

**SANTA SUSANA MOUNTAINS
TRAILS MASTER PLAN – PHASE II**

INITIAL STUDY / MITIGATED NEGATIVE DECLARATION

**VOLUME II
APPENDICES A–C**

PREPARED FOR:

**COUNTY OF LOS ANGELES DEPARTMENT OF PARKS AND RECREATION
510 S. VERMONT AVE.
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NOVEMBER 2, 2017

Appendix A

Aesthetics Technical Report

SANTA SUSANA MOUNTAINS TRAILS MASTER PLAN – PHASE II

AESTHETICS TECHNICAL REPORT

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EXECUTIVE SUMMARY

This Aesthetics Technical Report documents the results of the aesthetics evaluation that was undertaken in support of the proposed Santa Susana Mountains Trails Master Plan – Phase II (SSMTMP-P II, or proposed project). Based on two site visits, viewshed analysis, and map review, the construction, recreational use, and maintenance activities associated with the proposed project would have the potential to result in impacts to aesthetics that would be mitigated to below the level of significance with mitigation measures.

SCENIC VISTAS. The proposed project would not result in impacts to aesthetics in regard to a substantial adverse effect on a scenic vista because there are no designated scenic vista points within the SSMTMP-P II area; nor is the SSMTMP-P II area visible from scenic vistas designated within the Los Angeles County General Plan 2035 or by Caltrans.

REGIONAL RIDING AND HIKING TRAILS. The proposed project would result in less than significant impacts to aesthetics regarding visibility from a regional riding or hiking trail because, although the proposed project may be visible from nearby existing regional trails, it would not be expected to obstruct views due to intervening topography, trees, and shrubs, as well as the small scale of the proposed facilities. A viewshed analysis was conducted that determined that, based on topography, up to 65.1 percent of the SSMTMP-P II area would potentially be visible from the existing regional riding and hiking trails with clear atmospheric conditions and no intervening trees or shrubs.

SCENIC RESOURCES WITHIN STATE SCENIC HIGHWAY CORRIDORS. The proposed project would result in significant impacts to aesthetics in regard to substantial damage to scenic resources within a state scenic highway corridor. The proposed project would have the potential to be visible from one Officially Designated State Scenic Highway (SR-27) and up to six Eligible State Scenic Highway corridors. Implementation of Mitigation Measures AES-1 and AES-2 is required to reduce impacts to scenic resources within the state scenic highway corridors to less than significant.

VISUAL CHARACTER AND QUALITY. The proposed project would result in less than significant impacts to aesthetics in regard to substantial degradation of the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, character, or other features. Trails and related supporting facilities would generally not be expected to substantially degrade the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, or character because they would be low to the ground, spaced and designed in a pattern that follows the natural topography and existing paved and dirt roads, and be consistent with the scale and character of the rural SSMTMP-P II area that already contains several dirt access roads and fire roads throughout the mountainous and hilly terrain.

SHADOWS, LIGHT, AND GLARE. The proposed project would result in less than significant impacts to aesthetics in relation to the creation of a new source of substantial shadows, light or glare. Typical hours of operation for Los Angeles County trails are from dawn to dusk (County Code 17.04.330). Where lighting features are provided for safety and wayfinding reasons, lighting would be installed in a manner to be nonintrusive to adjacent uses, avoid detracting from a natural outdoors experience for trail users, and directed downward to avoid light pollution or spillover in general, in accordance with the guidelines of the County Trails Manual.¹

¹ County of Los Angeles Department of Parks and Recreation. Adopted 17 May 2011. Revised June 2013. *County of Los Angeles Trails Manual*. Available at: <https://trails.lacounty.gov/Files/Documents/69/LA%20County%20Trails%20Manual%20%28Revised%2006-20-13%29.compressed.pdf>

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APPENDICES

A.1	Key Observation Points
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SECTION 1.0 INTRