road map for reducing GHG emissions to achieve the GHG emissions reduction targets (Objective 3) because it would call for a CAP that does the bare minimum to achieve the County's targets, with no margin of safety. Such a CAP would provide no emissions "buffer" if certain measures and actions are not as effective in reducing GHG emissions in the future as they were modeled during the planning stage.
  - This alternative also would not demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and thus be a "qualified CAP" (Objective 5). This alternative would put the County in danger of missing its GHG emissions reduction targets, and thus would not be a reliable pathway to achieving a level of GHG emissions below which GHG emissions in the County would have less than cumulatively considerable GHG impacts.

Thus, the Recirculated Draft PEIR presents a reasonable range of feasible alternatives to the Project that would reduce and/or avoid some of the Project's significant environmental effects while achieving most of the Project Objectives. The following findings and brief explanation of the rationale for the findings

regarding Project alternatives identified in the PEIR are set forth to comply with the requirements of CEQA Guidelines section 15091(a)(3).

Four alternatives to the Project were defined and analyzed:

b. Findings Regarding Alternatives Analyzed in the PEIR

The Recirculated Draft PEIR analyzed three alternatives in addition to the No Project Alternative in Chapter 4, Alternatives, which sets forth the objectives of the Project, summarizes the Project's significant environmental impacts, discusses the alternatives considered but eliminated from further analysis, describes the alternatives evaluated in detail, and compares the impacts of the alternatives evaluated to the impacts of the Project. The Final EIR's Table 4-6, *Summary of Impacts of the Project and Alternatives*, summarizes the significant environmental impacts of the Project alternatives, and provides a fact-based comparison of the alternatives' impacts to the Project's impacts. The Project alternatives are summarized below along with the findings relevant to each alternative.

1. No Project Alternative.

Facts in Support of Finding: An EIR's discussion of alternatives to the proposed project must include a "no project alternative" to allow a comparison of the environmental impacts of approving the proposed project with the effects of not approving it. (CEQA Guidelines, § 15126.6(e)(1).) The No Project Alternative examines a scenario in which the County would not approve the 2045 CAP for implementation in the unincorporated areas and none of the GHG emissions reduction strategies, measures, or actions outlined in the 2045 CAP would be implemented. The No Project Alternative is captured in the 2045 CAP's Adjusted business-as-usual (BAU) forecast, which accounts for future growth under BAU conditions but adjusts for federal, state, and County legislation and regulations that were implemented before development of the 2045 CAP.

The No Project Alternative would not implement the Project's GHG emissions reduction strategies, measures, or actions, which would facilitate fewer projects compared with implementation of the 2045 CAP. Because the No Project Alternative would facilitate fewer projects, the No Project Alternative would result in fewer adverse physical environmental impacts on the project area and its surrounding environment in comparison to the impacts associated with implementation of the 2045 CAP strategies, measures, and actions. (See Table 4-6 in Chapter 4, *Alternatives*, which provides a comparative summary of environmental impacts.)

However, in the long-term, the No Project Alternative would result in fewer environmental benefits to the County overall because air pollutant and GHG emissions would be much higher than emissions levels associated with all other alternatives and the Project. The No Project Alternative would result in greater human health risks associated with exposure to toxic air contaminants than all other alternatives and the Project, because all other alternatives and the Project would substantially reduce toxic air contaminant (TAC) emissions in the County. The No Project Alternative would neither realize the long-term GHG emission reduction benefits associated with implementation of the 2045 CAP (and all the co-benefits that would also occur, such as reduced criteria pollutant and TAC emissions), nor provide a clear pathway for the County to meet and exceed the statewide 2030 GHG reduction goal identified in SB 32 or meet and exceed the 2045 direct emission reduction target and carbon neutrality goal established by AB 1279.

The No Project Alternative would not further many County goals and policies. Specifically, the No Project Alternative would not achieve or support the County Board of Supervisors' motions pertaining to supporting the Paris Agreement, equitable energy grid resiliency, zero-emissions medium- and heavy-duty vehicles, climate resilient communities, and equitable decarbonization of buildings.

Importantly, the No Project Alternative would not achieve any of the Project's basic objectives; specifically, the No Project Alternative would not implement the climate action policies of the General Plan (Objective 1); would not identify GHG emissions reduction targets tailored to the unincorporated County that closely align with state and County climate goals (Objective 2); would not provide a road map to achieve GHG reductions to meet the GHG emissions reduction targets (Objective 3); would not encourage sustainable housing production (Objective 4); and would not demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide CEQA streamlining for development projects ("qualified CAP") (Objective 5).

Finding: The EIR, including Chapter 4 of the Recirculated Draft PEIR, contains facts and analysis supporting the Finding, some of which are set forth here. Under the No Project Alternative, none of the GHG emissions reduction strategies, measures, or actions outlined in the 2045 CAP would be implemented in the unincorporated areas, resulting in fewer adverse environmental impacts than the Project because it would avoid all adverse impacts caused by projects facilitated by the 2045 CAP. (See Table 4-6 in Chapter 4, *Alternatives*, which provides a comparative summary of environmental impacts.) However, in the long-term, the No Project Alternative would result in less environmental benefits to the County overall, as air pollutant and GHG emissions would be higher than emissions levels associated with all other alternatives and the Project, resulting in greater human health risks. The No Project Alternative would neither realize the long-term GHG emission reduction benefits associated with implementation of the 2045 CAP nor provide a clear pathway for the County to meet and exceed the statewide 2030 GHG reduction goal identified in SB 32 or meet the 2045 carbon neutrality goal established by AB 1279. Lastly, the No Project Alternative would not achieve any of the Project's Objectives, which makes this alternative undesirable from a policy standpoint and therefore, the Board rejects the No Project Alternative as infeasible.

2. Alternative 1: Carbon Offset Alternative

Facts in Support of Finding:

Under Alternative 1, in addition to implementing the measures and actions called for by the 2045 CAP, the County would reduce GHG emissions by purchasing carbon offsets. Carbon offset projects could increase or protect carbon sequestration, invest in solar or wind projects, improve water or energy efficiency, capture methane at animal farms or landfills, replace high-global warming-potential gas use with a gas that has a lower global warming potential, or implement other measures. To achieve the greatest environmental co-benefits to the County, priority would be given, from highest to lowest, to offsets purchased from local projects (within Los Angeles County), regional projects (from within Southern California), projects within California, projects outside of California but within the Pacific Southwest (within Arizona, Hawaii, Utah, or Nevada), and projects elsewhere in the United States.

Implementation of Alternative 1 would generally result in the same environmental impacts as the Project but would result in greater environmental impacts associated with hazards and hazardous materials as well as utilities and service systems. Implementation of Alternative 1 would facilitate projects that include

wind projects with wind turbines that could result in a safety hazard for people residing or working in the project area due to collision risk, interference with radar or other air navigation tools, and other hazards related to air navigation. Additionally, implementation of this alternative would facilitate projects that would not encourage the reduction of solid waste like those facilitated by the Project, and instead would focus on the purchase of carbon offsets. As such, some of the adverse impacts caused by projects facilitated by Alternative 1, as compared to impacts under the 2045 CAP, would occur outside the County and so would not be subject to the same local thresholds that apply to the Project, such as thresholds established in the County General Plan or by the South Coast Air Quality Management District. Alternative 1 would result in fewer environmental benefits to the County overall because the reductions in air pollutant and GHG emissions could be realized elsewhere in Southern California, the State, or the Pacific Southwest, and because greater environmental impacts could result from wind projects facilitated by the purchase of carbon offsets.

Importantly, Alternative 1 would not provide a clear pathway for the County to meet and exceed the statewide 2030 GHG reduction goal identified in SB 32 or meet the 2045 direct emission reduction target established by AB 1279. This is because CARB's statewide targets are to reduce direct emissions occurring within state boundaries, and do not allow for carbon offsets occurring outside of the state to contribute to these targets (for example, AB 1279 states that it is "the policy of the state… to ensure that by 2045, statewide anthropogenic greenhouse gas emissions are reduced to at least 85% below the 1990 levels"). Only the state's 2045 net zero GHG emissions target appears to allow offsets. Similarly, Alternative 1 would not provide a clear pathway for the County to meet the County's local GHG reduction targets identified in the 2045 CAP. Specifically, the 2045 CAP's GHG reduction targets for 2030, 2035, and 2045 are to reduce direct, in-boundary county emissions to specific levels below 2015 emissions. Carbon offsets would likely not produce emission reductions within unincorporated county boundaries because there likely aren't enough offsets within the County to achieve these GHG targets. As such, Alternative 1 may not achieve Project Objective 2.

Alternative 1 would also likely not achieve Project Objective 5 to allow CEQA streamlining for future development projects because CEQA Guidelines section 15183.5(b)(1)(B) states that GHG reduction plans must "[e]stablish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions *from activities covered by the plan* would not be cumulatively considerable" (emphasis added). Because the 2045 CAP's GHG emission reduction targets apply to GHG emissions associated with activities occurring within unincorporated county boundaries, and the targets would be achieved by reducing GHG emissions "from activities covered by the plan," reducing emissions outside of county boundaries for activities not covered by the plan through the use of carbon offsets would not contribute toward meeting the represent 2045 CAP's GHG emission reduction targets. In addition, CEQA Guidelines section 15183.5(b)(1)(C) states that GHG reduction plans must "[i]dentify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions *anticipated within the geographic area*" (emphasis added) and CEQA Guidelines section 15183.5(b)(1)(D) states that GHG reduction plans must "[s]pecify measures… that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively *achieve the specified emissions level*" (emphasis added). Because carbon offsets would produce GHG emission reductions that occur outside the geographic area of the 2045 CAP (i.e., unincorporated county boundaries), and because the 2045 CAP's GHG emission reduction targets apply to GHG emissions associated with activities occurring within unincorporated county boundaries, carbon offsets would likely not achieve 2045 CAP's GHG emission reduction targets. As such, Alternative 1 is undesirable from a policy standpoint and would also likely conflict with several project objectives.

Alternative 1 is infeasible from a policy standpoint, given the uncertainties with its implementation. The volatile cap and trade market makes it difficult to anticipate the cost of regulatory carbon allowances. The County would have to purchase and retire carbon offsets from the voluntary market, which is not regulated. Prices in the voluntary carbon market vary widely depending on the type, size, and location of the project generating the offset, as well as the protocol or standard under which it was developed. A review of over-the-counter reputable offset retailers, conducted in April 2022, reveals current prices for voluntary offsets ranging from approximately $15 to $25 per metric ton of carbon dioxide equivalent ($MTCO_2e$). Based on these prices, the 2022 purchase of 1.25 million $MTCO_2e$ could range from $17 million to $36 million per year. Funding sources would have to be identified, but theoretically could be sourced from the County General Fund, existing or new development fees, or other sources. However, it is unlikely that other funding sources, such as those from CARB or the U.S. EPA, could be used to finance the purchase of out-of-county and out-of-state carbon offsets, since these funding programs are generally designed to reduce direct, in-boundary emissions within the influence or control of the agency or jurisdiction applying for the funds.

To implement Alternative 1, the County would have to purchase and retire carbon offsets from the unregulated voluntary carbon market on an annual basis to meet the County's annual GHG emission reduction targets, and the prices of voluntary GHG offset credits vary widely such that it is difficult to anticipate the cost of offset purchases. Implementation of Alternative 1 could be more expensive than implementation of the Project because costs would be greater if the cost per $MTCO_2e$ for voluntary offsets were greater than the cost per $MTCO_2e$ reduced by local CAP measures. Additionally, the County would have to purchase voluntary GHG offset credits perpetually each year to achieve the 2045 CAP's annual GHG emission reduction targets, while most of the 2045 CAP's measures and actions, once implemented, would result in GHG reductions every year in perpetuity. For example, decarbonizing a single building in 2025 would produce annual GHG emission reductions over the entire life of the building (30+ years), but if these reductions were instead achieved through offsets, the County would have to purchase an individual carbon offset credit for each year of that building's operation to achieve the same cumulative annual GHG reductions as that building's decarbonization. The uncertainty of the prices in the unregulated voluntary carbon market contributes to the uncertainty of implementation, making Alternative 1 undesirable from a policy standpoint.

Finding: The EIR, including Chapter 4 of the Recirculated Draft PEIR, contains facts and analysis supporting the Finding, some of which are set forth here. Alternative 1 would have similar but incrementally fewer adverse environmental impacts than the Project because some of the adverse impacts caused by projects facilitated by Alternative 1, as compared to impacts under the 2045 CAP, would occur outside the County and so would not be subject to the same local thresholds that apply to the Project, such as thresholds established in the County General Plan or by the South Coast Air Quality Management District. However, in the long-term, Alternative 1 would result in fewer environmental benefits to the County overall, because the reductions in air pollutant and GHG emissions could be realized elsewhere in Southern California, the State, or the Pacific Southwest and because greater environmental impacts associated with hazards and hazardous materials as well as utilities and service systems could result from wind projects facilitated by the purchase of carbon offsets; this makes Alternative 1 undesirable from a policy standpoint. Alternative 1 is also rejected because the uncertainty of the prices in the unregulated voluntary carbon market makes Alternative 1 undesirable from a policy standpoint, and makes the financial feasibility of Alternative 1 uncertain in the long-term (especially through 2045). Lastly, Alternative 1 is rejected by the Board as undesirable from a policy standpoint on the basis of inconsistency with County goals and policies to meet and exceed the statewide 2030 GHG

reduction goal identified in SB 32 or meet the 2045 carbon neutrality goal established by AB 1279 in the unincorporated areas of the County, Alternative 1 is further rejected as undesirable from a policy standpoint because Alternative 1 would result in greater impacts to hazards and hazardous materials and utilities and service systems than the Project. For the above stated reasons, the Board rejects Alternative 1 as infeasible.

3. Alternative 2: Zero Net Energy Buildings Alternative

Facts in Support of Finding: Zero net energy (ZNE) buildings produce enough renewable energy to meet their own annual energy consumption requirements, thereby reducing the use of nonrenewable energy in the building sector. These buildings achieve ZNE first though high levels of energy efficiency to minimize energy use, then through the addition of on-site renewable power generation and renewable energy storage systems (e.g., batteries). Under Alternative 2, the County would supplement its implementation of the Draft 2045 CAP measures and actions by requiring all new residential and commercial construction in the unincorporated areas to be ZNE by 2025, 50 percent of residential and commercial buildings in the unincorporated areas to be retrofitted to ZNE by 2030, 50 percent of new major renovations of County buildings to be ZNE by 2025, and the energy usage footprint of local government buildings to be 50 percent below 2015 levels by 2030. Further, Alternative 2 would reward projects in the unincorporated areas that voluntarily exceed state and local minimum energy codes by expedited permitting and favorable fee structures.

Energy efficiency measures include building design elements that reduce energy demand such as high-performance building envelopes, air barrier systems, daylighting, sun control and shading design, window selection and glazing, passive solar heating, natural ventilation, and water conservation. Energy use could be managed with efficient equipment and systems, such as energy-efficient lighting; electric lighting controls; high-performing heating, ventilation, and air conditioning; and energy-conversion devices. Once efficiency measures have been incorporated, the remaining energy needs of the building can be met with on-site renewable energy generation and storage. Common on-site electricity generation strategies include photovoltaic solar panels on rooftops or over surface parking, and solar water heating.

This alternative would worsen or increase the Project's significant and unavoidable air quality impacts related to operational criteria pollutant emissions and localized construction-related health risks from toxic air contaminants because the alternative would facilitate additional new construction of ZNE buildings that would cause short-term construction emissions that could exceed the SCAQMD's project-level thresholds and expose additional sensitive receptors to pollutant concentrations from localized emissions near those construction sites. Alternative 2 would also result in worse significant and unavoidable localized noise impacts than the Project. Construction of ZNE buildings facilitated by Alternative 2 would result in short-term construction noise and create new stationary noise sources that could exceed noise levels in excess of standards. Additionally, such construction of ZNE buildings would result in significant and unavoidable groundborne vibration impacts that exceed standards. As such, implementation of Alternative 2 would result in significant and unavoidable noise and vibration impacts (as well as result in cumulatively considerable noise and vibration impacts) at a greater level than the Project. Implementation of Alternative 2 would also result in greater transportation impacts compared with the Project, as construction of ZNE buildings would increase the amount of heavy-duty construction vehicles on roadways, which could substantially increase hazards due to incompatible uses with normal vehicles on roadways. Alternative 2 would create safety and mobility concerns for motorists, transit operators, bicyclists, and/or pedestrians during construction activities and result in a greater impact than the Project. This alternative would also contribute to a greater impact on utilities and service systems because

projects facilitated by Alternative 2 would not encourage the reduction of solid waste like those facilitated by the Project, and instead would focus on water and energy efficiencies.

Finding: The EIR, including Chapter 4 of the Recirculated Draft PEIR, contains facts and analysis supporting the Finding, some of which are set forth here. Alternative 2 would cause similar but incrementally greater adverse environmental impacts than the Project because the additional construction of new and retrofitted ZNE buildings would increase impacts for air quality, noise and vibration, transportation, and utilities and service systems. Alternative 2 is rejected by the Board as undesirable from a policy standpoint and infeasible on the basis of environmental considerations described above, as Alternative 2 would result in greater adverse environmental impacts than the Project on air quality, noise and vibration, transportation, and utilities and service systems. For the above stated reasons, the Board rejected Alternative 2 as infeasible.

4. Alternative 3: Lower Targets Alternative

Facts in Support of Finding: Under Alternative 3, the GHG emissions reduction targets of the 2045 CAP would be lower than those contained in the 2045 CAP. These targets would represent the minimum targets needed to "align" with California's codified statewide targets for 2030 and 2045. Specifically, the targets under Alternative 3 would be:

- By 2030, reduce emissions to 31 percent below 2015 levels (equivalent to a 40 percent reduction below 1990 levels).
- By 2035, maintain the same level of GHG reductions achieved in 2030.
- By 2045, reduce emissions to 83 percent below 2015 levels (equivalent to an 85 percent reduction below 1990 levels).

Because Alternative 3 has lower GHG emissions reduction targets for years 2030 and 2035 compared to the Project, implementation of Alternative 3 would facilitate fewer projects through 2030 and 2035 to achieve the lower targets. Additionally, performance objectives for the measures and actions would be reduced compared to the Project. This is because the County would implement fewer 2045 CAP strategies, measures, and actions to reduce GHG emissions to achieve the less aggressive reduction targets. For example, Measure T6, Increase ZEV Market Share, has a 2030 performance goal of a 30 percent ZEV fleetwide percentage for light-duty vehicles in the County; under Alternative 3, this performance objective would likely be reduced to a 10 percent ZEV market share (or lower). Because Alternative 3 would facilitate fewer new projects through 2030 and 2035, it would result in less construction of new projects having physical environmental impacts compared with that anticipated under the Project. Thus, implementation of Alternative 3 would result in less adverse physical environmental impacts on the project area and its surrounding environment compared to the impacts associated with implementation of the 2045 CAP strategies, measures, and actions needed to meet the Project's higher GHG emissions reduction targets.

While Alternative 3's reduced performance objectives would facilitate fewer projects in the short-term for years 2030 through 2035 compared to the Project, it would likely facilitate the same number of projects through 2045, resulting in the same environmental impacts through 2045 compared to the Project. However, implementation of Alternative 3 would more likely facilitate a greater number of projects in the 2035 to 2045 period than the Project. Consequently, Alternative 3 would delay the realization of its environmental impacts but would not lessen or eliminate these adverse environmental impacts entirely and would likely worsen environmental impacts during the 2035 to 2045 timeframe compared to the Project.

Regarding specific environmental impacts, Alternative 3 would result in similar but lesser impacts than the Project on the following resource areas: aesthetics, agriculture and forestry resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, transportation, and wildfire. However, Alternative 3 would result in greater impacts than the Project for energy, GHG emissions, and air quality. Alternative 3 would also likely result in greater impacts for utilities and service systems.

Alternative 3 would result in greater energy impacts than the Project because Alternative 3 would facilitate fewer projects that would reduce Countywide energy use compared to the Project, resulting in greater energy consumption than the Project. Because Alternative 3 would facilitate fewer projects that would increase renewable energy use compared to the Project, implementation of Alternative 3 would result in much less renewable energy use and much greater non-renewable and fossil energy use as compared to the Project.

Alternative 3 would result in greater GHG emissions impacts because Alternative 3 would not reduce Countywide GHG emissions as much as the Project through 2030 and 2035, producing much greater GHG emissions than the Project. This much higher level of GHG emissions associated with Alternative 3 would likely cause the alternative to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, including the CARB 2022 Scoping Plan, SB 32, AB 1279, the Southern California Association of Governments 2020–2045 RTP/SCS, the OurCounty Sustainability Plan, the CALGreen Code, and the Los Angeles County Green Building Ordinance.

Implementation of Alternative 3 would result in greater air quality impacts than the Project for operational impacts because Alternative 3 would facilitate fewer projects through 2030 and 2035, resulting in much greater emissions of criteria pollutants and TACs throughout the county for these years as compared to the Project, which would result in greater human health risks than the Project. This greater level of criteria pollutant and TAC emissions associated with implementation of Alternative 3 could result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the ambient air quality standards or emissions reductions in the SCAQMD 2016 AQMP or the AVAQMD 2017 Ozone Attainment Plan. Alternative 3 would result in a greater impact associated with exposure of sensitive receptors to operational TAC emissions because Alternative 3 would result in much greater operational TAC emissions than the Project.

Finally, Alternative 3 could result in greater utilities and service systems impacts because projects facilitated by Alternative 3 would lead to increased use of recycled and gray water systems compared to the Project, increasing the amount of wastewater requiring treatment by wastewater treatment providers, requiring the development of new water recycling and direct potable reuse facilities. Alternative 3 would also not encourage the reduction of solid waste to the same extent as those facilitated by the Project, resulting in greater solid waste generation and greater need for solid waste processing and disposal.

Importantly, Alternative 3 would not meet Project Objectives 1, 2, and 5. Alternative 3 would not meet Project Objective 1 (identify detailed programs, actions, and performance goals to achieve the climate policies of the General Plan) because implementation would result in an inconsistency with the County's General Plan Policy AQ 3.9 ("Ensure the availability of zero-carbon electricity to serve unincorporated Los Angeles County."). As stated above, Alternative 3 has lower GHG emissions reduction targets for years 2030 and 2035 compared to the Project such that Alternative 3's performance objectives for CAP strategies, measures, and actions would be lower than the Project's performance objectives. For example, Alternative 3 would reduce the performance objectives for 2045 CAP Measure ES2, *Procure*

Zero Carbon Electricity, which is to supply the County's power demand with zero-carbon electricity and is critical to achieving significant GHG emissions reductions. If the performance goals of Measure ES2 were reduced, then Alternative 3 would conflict General Plan Policy AQ 3.9 because Measure ES2 would not require zero-carbon electricity to serve the County. Measure ES2 is one of the five core measures necessary to meet the Project's targets for 2030 and 2035. Reducing Measure ES2's performance objectives would inhibit the County's ability to exceed the 2030 target by more than 160,000 MTCO2e and the 2035 target by more than 230,000 MTCO2e, which would occur under implementation of the Project.

Alternative 3 would not meet Project Objective 2 (identify GHG emissions reduction targets tailored to the unincorporated County that closely align with state and County climate goals) because implementation of Alternative 3 does not align with County or state goals. The 2030 target of 40 percent below 1990 levels is far off the emissions reduction trajectory needed to achieve emissions of 83 percent below 2015 levels by 2045, which means that Alternative 3 does not align with either County or state goals (Recirculated Draft PEIR, pp. 4.18 to 4.19). Specifically, CARB projects that a 48 percent reduction in 1990 emissions levels by 2030 is needed: "The Scoping Plan Scenario achieves the AB 1279 target of 85 percent below 1990 levels by 2045 and identifies a need to accelerate the 2030 target to 48 percent below 1990 levels" (CARB 2022b). This is far beyond the 40 percent reduction required by SB 32. The Project's 2030 target of 40 percent below 2005 levels is equivalent to 48 percent below 1990 levels, which aligns the Project with state goals and the 2022 Scoping Plan, which Alternative 3 would not do. Additionally, Alternative 3 does not align with the statewide targets codified in AB 1279, which establishes the state policy to achieve net zero GHG emissions as soon as possible but no later than 2045 and to achieve and maintain net negative GHG emissions thereafter. AB 1279 also mandates that by 2045, statewide anthropogenic GHG emissions are to be reduced at least 85 percent below 1990 levels.

Further, Alternative 3 would not align with the state's GHG emissions reduction goals because it would exclude several recommended priority local GHG emissions reduction strategies that the 2022 Scoping Plan recommends be incorporated "to the extent appropriate to ensure alignment with State climate goals." Such recommended strategies that Alternative 3 would not incorporate includes, for example: creating a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (Measures T6, T7, T8, and T9); increasing access to public transit by increasing density of development near transit (Measure T1); improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, and incorporating microtransit (Measure T4); adopting all-electric new construction reach codes for residential and commercial uses (Measure E2); facilitating deployment of renewable energy production and distribution and energy storage (Measures ES2, ES3, and ES4); and deploying renewable energy production and energy storage directly in new public projects and on existing public facilities (Measure ES3). Alternative 3 would not need these strategies to achieve its reduced targets for 2030 and 2035, thereby conflicting with Project Objective 2.

Alternative 3 would not meet Project Objective 5 (demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide CEQA streamlining for development projects via the Checklist) because Alternative 3's lower targets would not meet CEQA standards for a level of GHG emissions that would not be cumulatively considerable for future environmental review of projects. CEQA requires that thresholds of significance are based on substantial evidence. (CEQA Guidelines, § 15064.7.) Further, CEQA permits lead agencies to develop thresholds of significance for GHG emissions which "consider a project's consistency with the State's long-term climate goals or strategies." (CEQA Guidelines, § 15064.4(b)(3).) The Project's GHG reduction targets are more stringent than or align with statewide targets (Recirculated

Draft PEIR, p. 2-12). However, as discussed above, Alternative 3 would not meet Project Objective 2 because implementation of Alternative 3 does not align with state goals. Consequently, Alternative 3's targets do not demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects, thereby conflicting with Project Objective 5.

Finding: The EIR, including Chapter 4 of the Recirculated Draft PEIR, contains facts and analysis supporting the Finding, some of which are set forth here. Under Alternative 3, the County would establish lower targets than included in the Project, i.e., targets representing the minimum needed to "align" with California's codified statewide targets for 2030 and 2045. The Board rejects Alternative 3 as undesirable from a policy standpoint and infeasible on the basis of environmental considerations, because Alternative 3 would result in greater adverse environmental impacts associated with energy, GHG, air quality, and utilities and service systems. Alternative 3 would not meet Project Objectives 1, 2, and 5, and the Board finds that Alternative 3's failure to meet these Project Objectives makes this alternative undesirable from a policy standpoint and rejects Alternative 3 as infeasible. Specifically, Alternative 3 would not align with County and state GHG emissions reduction goals, including the County's General Plan Policy AQ 3.9, AB 1279, or CARB's 2022 Scoping Plan. This failure substantially impairs the ability of Alternative 3 to achieve the basic Project Objectives, including Objectives 1, 2, and 5. For the above stated reasons, the Board rejected Alternative 3 as infeasible.

5. Environmentally Superior Alternative

Facts in Support of Finding: CEQA requires an EIR to identify the "environmentally superior alternative" if the no project alternative is environmentally superior. (CEQA Guidelines, § 15126.6 (e)(2).).

The Recirculated Draft PEIR determined that the No Project Alternative is the environmentally superior alternative. The No Project Alternative would not implement the GHG emissions reduction strategies, measures, or actions identified by the Project, which would result in fewer facilitated projects compared with the 2045 CAP and thus, result in fewer adverse environmental impacts in comparison to the impacts associated with implementation of the 2045 CAP. Because the No Project Alternative would avoid impacts potentially associated with facilitated projects in comparison to the impacts associated with implementation of the 2045 CAP, the No Project Alternative is considered the environmentally superior alternative. However, in the long-term, the No Project Alternative would result in substantially fewer environmental benefits to the County overall for several reasons. First, air pollutant (criteria pollutants and toxic air contaminants) and GHG emissions would be much higher under the No Project Alternative than air pollutant and GHG emissions under all other alternatives and the Project such that impacts to human health would be higher. This is because the Project would substantially reduce countywide GHG emissions, and many of these emission reductions would produce parallel reductions in criteria pollutants and toxic air contaminants primarily by reducing fuel combustion. The No Project Alternative would result in greater human health risks associated with exposure to toxic air contaminants than all other alternatives and the Project, because all other alternatives and the Project would substantially reduce TAC emissions in the County. The No Project Alternative would neither realize the long-term GHG emission reduction benefits associated with implementation of the 2045 CAP (and all the co-benefits that would also occur, such as reduced criteria pollutant and TAC emissions), nor provide a clear pathway for the County to meet and exceed the statewide 2030 GHG reduction goal identified in SB 32 or meet and exceed the 2045 direct emission reduction target and carbon neutrality goal established by AB 1279. Significantly, the No Project Alternative would not meet any of the Project Objectives and the County is

not obligated to select the environmentally superior alternative for implementation if it would not accomplish the basic Project Objectives. (CEQA Guidelines, § 15126.6.)

CEQA Guidelines section 15126.6(e)(2) states "[i]f the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." Of Alternatives 1-3, Alternative 3 would reduce adverse environmental impacts compared to the Project to the greatest extent because it would facilitate fewer new projects compared with that anticipated under the 2045 CAP.

Because Alternative 3 has lower GHG emissions reduction targets for years 2030 and 2035 compared to the Project, implementation of Alternative 3 would facilitate fewer new projects through 2030 and 2035 to achieve the lower targets and performance objectives for the measures and actions compared to the Project. Thus, the County would implement fewer 2045 CAP strategies, measures, and actions to reduce GHG emissions to achieve the less aggressive reduction targets such that Alternative 3 would result in less short-term adverse physical environmental impacts compared to the impacts associated with implementation of the 2045 CAP strategies, measures, and actions needed to meet the Project's higher GHG emissions reduction targets.

However, Alternative 3 would likely only delay these impacts as compared to the Project rather than lessen or eliminate these impacts entirely because Alternative 3 has lower GHG emissions reduction targets for years 2030 and 2035 compared to the Project (it has the same targets for the year 2045). Alternative 3 would likely facilitate the same number of projects through 2045, resulting in the same environmental impacts through 2045 compared to the Project. However, Alternative 3 would more likely facilitate a greater number of projects in the 2035 to 2045 period than the Project, worsening environmental impacts during the 2035 to 2045 timeframe as compared to the Project. Consequently, Alternative 3 would delay the realization of its environmental impacts but would not lessen or eliminate these adverse environmental impacts entirely and could increase or create certain environmental impacts as compared to the Project.

Alternative 3 would result in similar but lesser impacts on the following resource areas: aesthetics, agriculture and forestry resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, transportation, and wildfire. However, Alternative 3 would also result in greater impacts than the Project in resource areas including energy, GHG emissions, air quality, and utilities and service systems. Alternative 3 would result in greater energy impacts than the Project because Alternative 3 would facilitate fewer projects that would reduce Countywide energy use compared to the Project, resulting in greater energy consumption than the Project. Alternative 3 would result in greater GHG emissions impacts than the Project because Alternative 3 would not reduce Countywide GHG emissions as compared to the Project through 2030 and 2035, producing much greater GHG emissions than the Project. Additionally, implementation of Alternative 3 would result in greater air quality impacts than the Project for operational impacts because Alternative 3 would facilitate fewer projects through 2030 and 2035, resulting in much greater emissions of criteria pollutants and TACs throughout the county for these years, resulting in greater human health risks as compared to the Project. Finally, Alternative 3 would result in greater utilities and service systems because projects facilitated by Alternative 3 would lead to increased use of recycled and gray water systems compared to the Project, increasing the amount of wastewater requiring treatment by wastewater treatment providers, and thus, would require the development of new water recycling and direct potable reuse facilities.

Importantly, as discussed above, Alternative 3 is unable to meet Project Objectives 1, 2, and 5. Alternative 3 would not meet Project Objective 1 (identify detailed programs, actions, and performance goals to achieve the climate policies of the General Plan) because implementation would result in an inconsistency with the County's General Plan Policy AQ 3.9 ("Ensure the availability of zero-carbon electricity to serve unincorporated Los Angeles County."). Alternative 3 would not meet Project Objective 2 (identify GHG emissions reduction targets tailored to the unincorporated County that closely align with state and County climate goals) because implementation of Alternative 3 does not align with County or state goals, including AB 1279, which establishes the state policy to achieve net zero GHG emissions as soon as possible but no later than 2045 and to achieve and maintain net negative GHG emissions thereafter. AB 1279 also mandates that by 2045, statewide anthropogenic GHG emissions are to be reduced at least 85 percent below 1990 levels. Alternative 3 would also not meet Project Objective 5 (demonstrate a level of GHG emissions below which the County would have less than cumulatively considerable GHG impacts for future environmental review projects and provide CEQA streamlining for development projects via the Checklist) because Alternative 3's lower targets would not meet CEQA standards for a level of GHG emissions that would not be cumulatively considerable for future environmental review of projects, given that Alternative 3's targets do not align with state goals and consistency with state goals is the criteria for whether the targets represent a level of GHG emissions that would have a less than cumulatively considerable GHG impact for future environmental review projects.

Alternative 3 would likely exclude several recommended priority local GHG emissions reduction strategies that the 2022 Scoping Plan recommends be incorporated "to the extent appropriate to ensure alignment with State climate goals." Alternative 3 would likely not align with the state's GHG emissions reduction goals if it excluded 2022 Scoping Plan priority local GHG emissions reduction strategies, making Alternative 3 inconsistent with Project Objectives 1, 2, and 5.

Finding: Based on the analysis for each alternative above, Alternative 3 is considered the environmentally superior alternative to the Project in relation to some short-term environmental impacts because Alternative 3's reduced performance objectives would facilitate fewer projects for years 2030 through 2035. However, Alternative 3 would likely facilitate the same number of projects through 2045, resulting in the same environmental impacts through 2045 compared to the Project, and would more likely facilitate a greater number of projects in the 2035 to 2045 period than the Project. Consequently, Alternative 3 would delay the realization of its environmental impacts but would not lessen or eliminate these adverse environmental impacts and would likely worsen environmental impacts during the 2035 to 2045 timeframe compared to the Project. The Board rejects Alternative 3, the Environmentally Superior Alternative, as undesirable from a policy standpoint and infeasible on the basis of environmental considerations, as Alternative 3 would result in greater adverse environmental impacts associated with energy, GHG emissions, air quality, and utilities and service systems. Alternative 3 would not meet Project Objectives 1, 2, and 5 and the Board finds that Alternative 3's failure to meet these Project Objectives makes this alternative undesirable from a policy standpoint and rejects Alternative 3 as infeasible. Specifically, Alternative 3 would not align with County and state GHG emissions reduction goals, including the County's General Plan Policy AQ 3.9, AB 1279, or CARB's 2022 Scoping Plan. This failure substantially impairs the ability of Alternative 3 to achieve the basic Project Objectives, including Objectives 1, 2, and 5.

VIII. FINDINGS CONCERNING CERTAIN RECOMMENDED MITIGATION MEASURES NOT INCLUDED IN MMRP

During the PEIR's public review process, commenters recommended certain mitigation measures. With respect to those specific mitigation measures suggested in public comments, which were not incorporated into the Final PEIR and are not included in the Mitigation Monitoring and Reporting Plan (MMRP), the Board finds as follows:

Programmatic mitigation measures for utility-scale solar projects to address dust control, water supply, wildlife impacts, heat islands, and aesthetic impacts. To reduce project impacts, one commenter generally recommended implementation of unspecified programmatic mitigation measures to address potential impacts from utility-scale solar projects (Recirculated Draft PEIR Comment O2-17 and O2-18). The PEIR identified reasonable, feasible programmatic mitigation measures to avoid or reduce significant environmental impacts, including cumulative environmental impacts, of future projects implementing 2045 CAP measures and actions, including utility-scale solar projects. The Board hereby rejects the proposed mitigation on the basis that other mitigation has been identified in the PEIR and included in the MMRP to reduce impacts to less than significant levels, because the proposed, unspecified measure would not be effective in mitigating a significant Project impact or provide substantial additional mitigation beyond the measures identified in the PEIR and included in the MMRP, and for the reasons set forth in Response to Comment O2-17 and O2-18.

Programmatic mitigation measures for utility-scale energy storage projects to address potential impacts. To reduce project impacts, one commenter generally recommended implementation of unspecified programmatic mitigation measures to address potential impacts from utility-scale energy storage projects (Recirculated Draft PEIR Comment O2-24 and O2-25). The PEIR identified reasonable, feasible programmatic mitigation measures to avoid or reduce significant environmental impacts, including cumulative environmental impacts, of future projects implementing 2045 CAP measures and actions, including utility-scale battery projects. The Board hereby rejects the proposed, unspecified mitigation on the basis that other mitigation has been identified in the PEIR and included in the MMRP to reduce impacts to less than significant levels, because the proposed, unspecified measure would not be effective in mitigating a significant Project impact or provide substantial additional mitigation beyond the measures identified in the PEIR and included in the MMRP, and for the reasons set forth in Response to Comment O2-24 and O2-25.

Limiting application of Action ES3.6 (streamlining and prioritizing permitting for solar and battery storage projects) to only distributed battery storage projects. To reduce Project impacts on unidentified "risks", one commenter suggested a mitigation measure limiting application of 2045 CAP Action ES3.6 to only distributed battery storage projects "because utility scale storage projects pose substantial risks...." (See Recirculated Draft PEIR Comment O2-26.) The PEIR identified mitigation measures to reduce hazards and hazardous materials impacts to a less than significant level. The Board hereby rejects the proposed mitigation on the basis that other mitigation has been identified in the PEIR and included in the MMRP to reduce this impact to a less than significant level, because the proposed measure would not be effective in mitigating a significant Project impact or provide substantial additional mitigation beyond the measures identified in the PEIR and included in the MMRP, and for the reasons set forth in Response to Comment O2-26.

Locating utility scale storage projects outside of Very High Fire Hazard Severity Zones and remote areas where there are no residents. To reduce Project impacts, one commenter recommended mitigation for

wildfire risk posed by utility scale storage facilities that might be caused by the projects facilitating 2045 CAP strategies, measures, and actions. (See Recirculated Draft PEIR Comment O2-27.) The EIR identified mitigation measures to reduce impacts on wildfire to a less than significant level. The Board hereby rejects the proposed mitigation on the basis that other mitigation has been identified in the PEIR and included in the MMRP to reduce this impact to a less than significant level, because the proposed measure would not be effective in mitigating a significant Project impact or provide substantial additional mitigation beyond the measures identified in the PEIR and included in the MMRP, and for the reasons set forth in Response to Comment O2-27.

IX. ADDITIONAL ENVIRONMENTAL FINDINGS

a. Findings Regarding EIR Recirculation

i. Legal Requirements Regarding Recirculation

A lead agency is required to recirculate a Draft EIR for additional public review when "significant" new information is added to the EIR after the initial public review, according to CEQA Guidelines section 15088.5(a). New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment on a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such effect, including a feasible project alternative that the project proponents have declined to implement. "Significant new information" requiring recirculation includes, for example, a disclosure showing that:

- A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
- A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
- A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project but the project's proponents decline to adopt it.
- The Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

Recirculation is not required where the new information added to the EIR merely clarifies, amplifies, or makes insignificant modifications to an adequate EIR, according to CEQA Guidelines section 15088.5(b).

ii. Recirculated Draft PEIR Comments, Responses, and Revisions Do Not Trigger Draft PEIR Recirculation

No significant new information has been added to the EIR in Recirculated Draft PEIR comments, responses to Recirculated Draft PEIR comments, and Recirculated Draft PEIR revisions made in the Final PEIR that would trigger recirculation of the Recirculated Draft PEIR under CEQA Guidelines section 15088.5(a) because:

- They did not disclose a new significant environmental impact that would result from the Project or from a new mitigation measure proposed to be implemented.
- They did not disclose a substantial increase in the severity of an environmental impact that would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
- They did not disclose a feasible Project alternative or mitigation measure considerably different from others previously analyzed that would clearly lessen the adverse environmental impacts of the Project.

- They did not otherwise result in major revisions to the Recirculated Draft PEIR that precluded meaningful public review and comment on a substantial, adverse project impact environment, a feasible mitigation measure, or an alternative not proposed or implemented.

Instead, only minor changes were made to the Recirculated Draft PEIR in response to public comments and to amplify, clarify, and update certain information. The changes and new information provided in the Final PEIR include:

- Clarifications to the Recirculated Draft PEIR analysis in response to comments received;
- Minor revisions to mitigation measures in response to comments received; and
- Corrections of typographical and editorial errors.

This new information does not include identification of new or substantially increased significant impacts associated with the Project, alternatives, or mitigation measures that are considerably different from those previously analyzed that would clearly lessen the Project's significant impacts.

The Board finds that none of the revisions to the Recirculated Draft PEIR made by, or discussion included in, the Final PEIR involves "significant new information" triggering recirculation because the changes do not result in any new significant environmental effects, substantial increase in the severity of previously identified significant effects, or feasible project alternatives that would clearly lessen the environmental effects of the project. The Board further finds that incorporating the information and corrections does not deprive the public of a meaningful opportunity to comment on the Project or its effects, and that no information has been added to the EIR that would warrant recirculation pursuant to Public Resources Code section 21092.1 or CEQA Guidelines section 15088.5. This finding is based upon all the information presented in the Final PEIR and the Record of Proceedings.

b. Findings Regarding Disagreement Among Experts

It is possible that during the public review process experts may disagree with assumptions, analysis, conclusions, and other materials presented in the Recirculated Draft PEIR. The Final PEIR has summarized the conflicting opinions, where such information is known in advance, including response to comment O14-21. All such information will be considered by the decision-makers during the public review process. However, to be adequate under CEQA, the Recirculated Draft PEIR need not resolve all such disagreements.

In rendering a decision on a project where there is a disagreement among experts, the decision makers may give more weight to the views of one expert than to those of another, and need not resolve a dispute among experts. Disagreement among experts does not make an EIR inadequate. (CEQA Guidelines, § 15151).

The Board has considered the comments and objections received, but need not follow said comments or objections. The Board makes its decisions based on the evidence that is contained within the administrative record provided by the Final PEIR, its supporting information and analysis, and the associated public review process. The Board finds that the Final PEIR accurately reflects the 2045 CAP's impacts on environmental resources and is supported by the County's experts.

c. Section 21082.1(c)(3) Findings

Pursuant to Public Resources Code section 21082.1(c)(3), the Board hereby finds that the Final PEIR reflects that independent judgment of the lead agency.

X. MITIGATION MONITORING AND REPORTING PLAN

The Board hereby finds that a Mitigation Monitoring and Reporting Program has been prepared for the EIR and has been adopted concurrently with these Findings. (Pub. Resources Code, § 21081.6(a)(1).) The County will use the MMRP to track implementation of EIR mitigation measures adopted in these Findings. The County will also monitor the County's implementation of 2045 CAP policies relied upon to reduce environmental impacts.

Exhibit E

STATEMENT OF OVERRIDING CONSIDERATIONS
CEQA Guidelines Section 15093
For:
LOS ANGELES COUNTY 2045 CLIMATE ACTION PLAN
Final Program Environmental Impact Report SCH No. 2021120568

Lead Agency:
County of Los Angeles Department of Regional Planning

Pursuant to Public Resources Code section 21081(b) and the California Environmental Quality Act (CEQA) Guidelines section 15093(a) and (b), the County is required to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project. For a project that has significant impacts that cannot feasibly be avoided or substantially lessened, a public agency, after adopting proper findings, may nevertheless approve the project if the agency first adopts a Statement of Overriding Considerations setting forth the specific reasons why the agency found that the project's "benefits" rendered "acceptable" its "unavoidable adverse environmental effects." (CEQA Guidelines, §§ 15093, 15043(b); Pub. Resources Code, § 21081(b).)

The Los Angeles County 2045 Climate Action Plan (2045 CAP, or Project) will result in environmental effects, which, although mitigated to the extent feasible by the implementation of mitigation measures required for the Project, will remain significant and unavoidable, as discussed in the Final Program Environmental Impact Report (PEIR) and CEQA Findings of Fact. These impacts are summarized below and constitute those impacts for which this Statement of Overriding Considerations is made. The significant and unavoidable impacts of the Project are as follows:

- Aesthetics (Impacts 3.2-1, 3.2-2, 3.2-3, 3.2-4, 3.2-6, 3.2-7, 3.2-8, 3.2-9)
- Agriculture and Forestry (Impacts 3.3-1, 3.3-2, 3.3-5, 3.3-7, 3.3-8, 3.3-11)
- Air Quality (Impacts 3.4-1, 3.4-2, 3.4-3a, 3.4-5, 3.4-6, 3.4-7 [local Air Pollutant and TAC emissions])
- Biological Resources (Impacts 3.5-2, 3.5-3, 3.5-5, 3.5-7, 3.5-8, 3.5-10, 3.5-11)
- Noise and Vibration (All impacts)
- Utilities and Service Systems (Impact 3.17-1, 3.17-3, 3.17-5, 3.17-7)

Finding:

The County of Los Angeles Board of Supervisors (Board) finds and determines in approving the Project that the Final PEIR has considered the identified means of lessening or avoiding the Project's significant effects and that to the extent any significant direct or indirect environmental effects, including cumulative project impacts, remain unavoidable or not mitigated to below a level of significance after mitigation, such impacts are at an acceptable level in light of the social, legal, economic, environmental, technological and other project benefits discussed below, and such benefits override, outweigh, and make "acceptable" any such remaining environmental impacts of the project. (CEQA Guidelines, § 15092(b).)

The following benefits and considerations, taken together or individually, outweigh such significant and unavoidable adverse environmental impacts. All of these benefits and considerations are based on the facts set forth in the Findings, the Final PEIR (including, without limitation, the response to comments and appendices and attachments thereto), and the record of proceedings for the Project. The Board determines that the evidence in the record constitutes substantial evidence to support the determinations made in this Statement of Overriding Considerations, that the facts stated in this document and in the Findings are supported by substantial evidence in the record, including testimony received at the public hearing, the staff presentations, staff reports and all materials in the project files. The Board also determines that to the extent other evidence was presented that is contrary to the determinations made herein or in the Findings, such evidence was nevertheless considered, weighed and determined to be either lacking in credibility or insufficient in weight to detract from the determinations made herein or in the Findings such that the Board reached these determinations after due consideration of all evidence presented to it. Each of these benefits and considerations is a separate and independent basis that justifies approval of the Project, so that if a court were to set aside the determination that any particular benefit or consideration will occur and justifies project approval, this Board determines that it would stand by its determination that the remaining benefit(s) or consideration(s) is or are sufficient to warrant project approval.

Facts in Support of Statement of Overriding Considerations:

In determining whether to approve the 2045 CAP, the County has weighed the economic, legal, social, technological, environmental, and other benefits of the Project against its unavoidable significant environmental impacts. The County finds that the adoption and implementation of the 2045 CAP would have substantial overriding benefits, supported by substantial evidence in the PEIR and elsewhere in the administrative record, warranting approval of the Project and the Board of Supervisors determines that the adverse environmental impacts of the Project are “acceptable” if any one of these benefits will be realized. The Project will provide benefits to Los Angeles County and the region as follows:

1. Improves Regional Air Quality

   Degraded air quality can aggravate a wide range of health problems, including asthma and other debilitating and costly respiratory and cardiovascular diseases. The Project would improve air quality in the region, which in turn reduces these health impacts related to air quality. The Project also offers many co-benefits to public health, including reducing chronic disease, lowering obesity levels, reducing respiratory diseases, and improving mental health.

2. Increases Community Resiliency

   The Project facilitates community resiliency by reducing the impacts of climate change such as extreme heat, drought, wildfire, pollution, extreme storms and wind, invasive species, and vector-borne illnesses.

3. Promotes Green Jobs

   The Project facilitates the development of a wide range of green jobs and provides meaningful employment opportunities across job sectors.

4. Lowers Energy Costs

   The Project promotes lower energy and transportation costs by encouraging the use of cost-efficient renewable resources.

5. Fights Drought

The Project promotes water conservation which lessens the dependence on imported water sources, which is especially beneficial economically during drought years.

6. Improves Active Transportation

   With an emphasis on active transportation and reducing vehicle emissions, the Project promotes safer walking and cycling throughout the region.

7. Improves CEQA Streamlining

   Per section 15183.5 of the CEQA Guidelines, this Project provides CEQA streamlining benefits for future development projects. This simplifies the GHG emissions analyses necessary to comply with CEQA in the future.

8. Achieves Statewide Climate Goals

   The Project helps the County meet and/or exceed Statewide climate goals.

9. Encourages Green Investment

   The Project positions the economy for growth by encouraging green investment and infrastructure spending. Additionally, the Project improves the opportunity for access to statewide climate grants and other funding sources.

10. Promotes Environmental and Social Justice

    The Project promotes environmental and social justice by focusing efforts and improvements within disadvantaged communities through infrastructure investment, creation of greenspaces, active and accessible transportation, and building decarbonization.

Conclusion

CEQA requires a public agency to balance the benefits of a proposed project against its significant and unavoidable adverse impacts in determining whether to approve the project. As discussed more fully above, the proposed Project would result in significant and unavoidable project-level and/or cumulative impacts to on aesthetics, agricultural and forestry resources, air quality, biological resources, noise and vibration, and utilities and service systems, which, although mitigated to the extent feasible by the implementation of mitigation measures required for the Project, will remain unavoidable significant adverse impacts. This Board of Supervisors finds that such impacts are at an acceptable level in light of each of the Project benefits described above, which make “acceptable” any significant environmental impacts of the Project.

Exhibit F

MITIGATION MONITORING AND REPORTING PROGRAM

The California Environmental Quality Act (CEQA) requires a Mitigation Monitoring and Reporting Program (MMRP) for projects where mitigation measures are a condition of project approval and development. (Pub. Resources Code, § 21081.6.) The County of Los Angeles (County) has prepared the Recirculated Draft Programmatic Environmental Impact Report (Recirculated Draft PEIR) to address the environmental impacts of the Revised Draft 2045 Climate Action Plan (2045 CAP or Project) and where appropriate, the Recirculated Draft PEIR recommends mitigation measures that would avoid or substantially lessen the significant environmental impacts associated with the Project.

This MMRP has been developed for the Project in compliance with Public Resources Code section 21081.6 and CEQA Guidelines section 15097. The mitigation measures in Table 1 are coded by alphanumeric identification consistent with the Recirculated Draft PEIR. The following items are identified for each mitigation measure:

- **Mitigation Method.** This section of the MMRP lists how the mitigation measure would be implemented. The numbering in this column corresponds to the project stage numbers listed in the Timing of Implementation column.
- **Timing of Implementation.** This section of the MMRP lists the stage of the project during which the mitigation measure would be implemented and during the stage that the monitoring and reporting would be conducted.
- **Implementation Responsibility**. This section of the MMRP indicates who is responsible for implementing the mitigation measure (i.e., the "implementing party").
- **Monitoring and Reporting Agency.** This section lists the agency that is responsible for ensuring that the mitigation measure is implemented and which agency will receive reports on mitigation implementation.
- **Verification of Compliance.** This section of the MMRP provides a location for the implementing party and/or monitoring and reporting agency to make notes and to record their initials and the compliance date for each mitigation measure.

The County must adopt this MMRP, or an equally effective program, if it approves the Project with the mitigation measures that were adopted or made conditions of Project approval

TABLE 1
2045 CAP MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure	Mitigation Method	Timing of Implementation	Implementation Responsibility	Monitoring and Reporting Agency	Verification of Compliance		
					Initials	Date	Remarks
Aesthetics							
Mitigation Measure 3.2-1: Alternative Design. Projects facilitated by the 2045 CAP that would obstruct views from publicly-accessible vantage points as defined in this analysis (such as from a vista point or a regional riding, hiking, or multiuse trail) shall identify and protect public views and significant landscape features or landforms visible from such views, and shall implement project-specific mitigation as applicable. If it is determined that a project would obstruct scenic views, the County shall consider alternative designs that seek to avoid and/or minimize these impacts. Project-specific design measures may include reduction in height of improvements or width of improvements to reduce obstruction of views or other adverse visual effects, or relocation of improvements to reduce obstruction of views. The County shall consider taking the following (or equivalent) actions: i) Require that the scale and massing of new development provide appropriate transitions in structure height and bulk that are sensitive to the physical and visual character of the affected area; ii) ensure structure heights are stepped back to maintain appropriate transitions in scale and to protect scenic views; and iii) avoid siting electric towers, solar power facilities, wind power facilities, communication transmission facilities and/or above ground lines where they could obstruct views from public vantage points, such as a regional riding, hiking, or multiuse trail, along scenic roadways and routes, or scenic vista points.	1-2) Review of project plans and specifications to ensure project includes specific design measures to protect public views.	1) During project-specific environmental review. 2) Prior to approval of future projects construction. 3) Monitoring and reporting conducted during project review and at time of permit approval.	Applicant/County of Los Angeles	County of Los Angeles			
Mitigation Measure 3.2-2: Visual Screening and Other View Protection Measures. To partially screen views of projects facilitated by 2045 CAP measures and actions in locations where they would be visible from publicly accessible vantage points (e.g., scenic vistas, trails, scenic roadways and routes) and affect visual character or quality, if feasible and effective, the County shall (and other implementing state or local agencies can and should) require the construction of a berm, vegetative screening, or other form of visual barrier of sufficient height to provide a visual transition from ground level to surrounding hills or ridgelines. The color of proposed building facades and roofs shall be designed to visually blend in and minimize the potential for visual contrast between the project elements and their natural landscape surroundings. Bright or very light colors (including white) shall be avoided. Re-contouring and revegetation of temporarily disturbed, graded areas shall be completed to provide a natural appearing landform upon completion of construction.	1-2) Review of project plans and specifications to ensure project design includes a visual barrier, building materials and color schemes that match the surrounding landscape. 3) Field verification to ensure revegetation and recontouring is implemented.	1) During project specific environmental review. 2) Prior to approval of future projects construction. 3) During future project construction. 4) Monitoring and reporting conducted during project review and construction.	County of Los Angeles	County of Los Angeles			
Mitigation Measure 3.2-3: Reduce Light and Glare Impacts. To reduce significant light and glare impacts of projects facilitated by the 2045 CAP, the County shall require the following measures to be incorporated: a) All lighting shall be focused toward the site and outdoor lighting shall be directed downward; b) The design of exterior light fixtures shall incorporate shielding to prevent glare and offsite light spillage; c) Outdoor lighting shall include non-glare fixtures; and d) Structure design shall include exterior finishes and materials that would be minimally reflective or sited or oriented in such a way as to direct glare away from sensitive receptors.	1) Ensure project design plan includes lighting plan consistent with mitigation measure 3.2.3 requirements. 2) Ensure that lighting requirements are included in construction contract documents.	1) During project specific environmental review. 2) Prior to approval of future projects construction. 3) Monitoring and reporting conducted during project review.	County of Los Angeles	County of Los Angeles			
Agriculture and Forestry							
Mitigation Measure 3.3-1: Avoidance of Actively Farmed Lands When Siting Utility-Scale Solar and Energy Storage Development. To reduce the impacts of converting Farmland in physical use for agriculture to nonagricultural uses when a utility-scale solar development is proposed on actively farmed land, the County shall require renewable energy project applicants to demonstrate their consideration of alternate sites consisting of formerly developed and/or contaminated lands such as landfills and mine sites located within one mile of the proposed project site when such development is consistent with General Plan and zoning requirements.	1-2) Demonstrate consideration of alternate sites of formerly developed and/or contaminated lands within one mile of the proposed project site.	1) During project specific environmental review. 2) Prior to approval of future projects construction. 3) Monitoring and reporting conducted during project review.	County of Los Angeles	County of Los Angeles			

Mitigation Measure	Mitigation Method	Timing of Implementation	Implementation Responsibility	Monitoring and Reporting Agency	Verification of Compliance		
					Initials	Date	Remarks
Air Quality							
Mitigation Measure 3.4-1: Construction Emissions. If, during subsequent project-level environmental review, construction-related criteria air pollutants are determined to have the potential to exceed the applicable air quality management district (AQMD) adopted thresholds of significance, the lead agency shall require applicants for new projects facilitated by the 2045 CAP measures and actions to incorporate mitigation measures to avoid or reduce air pollutant emissions during construction activities. Mitigation measures that may be identified during the environmental review include, but are not limited to: • When wind gusts exceed 25 miles per hour, cease all active construction activities or follow the applicable guidelines outlined in Table 3 of SCAQMD Rule 403 or Sections (C)(10) through (C)(14) of AVAQMD Rule 403. • Use construction equipment rated by the U.S. Environmental Protection Agency (USEPA) as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits, applicable for engines between 50 and 750 horsepower, as commercially available. • Ensure that construction equipment is properly serviced and maintained to the manufacturer's standards. • Limit nonessential idling of construction equipment to no more than five consecutive minutes. • Where acceptable to the fire department, control weed growth by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering. • Water all active construction areas at least three times daily or four times daily if needed to control dust emissions. Watering should be sufficient to prevent airborne visible dust from leaving the site. Where local water supplies are not available in sufficient quantities within unincorporated areas of the County, use nontoxic chemical soil stabilizers or dust suppressants to control dust emissions in sufficient amounts to prevent airborne visible dust from leaving the site. • Increase watering frequency and/or application frequency of nontoxic chemical soil stabilizers or dust suppressants whenever wind speeds exceed 25 miles per hour. Reclaimed water shall be used whenever possible. • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). • Pave, apply water three times daily or as often as necessary to control dust, or where local water supplies are not available in sufficient quantities within unincorporated areas of the County, apply (nontoxic) soil stabilizers or dust suppressants on all unpaved access roads, parking areas, and staging areas at construction sites. • Sweep daily (with water sweepers using reclaimed water if possible), or as often as needed, all paved access roads, parking areas, and staging areas at the construction site to control dust. • Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the Project site, or as often as needed, to keep streets free of visible soil material. • Where local water supplies are not available in sufficient quantities within unincorporated areas of Los Angeles County, hydroseed or apply nontoxic chemical soil stabilizers or dust suppressants to inactive construction areas. • Enclose, cover, water three times daily, or apply nontoxic chemical soil stabilizers or dust suppressants to exposed stockpiles (dirt, sand, etc.). • In areas with existing vegetation, install the facility components with minimal disturbance. Take all necessary precautions to not use vehicles or machinery for grading or alter the existing grade in these areas.	1-2) Review of project plans and specifications to ensure that all measures included. 3) Construction contractor/manager shall submit signed letter verifying compliance. Field verification to ensure measures are implemented.	1) During project specific environmental review. 2) Prior to approval of future projects construction. 3) During future project construction. 4) Monitoring and reporting conducted during project review and construction.	Applicant County of Los Angeles	County of Los Angeles			

Mitigation Measure	Mitigation Method	Timing of Implementation	Implementation Responsibility	Monitoring and Reporting Agency	Verification of Compliance		
					Initials	Date	Remarks

• Design project facilities to limit ground disturbance or grading to only the access roads, substations and related underground transmission lines, tanks, basins, inverter pads, or other areas required by the County. Ensure that the facilities comply with all applicable grading standards.
• Site utility-scale renewable energy projects in a way that minimizes site disturbance, such as grading, brush clearance, and other forms of earthwork.
• In areas with existing vegetation, install facility components with minimal disturbance. Take all necessary precautions to avoid using vehicles or machinery for grading or altering the existing grade in these areas.
• Establish and maintain a landscaped buffer:
  ○ Maintain a landscaped area at least 10 feet deep along any facility perimeter fencing and between such fencing and any public right-of-way or adjacent property with an existing residential or agricultural use.
  ○ Establish the landscaped area in such manner that adequate corner sight distance is maintained from all access roads to the public right-of-way to the satisfaction of the County of Los Angeles Department of Public Works.
  ○ Maintain the landscaped area throughout the life of the facility							

Mitigation Measure 3.4-2: Operational Fugitive Dust Emissions. If, during subsequent project-level environmental review, operational fugitive dust emissions are determined to have the potential to be significant, the lead agency shall require applicants for new projects facilitated by the 2045 CAP measures and actions to incorporate mitigation measures to avoid or reduce air pollutant emissions during operational activities. Mitigation measures that may be identified during the environmental review include, but are not limited to, the following: • Unpaved main access roads for operational vehicle trips shall be paved or effectively stabilized using soil stabilizers that can be determined to be as efficient as or more efficient for fugitive dust control than California Air Resources Board–approved soil stabilizers, and that shall not increase any other environmental impacts, including loss of vegetation. • All other unpaved roads shall be stabilized using water or soil stabilizers so that vehicle travel on these roads does not cause visible dust plumes. • Gravel pads, grizzly strips, or other material track-out control methods approved for use by the local AQMD shall be installed where vehicles enter or exit unpaved roads onto paved roadways. • Traffic speeds on unpaved roads shall be limited to no more than 10 miles per hour, except that vehicles may travel up to 25 miles per hour on stabilized unpaved roads as long as such speeds do not create visible dust emissions. Traffic speed signs shall be displayed prominently at all site entrances and at egress point(s) from the central maintenance complex. • Where acceptable to the local and County fire departments, all unpaved, non-road surfaces that may potentially be disturbed shall be covered with a minimum of 3 inches of mulch. Where acceptable to the local and County fire departments, vegetation shall be maintained at 6 inches height. • All trucks hauling dirt, sand, soil, or other loose materials shall be covered or shall maintain at least 6 inches of freeboard (minimum vertical distance between top of the load and top of the trailer) in accordance with California Vehicle Code Section 23114. • A fugitive dust control plan that includes a dust plume response plan shall be prepared for review and approval by applicable agencies before any earthwork activities. • Where acceptable to the local and County fire departments, weed control shall be accomplished by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering.	1-2) Review of project plans and specifications to ensure that all measures are included. 3) Construction contractor/manager shall submit a signed letter verifying compliance. Field verification to ensure measures are implemented.	1) During future project-level environmental review. 2) Prior to approval of future projects construction. 3) During future project construction. ——————————— 4) Monitoring and reporting conducted during project review and construction.	County of Los Angeles	County of Los Angeles			

Mitigation Measure	Mitigation Method	Timing of Implementation	Implementation Responsibility	Monitoring and Reporting Agency	Verification of Compliance		
					Initials	Date	Remarks
• Existing vegetation may be mowed, but removal of existing vegetation root systems shall be prohibited, except where necessary for construction of access roads, substations and related underground transmission lines, tanks, basins, inverter pads, or other areas required by the County. • Continuous particulate monitors shall be installed at the discretion of the lead agency.							
Mitigation Measure 3.4-3: Architectural Coating VOC Emissions. If, during subsequent project-level environmental review, it is determined that VOC emissions impacts may be significant, the lead agency shall require Super-Compliant VOC-content architectural coatings (0 grams per liter to less than 10 grams per liter VOC) to be used during construction and operational application of paints and other architectural coatings to reduce ozone precursors. If paints and coatings with VOC content of 0 grams/liter to less than 10 grams/liter cannot be utilized, the developer shall avoid application of architectural coatings during days when the USEPA, CARB, or SCAQMD has forecasted the Air Quality Index for ozone to be greater than 100 for the project location.	1-2) Review of project plans and specifications to ensure that project design includes Super-Compliant VOC-content architectural coatings, and timeframe limits. 3) Construction contractor/manager shall submit letter verifying compliance. Field verification to ensure measures are implemented.	1) During future project-level environmental review. 2) Prior to approval of future projects construction. 3) During future project construction. 4) Monitoring and reporting conducted during project review and construction.	County of Los Angeles	County of Los Angeles			
Mitigation Measure 3.4-4: Enhanced Energy Conservation. If, during subsequent project-level environmental review, it is determined that operational emissions impacts are significant, the lead agency shall require the project to incorporate enhanced energy conservation measures beyond those required by federal or state law, County ordinance, and the 2045 CAP measures and actions to reduce energy-related emissions. Enhanced energy conservation measures shall include one or more of the following as applicable: • Install Energy Star rated heating, cooling, lighting, and appliances. • Use of heating, ventilation, and air conditioning equipment with a Seasonal Energy Efficiency Ratio of 12 or higher. • Installation of water heaters with an energy factor of 0.92 or higher. • Install solar water heaters or tankless water heaters. • Use passive solar cooling/heating. • Reduce building natural gas infrastructure, use renewable natural gas in place of fossil fuel–derived natural gas, or eliminate building natural gas infrastructure and fully electrify buildings.	1-3) Review of project plans and specifications to ensure that project design includes enhanced energy conservation measures. 4) Field verification to ensure measures are implemented.	1) During project-level environmental review. 2) Prior to approval of future projects construction. 3) Prior to issuance of future project building permits. 4) During future project construction. 5) Monitoring and reporting conducted during project review and construction	County of Los Angeles	County of Los Angeles			
Mitigation Measure 3.4-5: Low-VOC/Green Cleaning Product Educational Program. If, during subsequent project-level environmental review, it is determined that operational emissions impacts may be significant, the lead agency shall require the project applicant or developer to provide tenants and residents with information about low-VOC/green cleaning products and paints, including materials educating how to identify low-VOC cleaners and products.	1-3) Review of project plans and specifications to ensure that project applicant includes relevant information.	1) During future project-level environmental review. 2) Prior to approval of future projects. 3) Prior to issuance of future project building permits. 4) Monitoring and reporting conducted during project review.	County of Los Angeles	County of Los Angeles			
Mitigation Measure 3.4-6: Stationary Sources. Applicants for new or modified stationary sources facilitated by the 2045 CAP measures and actions that: (1) have the potential to generate 40 or more diesel trucks per day and (2) are located within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, nursing homes), as measured from the property line of the project to the property line of the nearest sensitive use, shall submit a health risk assessment (HRA) to the County Department of Regional Planning prior to future discretionary project approval. The HRA shall be prepared in accordance with	1) Applicant shall submit HRA to the County. 2) Review of plans and specifications to ensure that project design includes T-BACTs.	1) Prior to approval of future projects. 2) Prior to approval of future projects construction. 3) Monitoring and reporting conducted during project review	Applicant	County of Los Angeles			

Mitigation Measure	Mitigation Method	Timing of Implementation	Implementation Responsibility	Monitoring and Reporting Agency	Verification of Compliance		
					Initials	Date	Remarks
policies and procedures of the state Office of Environmental Health Hazard Assessment and the applicable air quality management district. If the HRA shows that the incremental cancer risk exceeds ten in one million (10E-06), particulate matter concentrations would exceed 2.5 µg/m3, or the appropriate noncancer hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that best available control technologies for toxics (T-BACTs) are capable of reducing potential cancer and noncancer risks to an acceptable level, including appropriate enforcement mechanisms. T-BACTs may include, but are not limited to, restricting idling onsite or electrifying warehousing docks to reduce diesel particulate matter, or requiring use of newer equipment and/or vehicles. T-BACTs identified in the HRA shall be identified as mitigation measures in the environmental document and/or incorporated into the site development plan as a component of the project.							
Mitigation Measure 3.4-7: Health Risk Assessment. Applicants shall submit a health risk assessment (HRA) to the County prior to future discretionary project approval for sensitive land uses facilitated by the 2045 CAP measures and actions within the following distances as measured from the property line of the project to the property line of the source/edge of the nearest travel lane, from these facilities or similar types of facilities that produce TAC emissions: • Industrial facilities within 1,000 feet • Distribution centers (40 or more trucks per day) within 1,000 feet • Major transportation projects (50,000 or more vehicles per day) within 1,000 feet • Gasoline dispensing facilities within 300 feet Applicants proposing projects facilitated by the 2045 CAP measures and actions which produce TAC emissions may be required to submit an HRA based on local rules and regulations, and/or at the discretion of the lead agency. The HRA shall be prepared in accordance with policies and procedures of the applicable Air Quality Management District. If the HRA shows that the incremental cancer risk exceeds ten in one million (10E-06) or the appropriate noncancer hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and non-cancer risks to an acceptable level (i.e., below ten in one million or a hazard index of 1.0), including appropriate enforcement mechanisms. Measures to reduce risk may include but are not limited to: • Air intakes located away from high-volume roadways and/or truck loading zones, unless it can be demonstrated to County Department of Regional Planning that there are operational limitations. • Heating, ventilation, and air conditioning systems of the buildings provided with appropriately sized maximum efficiency rating value (MERV) filters. Mitigation measures identified in the HRA shall be identified as mitigation measures in the environmental document and/or incorporated into the site development plan as a component of the Project. The air intake design and MERV filter requirements shall be noted and/or reflected on all building plans submitted to the County and shall be verified by County Department of Regional Planning.	1) Applicant shall submit HRA to the County. 2) Review of plans and specifications to ensure that project design includes mitigation measures identified in the HRA. 3) Ensure mitigation measures identified in the HRA are identified as mitigation measures in the environmental document and/or incorporated into the site development plan.	1) Prior to approval of future projects. 2) Prior to approval of future projects construction. 3) During future project-level environmental review. 4) Monitoring and reporting conducted during project review.	Applicant	County of Los Angeles			
Mitigation Measure 3.4-8: Valley Fever. • Require crews to use respirators during project clearing, grading, and excavation operations in accordance with California Division of Occupational Safety and Health regulations. • Require that the cabs of grading and construction equipment be air-conditioned or enclosed with sufficient ventilation and particulate matter filtration systems. • Require crews to work upwind from excavation sites where possible. • Where acceptable to the fire department, control weed growth by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering. • During rough grading and construction, ensure that the access way into the project site from adjoining paved roadways is paved or treated with environmentally safe dust control agents.	1-2) Review of plans and specifications to ensure that project design includes measures. 3) Construction contractor/manager shall submit a letter verifying compliance. Field verification to ensure measures are implemented.	1) During future project-level environmental review. 2) Prior to approval of future projects construction. 3) During future project construction activities that would involve ground disturbance. 4) Monitoring and reporting conducted during project review and construction.	Applicant	County of Los Angeles			

Mitigation Measure	Mitigation Method	Timing of Implementation	Implementation Responsibility	Monitoring and Reporting Agency	Verification of Compliance		
					Initials	Date	Remarks
Biological Resources							
BIO–1 Biological resources shall be analyzed on a project-specific level by a qualified biological consultant. A general survey shall be conducted to characterize the project site, and focused surveys should be conducted as necessary to determine the presence/absence of special-status species (e.g., focused sensitive plant or wildlife surveys). A biological resources assessment report shall be prepared to characterize the biological resources on-site, analyze project-specific impacts to biological resources, and propose appropriate mitigation measures to offset those impacts. The report shall include site location, literature sources, methodology, timing of surveys, vegetation map, site photographs, and descriptions of biological resources on-site (e.g., observed and detected species as well as an analysis of those species with potential to occur onsite). [a] [a] – This mitigation measures was previously adopted in 2015 as part of the Los Angeles County General Plan Update.	1) Survey conducted by a qualified biologist. 2) Submit biological resources assessment report (including general site survey and focused surveys, as necessary).	1) During future project-level environmental review. 2) Prior to approval of future projects. 3) Monitoring and reporting conducted during project review.	Applicant	County of Los Angeles			
BIO–2 If there is potential for direct impacts to special-status species with implementation of construction activities, the project-specific biological resources assessment report (as mentioned in Mitigation Measure BIO–1) shall include mitigation measures requiring preconstruction surveys for special-status species and/or construction monitoring to ensure avoidance, relocation, or safe escape of special-status species from the construction activities, as appropriate. If special-status species are found to be nesting, brooding, denning, etc. on-site during the pre-construction survey or monitoring, construction activity shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate offsite habitat areas. Relocations into areas of appropriate restored habitat would have the best chance of replacing/incrementing populations that are lost due to habitat converted to development. Relocation to restored habitat areas should be the preferred goal of this measure. A qualified biologist shall be on site to conduct surveys, to perform or oversee implementation of protective measures, and to determine when construction activity may resume. [a] [a] – This mitigation measures was previously adopted in 2015 as part of the Los Angeles County General Plan Update.	1-2) Submit pre-construction survey 3) Obtain permit(s) as necessary. 4) Construction monitoring by qualified biologist. 5) Submit construction monitoring documentation.	1) During future project-level environmental review 2) Prior to approval of future projects construction. 3) Prior to issuance of grading permits 4) During future project construction activities that would involve ground disturbance 5) Monitoring and reporting conducted during project review and construction	Applicant	County of Los Angeles			
Mitigation Measure 3.5-1: The County shall require biological resources to be analyzed on a project-specific level by a qualified biological consultant. Prior to or during the preparation of project-level environmental documents, and prior to the start of construction activities, a biological resources assessment shall be conducted to characterize the project site. Suitable buffer areas surrounding the project site shall be included where native habitat is contiguous with off-site habitat areas. The assessment and analysis shall emphasize identifying endangered, threatened, rare, and other special-status species; regionally and locally unique species; and sensitive natural communities, jurisdictional waters, and oak woodlands. Focused surveys shall be conducted as necessary to determine the presence of special-status species (e.g., focused sensitive plant or wildlife surveys). Focused surveys shall be conducted according to established CDFW or USFWS protocols, if available for the object species. Natural communities shall be mapped and identified according to floristic alliance- and/or association-based mapping protocols consistent with CDFW natural communities. A jurisdictional delineation may be required if there are signs of potentially regulated wetlands and non-wetland waters. A biological resources assessment report shall be prepared to characterize the biological resources on-site, analyze direct and indirect impacts on biological resources, and propose mitigation measures to offset those impacts. The report shall include site location, literature sources, methodology, timing of surveys, vegetation map, site photographs, and descriptions of biological resources on-site (e.g., observed and detected species as well as those species with potential to occur on-site).	1) A qualified biologist shall prepare a biological resources assessment report. 2) Review of the biological resources assessment report.	1) Prior to or during the preparation of project-level environmental documents. 2) Prior to the start of construction activities. 3) Monitoring and reporting conducted during project review.	County of Los Angeles/Applicant	County of Los Angeles			
Mitigation Measure 3.5-2: If there is potential for direct impacts to special-status species with implementation of construction activities, the project-specific biological resources assessment report (as described in Mitigation Measure 3.5-1) shall include a mitigation measure requiring pre-construction surveys for special-status species and/or construction monitoring to ensure avoidance, relocation, or safe escape of special-status species from the construction activities, as appropriate. The mitigation measures shall also include consultation with and obtaining permits from USFWS or CDFW prior to construction, if required by FESA or CESA for listed endangered and threatened species. If special-status species are found to be nesting, brooding, denning, etc. on-site during the pre-construction survey or monitoring, construction activity shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate offsite habitat areas. Relocation of such species into areas of appropriate restored habitat would have the best chance of replacing/incrementing	1) General Contractor to consult with qualified biologist to verify compliance with requirements. 2) Qualified biologist shall be on-site to conduct surveys and oversee implementation of measures. 3) Qualified biologist to submit report documenting compliance with requirements.	1) Prior to construction of future projects. 2) During future project construction activities. 3) After construction of future projects.	Applicant	County of Los Angeles			

Mitigation Measure	Mitigation Method	Timing of Implementation	Implementation Responsibility	Monitoring and Reporting Agency	Verification of Compliance		
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populations that are lost due to habitat converted to development. Relocation to restored habitat areas shall be the preferred goal of this measure. A qualified biologist shall be on site to conduct surveys, to perform or oversee implementation of protective measures, and to determine when construction activity may resume.		4) Monitoring and reporting conducted before and during project construction.					
Mitigation Measure 3.5-3: Prior to issuance of any grading permit for permanent impacts in the areas designated as jurisdictional features, the project applicant shall obtain a Clean Water Act Section 404 permit from U.S. Army Corps of Engineers, a Clean Water Act Section 401 certification from the Regional Water Quality Control Board, and a Streambed Alteration Agreement/ (LSAA) permit under Section 1602 of the California Fish and Game Code from California Department of Fish and Wildlife, where the project warrants..	1) Applicant to obtain listed permits, where required. 2) Review and verification of listed permits, where required.	1-2) Prior to issuance of any grading permit for permanent impacts in the areas designated as jurisdictional features. 3) Monitoring and reporting conducted before project construction.	Applicant	County of Los Angeles			

Mitigation Measure	Mitigation Method	Timing of Implementation	Implementation Responsibility	Monitoring and Reporting Agency	Verification of Compliance		
					Initials	Date	Remarks
Mitigation Measure 3.5-4: Proponents for individual projects facilitated by the 2045 CAP provisions shall analyze impacts on wildlife movement and corridors that may introduce new or additional barriers to wildlife dispersal or constrain existing wildlife corridors to future movement, or indirect impacts constraining future wildlife movement. Where projects may interfere with wildlife movement, alternative designs shall be included in the analysis to reduce wildlife movement impacts. Corridors, linkages, and pinch points shall not be entirely closed by any development, and partial mitigation shall be mandatory for project-specific impacts on wildlife corridors and wildlife nursery sites. This shall include provision of a minimum of half the corridor width. (The width shall be at least what is needed to remain connective for the top predators using the corridor.) Mitigation can include preservation by deed in perpetuity of other parts of the wildlife corridor connecting through the development area; it can include native landscaping to provide cover on the corridor. For nursery site impacts, mitigation shall include preservation by deed in perpetuity for another comparable nursery site of the same species	1) Ensure alternative designs and mitigation is included in the analysis where wildlife movement and corridors are impacted. 2) Review of plans and specifications to ensure that project design includes alternative measures.	1) During project-specific environmental review. 2) Prior to approval of future development projects. 3) Monitoring and reporting conducted during project review.	Applicant	County of Los Angeles			
Mitigation Measure 3.5-5: Proponents of projects resulting in the loss of oak woodlands shall mitigate with in-kind replacement habitat at a minimum of 1:1 mitigation ratio documented through a County–approved habitat mitigation plan. The plan shall include the number of replacement trees (or acreage and average density of woodland), location of replacement woodland, understory habitat components, sequencing for any phased tree removal, and performance standards for mitigation. The plan shall include monitoring for a minimum of five years, with annual reports submitted to the County. For oak woodlands impacts, project mitigation shall be consistent with recommendations in the County's Oak Woodland Conservation Management Plan and its 2014 Guide. If a project cannot be redesigned to avoid impacts to oak woodlands, an appropriate mitigation strategy would be developed by selecting from the Guide's list of recommended mitigation measures, prioritizing the acquisition of oak woodland habitat comparable to the habitat that as affected over the restoration of degraded off-site and in-lieu fees. A Mitigation Monitoring Plan consistent with the Guide's recommendations would be prepared and implemented.	1) Applicant shall retain an arborist to develop and submit the Mitigation Monitoring Plan to the County Department of Regional Planning. 2) Review of plans and specifications to ensure that project design includes Mitigation Monitoring Plan. 3) Field verification to ensure measures are implemented.	1) During project-specific environmental review. 2) Prior to construction of future projects. 3) During future project construction activities. 4) Monitoring and reporting conducted during project review and construction	Applicant	County of Los Angeles			
Cultural Resources							
Mitigation Measure 3.6-1: Historic Resources Assessment. Prior to demolition or alteration of buildings and/or structures or the construction of aboveground infrastructure with potentially significant impacts on historic architectural resources, the project proponent shall retain an architectural historian meeting the minimum professional qualifications standards (PQS) set forth by the Secretary of the Interior (codified in 36 CFR Part 61; 48 FR 44738-44739) (Qualified Architectural Historian) to conduct a historic resources assessment of affected properties. The assessment shall include a records search at the South Central Coastal Information Center or review of a prior record search conducted within the previous one year; a review of other pertinent archives and sources; a pedestrian field survey; recordation of all identified historic architectural resources on California Department of Parks and Recreation (DPR) 523 forms; evaluation of resources which may be eligible for listing in the California Register (i.e., meets the definition for historical resource in CEQA Guidelines Section 15064.5[a]), and for local listing; and preparation of a technical report documenting the methods and results of the assessment for each future project facilitated by 2045 CAP measures and actions. If a historic architectural resource is found eligible by the Qualified Architectural Historian, then the Qualified Architectural Historian shall coordinate with the project proponent and the County to ensure the project is constructed in conformance with the Secretary of the Interior's Standards. All reports resulting from implementation of this measure shall be filed with the South Central Coastal Information Center (including but not limited to historic resources assessments and Secretary of the Interior's Standards plan reviews).	1) Qualified architectural historian to submit historic resources assessment report of affected properties to the County Department of Regional Planning. 2) Review plan and specifications to ensure project is constructed in conformance with the Secretary of the Interior's Standards. 3) File report with the South Central Coastal Information Center.	1) During project-specific environmental review. 2) Prior to demolition or alteration of buildings and/or structures or the construction of aboveground infrastructure with potentially significant impacts on historic architectural resources. 3) After construction of future projects with potentially significant impacts on historic architectural resources. 4) Monitoring and reporting conducted during project review and construction.	Applicant	County of Los Angeles			
Mitigation Measure 3.6-2: Archaeological Resources Assessment. Prior to conducting construction activities that would involve ground disturbance, the project proponent shall retain an archaeologist meeting the minimum PQS set forth by the Secretary of the Interior (codified in 36 CFR Part 61; 48 FR 44738–44739) (Qualified Archaeologist) to conduct an archaeological resources assessment. The assessment shall include a records search at the South Central Coastal Information Center or review of a prior record search conducted within the previous one year; a Sacred Lands File search at the California Native American Heritage Commission (NAHC); geoarchaeological review including a focused assessment of land use history and any available geotechnical data to assess the potential for	1) Applicant shall retain a Qualified archaeologist to prepare an archaeological resources assessment report and submit to the County Department of Regional Planning. 2) Qualified archaeologist shall develop and submit a work plan to the County.	1) During project-specific environmental review. 2) Prior to conducting construction activities that would involve ground disturbance.	Applicant/County of Los Angeles	County of Los Angeles			

Mitigation Measure	Mitigation Method	Timing of Implementation	Implementation Responsibility	Monitoring and Reporting Agency	Verification of Compliance		
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subsurface archaeological resources; a pedestrian field survey in instances where ground surface is exposed; recordation of all identified archaeological resources on DPR 523 forms; evaluation of resources affected by the project for eligibility for listing in the California	3) The County shall consult with local Native American tribes.	3) Prior to the initiation of field work for any Extended Phase I or Phase II investigation.					
Register (i.e., meets the definition for historical resource in CEQA Guidelines Section 15064.5[a]), and for local listing; and preparation of a technical report documenting the methods and results of the assessment. Resources that do not qualify as historical resources shall be considered by the Qualified Archaeologist for qualification as unique archaeological resources as defined in Public Resources Code Section 21083.2(g). The technical report also shall provide recommendations as to whether additional studies are warranted to further identify or evaluate archaeological resources (i.e., Extended Phase I boundary delineation, Phase II testing and evaluation) and if archaeological monitoring and Native American monitoring of ground disturbing activities is warranted (e.g., in areas where there is a higher potential to encounter buried resources). Prior to the initiation of field work for any Extended Phase I or Phase II investigation, the Qualified Archaeologist shall prepare a work plan outlining the investigation's objectives, goals, and methodology. When developing a work plan for Native American resources, the County shall consult with local Native American tribes. If archaeological/Native American monitoring is warranted, the Qualified Archaeologist shall determine the locations and duration of monitoring and reporting requirements. All reports resulting from implementation of this measure shall be filed with the South Central Coastal Information Center (including but not limited to archaeological resources assessments, Extended Phase I and Phase II reports, and monitoring reports).	4) File report(s) with the South Central Coastal Information Center.	4) After construction of future projects with potentially significant impacts on archaeological resources. 5) Monitoring and reporting conducted during project review and construction.					
Mitigation Measure 3.6-3: Construction Worker Cultural Resources Sensitivity Training. For projects with ground-disturbing activities that may encounter potentially significant archaeological resources, the Qualified Archaeologist shall implement a cultural resources sensitivity training program. The Qualified Archaeologist, or its designee, shall instruct all construction personnel of the types of archaeological resources that may be encountered, the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains, applicable laws protecting archaeological resources, and confidentiality of discoveries. Native American monitor(s) shall be invited to participate in presenting tribal perspectives as part of the training curriculum. In the event that construction crews are phased, additional trainings shall be conducted for new construction personnel. The project proponent or its contractors shall ensure construction personnel are made available for and attend the training. The project proponent shall retain documentation demonstrating attendance and provide it to the County.	1) Qualified archaeologist shall prepare and conduct a cultural resources sensitivity training program. 2) Construction contractor/manager ensure construction personnel attend training. 3) Applicant shall retain documentation demonstrating attendance and provide it to the County.	1-3) Prior to conducting construction activities that would involve ground-disturbance. 4) Monitoring and reporting conducted before project construction.	Applicant	County of Los Angeles			
Mitigation Measure 3.6-4: Archaeological Resources Discoveries. In the event archaeological resources are encountered during construction of a project, the project proponent shall cease all activity within 50 feet of the find shall cease. The discovery shall be evaluated for significance by the Qualified Archaeologist. When assessing significance and developing treatment for resources that are Native American in origin, the County shall consult with local Native American tribes. If the Qualified Archaeologist determines that the resource is significant (i.e., meets the definition for historical resource in CEQA Guidelines Section 15064.5[a] or for unique archaeological resource in Public Resources Code Section 21083.2[g]), the Qualified Archaeologist shall provide a method for avoidance and preservation in place, which shall be the preferred manner of mitigating impacts. If avoidance is infeasible, the Qualified Archaeologist shall develop a Phase III Archaeological Resources Data Recovery and Treatment Plan consistent with Mitigation Measure 3.6-5. The Qualified Archaeologist also shall determine, based on the initial assessment of the discovery, whether the 50-foot buffer may be reduced. All reports resulting from implementation of this measure shall be filed with the South Central Coastal Information Center (including but not limited to Extended Phase I, Phase II, and Phase III reports).	1) Qualified archaeologist shall evaluate archeological discovery's significance. 2) Qualified archaeologist shall provide a method for avoidance and preservation in place or develop a Phase III Archaeological Resources Data Recovery and Treatment Plan consistent with Mitigation Measure 3.6-5. 3) File report(s) with the South Central Coastal Information Center.	1-2) If archaeological resources are encountered during construction of a project. 3) After construction of future projects with archaeological resource discoveries. 4) Monitoring and reporting conducted during project construction.	Applicant/County of Los Angeles	County of Los Angeles			
Mitigation Measure 3.6-5: Treatment of Archaeological Resources. If the assessment conducted under Mitigation Measure 3.6-2 or Mitigation Measure 3.6-4 identifies significant archaeological resources (i.e., meets the definition for historical resource in CEQA Guidelines Section 15064.5[a] or for unique archaeological resource in Public Resources Code Section 21083.2[g]), then avoidance and preservation in place shall be the preferred manner of mitigating impacts. Preservation in place may be accomplished by, but is not	1) Review plans and specification to ensure measures for avoidance and preservation in place, or those from the Phase III Archaeological Resources Data Recovery and Treatment Plan are included.	1) During project-specific environmental review.	Applicant/County of Los Angeles	County of Los Angeles			

Mitigation Measure	Mitigation Method	Timing of Implementation	Implementation Responsibility	Monitoring and Reporting Agency	Verification of Compliance		
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limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. If avoidance and preservation in place of significant archaeological resources is determined by the County to be infeasible, then the Qualified Archaeologist shall prepare a Phase III Archaeological Resources Data Recovery	2) The County Department of Regional Planning shall consult with local Native American tribes.	2) Prior to conducting construction activities that would involve ground disturbance.					
and Treatment Plan. The plan shall include: a detailed research design; justification for data recovery or other treatment methods depending on the nature of the resource's eligibility; excavation methodology; and, reporting and curation requirements. When developing treatment for resources that are Native American in origin, the County shall consult with local Native American tribes. All Phase III reports resulting from implementation of this measure shall be filed with the South Central Coastal Information Center.	3) File report(s) with the South Central Coastal Information Center.	3) After construction of future projects with potentially significant impacts on archaeological resources. 4) Monitoring and reporting conducted during project review and construction.					
Mitigation Measure 3.6-6: Curation and Disposition of Cultural Materials. The project proponent shall arrange curation for all Native American archaeological materials, with the exception of funerary objects or grave goods (i.e., artifacts associated with Native American human remains). For significant Native American archaeological materials, the project proponent shall first consider repositories that are accredited by the American Association of Museums and that meet the standards outlined in 36 CFR 79.9. If a suitable accredited repository is not identified, then the project proponent shall consider nonaccredited repositories as long as they meet the minimum standards set forth by 36 CFR 79.9. If a suitable nonaccredited repository is not identified, then the project proponent shall donate the collection to a local California Native American tribe(s). Nonsignificant archeological materials shall be donated to a local California Native American tribe(s). If neither an accredited or nonaccredited repository or tribe accepts the collection, then the project proponent may offer the collection to a public, nonprofit institution with a research interest in the materials, or to a local school or historical society in the area for educational purposes. Disposition of Native American human remains and associated funerary objects or grave goods shall be determined by the landowner in consultation with the County and the MLD. The project proponent shall curate all significant historic-period archaeological material, or portions thereof at the discretion of the Qualified Archaeologist, at a repository accredited by the American Association of Museums that meets the standards outlined in 36 CFR 79.9. If no accredited repository accepts the collection, then the project proponent may curate it at a nonaccredited repository as long as it meets the minimum standards set forth in 36 CFR 79.9. If neither an accredited nor a nonaccredited repository accepts the collection, then the project proponent may offer the collection to a public, nonprofit institution with a research interest in the materials, or to a local school or historical society in the area for educational purposes.	1) Applicant shall arrange curation for all Native American archaeological materials, with the exception of funerary objects or grave goods. 2) Landowner to consult with County Department of Regional Planning and the Native American Most Likely Descendant (MLD) regarding disposition of Native American human remains and associated funerary objects or grave goods. 3) Applicant to consult with Qualified Archaeologist to curate all significant historic-period archaeological material, or portions thereof.	1-3) If archaeological resources are encountered during construction of a project. 4) Monitoring and reporting conducted during project construction.	Applicant	County of Los Angeles			
Mitigation Measure 3.6-7: Paleontological Resources Assessment and Monitoring. For projects facilitated by 2045 CAP measures and actions that involve ground disturbance, the project proponent shall retain a paleontologist who meets the Society of Vertebrate Paleontology's (SVP 2010) definition for qualified professional paleontologist (Qualified Paleontologist) to prepare a paleontological resources assessment report prior to the start of construction activities. The report shall include methods and results of the paleontological resources assessment, monitoring requirements (including depths, frequency, and reporting), and maps that outline where monitoring is required. Monitoring shall follow SVP Guidelines: no monitoring of ground-disturbing activities within units of *Low Sensitivity* or *No Potential*; monitoring of all ground-disturbing activities (with depths specified) in units of *Low to High Significance;* and at all depths within units of *High Significance* unless the Qualified Paleontologist's report identifies previous disturbances or the use of construction methods which do not warrant monitoring; and monitoring at the initiation of excavation in units of *Undetermined Significance.* The report also shall stipulate whether screen washing is necessary to recover small specimens following SVP Guidelines and determine whether unique geologic features are present onsite. If monitoring is conducted, then the Qualified Paleontologist shall prepare a final report summarizing monitoring results and submit it to the project proponent and the County.	1) Applicant shall retain a Qualified Paleontologist to prepare a paleontological resources assessment report and submit to the County. 2) If monitoring is warranted, then the Qualified Paleontologist shall prepare a final report summarizing monitoring results and submit to the Applicant and County.	1) Prior to conducting construction activities that would involve ground disturbance. 2) After construction of future projects with potentially significant impacts on paleontological resources. 3) Monitoring and reporting conducted during project construction.	Applicant	County of Los Angeles			
Mitigation Measure 3.6-8: Paleontological Resources Sensitivity Training. Prior to the start of ground-disturbing activities for projects facilitated by 2045 CAP measures and actions with potentially significant impacts on paleontological resources, the Qualified Paleontologist or its designee shall conduct construction worker paleontological resources sensitivity training (or may be provided via digital recording) for all construction workers. Construction workers shall be informed on how to identify the types of paleontological resources that may be encountered, the proper procedures to be enacted in the event of an	1) Qualified Paleontologist or its designee shall prepare and conduct construction worker paleontological resources sensitivity training (or may be provided via digital recording) for all construction workers.	1-3) Prior to conducting construction activities that would involve ground-disturbance.	Applicant	County of Los Angeles			

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inadvertent discovery of paleontological resources, and safety precautions to be taken when working with paleontological monitors. The project proponent shall ensure that construction workers are made available for and attend the training. The project proponent shall retain documentation demonstrating attendance and provide it to the County.	2) Construction contractor/manager ensure construction personnel attend training.						
	3) Applicant shall retain documentation demonstrating attendance and provide it to the County.	4) Monitoring and reporting conducted before project construction.					
Mitigation Measure 3.6-9: Paleontological Discoveries. If a potential fossil is found, the paleontological monitor shall be allowed to temporarily divert or redirect grading and excavation activities in the area of the exposed fossil to facilitate evaluation of the discovery. An appropriate buffer area determined by the paleontological monitor shall be established around the find where construction activities shall not be allowed to continue. Work shall be allowed to continue outside of the buffer area. At the monitor's discretion, and to reduce any construction delay, the grading/excavation contractor shall assist, where feasible, in removing rock/sediment samples for initial processing and evaluation. If a fossil is determined to be significant, the Qualified Paleontologist shall implement a paleontological salvage program to remove the resources from their location, following the guidelines of the SVP (2010). Any fossils encountered and recovered shall be prepared to the point of identification, catalogued, and curated at a public, nonprofit institution with a research interest in the material and with retrievable storage, such as the Natural History Museum of Los Angeles County, if such an institution agrees to accept the fossils. Accompanying notes, maps, and photographs shall also be filed at the repository. If no institution accepts the fossil collection, it may be donated to a local school or other interested organization in the area for educational purposes. If construction workers discover any potential fossils during construction while the paleontological monitor is not present, regardless of the depth of work or location, work at the discovery location shall cease in a 50-foot radius of the discovery until the Qualified Paleontologist has assessed the discovery and recommended and implemented appropriate treatment as described earlier in this measure. Any salvage reports resulting from implementation of this measure shall be filed with the Natural History Museum of Los Angeles County.	1) Paleontological monitor shall provide direction to Construction contractor/manager to temporarily divert or redirect grading and excavation activities in the area of the exposed fossil. Paleontological monitor shall establish an appropriate buffer area around the find where construction activities shall not be allowed to continue. 2) Qualified Paleontologist shall implement a paleontological salvage program. 3) Construction contractor/manager shall cease work at discovery location in a 50-foot radius until the Qualified Paleontologist has assessed the discovery and recommended and implemented appropriate treatment. 4) File report with the Natural History Museum of Los Angeles County.	1) If a potential fossil is encountered during construction of a project. 2) If a fossil is determined to be significant. 3) If construction workers discover any potential fossils during construction while the paleontological monitor is not present. 4) After construction of future projects with potentially significant impacts on paleontological resources. 5) Monitoring and reporting conducted during and after project construction.	Applicant	County of Los Angeles			
Mitigation Measure 3.6-10: Human Remains Discoveries. If human remains are encountered, then the project proponent or its contractor shall immediately halt work within 50 feet of the discovery and contact the County Coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5, which require that no further disturbance shall occur until the County Coroner has made the necessary findings as to the remains' origin and disposition. If the County Coroner determines that the remains are Native American, then the County Coroner will notify the NAHC within 24 hours in accordance with Health and Safety Code Section 7050.5(c), and Public Resources Code Section 5097.98. The NAHC shall then identify the person(s) thought to be the MLD. The MLD may, with the permission of the land owner, or their authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The MLD shall complete their inspection and make their recommendation within 48 hours of being granted access by the landowner to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials. The project proponent, County, and the landowner shall discuss and confer with the MLD on all reasonable options regarding the MLD's preferences for treatment. Until the project proponent, the County, and the landowner have conferred with the MLD, the contractor shall ensure that the immediate vicinity where the discovery occurred is not disturbed by further activity and is adequately protected according to generally accepted cultural or archaeological standards or practices (e.g., the *NAHC's A Professional Guide for the Preservation and Protection of Native American Human Remains and Associated Grave Goods* [NAHC 2022], which reiterates statutory requirements), and that further activities take into account the possibility of multiple burials. If the NAHC is unable to identify an MLD, or the MLD identified fails to make a recommendation, or the landowner rejects the recommendation of the MLD and the	1) Project proponent or its Construction contractor/manager shall immediately halt work within 50 feet of the discovery and contact the County Coroner. 2) Project proponent, County, and the landowner shall discuss and confer with the MLD on all reasonable options regarding the MLD's preferences for treatment. 3) Construction contractor/ manager shall ensure that the immediate vicinity where the discovery occurred is not disturbed by further activity and is adequately protected. 4) In the absence of an MLD, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance.	1-4) If human remains are encountered during construction of a project. 5) Monitoring and reporting conducted during project construction.	Applicant	County of Los Angeles			

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mediation provided for in Public Resources Code Section 5097.94(k), if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance.							
Hazards and Hazardous Materials							
Mitigation Measure 3.10-2: The County shall require applicants of solar PV installation projects that include the use of CdTe modules to dispose of panels or recycle panels in accordance with current local, state, and federal regulations. Broken and end-of-project-life PV modules, materials, and components shall be: • Stored on-site in a manner that complies with federal and state laws until recycling or disposal actions can be taken. • Stored on-site no longer than allowed by federal and state laws. • Recycled in accordance with federal and state laws applicable at that time.	1) Review plans and specifications to ensure disposal of panels or recycle of panels in accordance with current local, state, and federal regulations is included. 2) Field verification to ensure measures are implemented.	1) Prior to construction of future projects. 2) During project construction activities. 3) Monitoring and reporting conducted during project review and construction.	County of Los Angeles/Applicant	County of Los Angeles			
Noise							
Mitigation Measure 3.13-1: Construction Noise. Construction activities associated with new projects facilitated by the 2045 CAP that occur within 500 feet of noise-sensitive receptors (i.e., residences, parks, schools, historic sites, cemeteries, and recreation areas) shall be evaluated by the project applicant for noise impacts that would result in a 5 dBA increase over existing ambient noise levels at any sensitive receptor. Mitigation measures such as installing temporary sound barriers for construction activities that occur adjacent to occupied noise-sensitive structures; equipping construction equipment with more effective mufflers, sound-insulating hoods or enclosures, vibration dampers, and other Best Available Control Technology (BACT); and reducing non-essential idling of construction equipment to no more than five minutes shall be incorporated into construction activities to reduce construction-related noise.	1-2) Review plans and specifications to ensure that measures to reduce noise are included. 3) Construction contractor/manager shall submit a letter to the County verifying full compliance with all requirements. 4) Field Verification to ensure measures are implemented.	1) Prior to future development project approval. 2) Prior to construction of future projects. 3) During future project construction. 4) Monitoring and reporting conducted during project review and construction.	Applicant	County of Los Angeles			
Mitigation Measure 3.13-2: Stationary-Source Noise. For any project that involves a noise-sensitive use within the 65 dBA CNEL contour (i.e., areas in or above 65 dBA CNEL) exposed to project stationary-source noise levels in excess of applicable standards in the Los Angeles County Noise Ordinance, the project applicant shall submit an acoustic analysis prior to project approval. The acoustic analysis shall identify site design features (e.g., setbacks, berms, parapets, equipment enclosures, equipment mufflers, sound walls, or other similar noise control device or noise barrier) and/or required building acoustical improvements (e.g., sound transmission class rated windows, doors, and attic baffling) to ensure compliance with the County's Noise Compatibility Criteria, the California Building Code, and the California Noise Insulation Standards (Title 24 of the California Code of Regulations).	1) Applicant shall submit an acoustic analysis to the County. 2) Review plans and specifications to ensure that project design includes features to reduce noise. 3) Field Verification to ensure measures are implemented.	1) Prior to future development project approval. 2) Prior to construction of future projects. 3) During future project construction. 4) Monitoring and reporting conducted during project review and construction.	Applicant	County of Los Angeles			
Mitigation Measure 3.13-3: Construction Vibration. Individual projects that use vibration-intensive construction equipment, such as pile drivers, jackhammers, and vibratory rollers near vibration-sensitive receptors shall be evaluated by the applicant for potential vibration impacts. If construction-related vibration is determined to be perceptible at vibration-sensitive uses (i.e., exceed the County's standard of 0.01 inches per second (in/sec) vibration velocity [within the range of 1 to 100 Hz frequency]), additional requirements shall be implemented during construction, such as the use of less-vibration-intensive equipment or vibration-reduction construction techniques or strategies (e.g., drilled piles to eliminate the use of a vibration-intensive pile driver, increased setback distances).	1) Applicant shall complete an analysis for potential vibration impacts and submit to the County. 2) Review plans and specifications to ensure project construction includes measures to reduce vibration impacts. 3) Field Verification to ensure measures are implemented.	1) Prior to future development project approval for future projects that include vibration-intensive construction equipment. 2) Prior to construction of future projects. 3) During future project construction. 4) Monitoring and reporting conducted during project review and construction.	Applicant/County of Los Angeles	County of Los Angeles			
Mitigation Measure 3.13-4: New Development Near Railroad Tracks. New development that occurs within 200 feet of a railroad track (according to the FTA's vibration screening distances) shall be evaluated for potential vibration impacts. The project property owner/developers shall retain an acoustical engineer to conduct an acoustic analysis and identify, where appropriate, site design features and/or required building construction	1) Applicant shall retain an acoustical engineer to conduct an acoustic analysis and submit to the County. 2) Review plans and specifications to ensure project design includes features to	1) Prior to future development project approval for projects that occur within 200 feet of a railroad track. 2) Prior to construction of future projects.	Applicant	County of Los Angeles			

Mitigation Measure	Mitigation Method	Timing of Implementation	Implementation Responsibility	Monitoring and Reporting Agency	Verification of Compliance		
					Initials	Date	Remarks
improvements to ensure that vibration impacts would remain below acceptable levels of 0.08 in/sec RMS for residential uses.	keep vibration impacts below acceptable levels.	3) Monitoring and reporting conducted during project review.					
Transportation							
Mitigation Measure 3.15-1, Traffic Control Plan: The County shall require project applicants and construction contractors to coordinate with relevant County departments, transit providers, and emergency service providers to develop a traffic control plan to reduce the impacts of construction traffic on transit service, roadway operations, emergency responders, pedestrian and bicycle facilities, and public safety in the surrounding area. (A traffic control plan may not be required for minor construction activities.) The project applicant shall be responsible for monitoring to ensure that the plan is effectively implemented by the construction contractor(s). Measures that may be employed throughout the course of the construction period include, but are not limited, to the following. • Provide advance notice of lane and sidewalk closures, durations, and alternative routes to emergency service providers, motorists, bicyclists, and pedestrians. • Provide clearly marked pedestrian detours if any sidewalk or pedestrian walkway closures are necessary. • Provide clearly marked bicycle detours if heavily used bicycle routes must be closed, or if bicyclist safety may otherwise be comprised. • Provide crossing-guards and/or flag persons as needed to avoid traffic conflicts and ensure pedestrian and bicyclist safety. • Locate all stationary equipment as far as possible from areas used heavily by vehicles, bicyclists, and pedestrians. • Use nonskid traffic plates over open trenches to reduce hazards. • Implement traffic control measures to reduce vehicle travel delays through construction zones. • Maintain acceptable response times and performance objectives for emergency response services. • Avoid routing construction traffic through residential areas to the extent feasible. • Prohibit mobilization and demobilization of heavy construction equipment during AM and PM peak traffic hours. • Maintain access for driveways and private roads outside the immediate construction zone by using steel plates or temporary backfill, as necessary. • Provide designated areas for construction worker parking wherever feasible to reduce use of parking on streets or in city center areas.	1) Applicant and/or its Construction contractor/manager shall develop a construction traffic control plan. 2) Review plans and specifications to ensure that project includes traffic control plan. 3) Applicant monitor to ensure measures are implemented by Construction contractor/manager.	1) Prior to future development project approval. 2) Prior to construction of future projects. 3) During future project construction. 4) Monitoring and reporting conducted during project review and construction.	County of Los Angeles/Applicant	County of Los Angeles			
Tribal Cultural Resources							
Mitigation Measure 3.16-1: AB 52 Consultation. Consistent with AB 52, before the release of a negative declaration, mitigated negative declaration, or EIR, the County shall initiate consultation within 14 days of a decision to undertake a project facilitated by 2045 CAP measures or actions. The County shall provide formal notification to the designated contact of, or a tribal representative of, each traditionally and culturally affiliated California Native American tribe that has requested notice. The County shall begin the consultation process within 30 days after receiving a California Native American tribe's request for consultation. The purpose of the consultation shall be to identify sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that meet the definition of tribal cultural resources provided in CEQA Section 21074(a)(1) or Section 21074(a)(2). In addition, the California Native American tribe may request consultation regarding the type of environmental review necessary, the significance of tribal cultural resources, the significance of the project's impacts on the tribal cultural resources, and, if necessary, project alternatives or the appropriate measures for preservation or mitigation. If tribal cultural resources are identified, the County shall implement mitigation measures that could avoid or substantially lessen significant impacts on such resources, including but not limited to the measures recommended in Public Resources Code Section 21084.3, or shall implement alternatives that would avoid significant impacts on the tribal cultural	1) County shall initiate AB 52 Consultation. 2) County shall begin the consultation process. 3) County shall implement measures or alternatives that could avoid or substantially lessen significant impacts on tribal cultural resources, in consultation with the California Native American tribe.	1) Within 14 days of decision to undertake a future project. 2) Within 30 days after receiving a California Native American tribe's request for consultation. 3) If tribal cultural resources are identified. 4) Monitoring and reporting conducted during project review.	County of Los Angeles	County of Los Angeles			

Mitigation Measure	Mitigation Method	Timing of Implementation	Implementation Responsibility	Monitoring and Reporting Agency	Verification of Compliance		
					Initials	Date	Remarks
resources. Such measures shall be implemented in consultation with the California Native American tribe.							
Wildfire							
Mitigation Measure 3.18-3: Fire Safety During Construction and Operation. Future applicants and/or their contractors shall prepare and implement project-specific fire protection plans for projects located in the VHFHSZ to ensure that wildfire-related hazards are not exacerbated by projects facilitated by the 2045 CAP measures or goals. The applicant shall prepare and submit a fire protection plan to the County for review and approval at least 60 days before the start of construction activities. The fire protection plan shall include or require, but not be limited to, the following measures along with Fire Code compliance, as applicable to address construction and operation: • A training module within the pre-construction worker training (e.g., Worker Environmental Awareness training, safety training, fire equipment and procedures) on the specifics of the approved plan for all construction crew members before the start of construction. • List project site roles and responsibilities and identify appropriate emergency notification procedures and site-specific emergency response and evacuation measures and routes that would be followed during emergency situations. All construction vehicles shall have fire suppression equipment. • Instruct construction personnel to park vehicles within roads, road shoulders, graveled areas, and/or cleared areas (i.e., away from dry vegetation) wherever such surfaces are present at the construction site. • Protocol for the project contractor and/or the applicant to perform visual inspections to ensure that all ignition risks are reduced or eliminated before leaving the worksite. Identify fire safety and prevention measures for project-specific infrastructure that can ignite fires, such as power lines, battery storage facilities, and composting facilities.	1) Applicant and/or its Construction contractor/manager shall prepare and submit a fire protection plan to the County. 2) Review plans and specifications to ensure project includes fire protection measures.	1) At least 60 days before the start of construction activities. 2) Prior to future development project approval for projects located in the VHFHSZ, and prior to construction of future projects 3) Monitoring and reporting conducted during project review.	Applicant	County of Los Angeles			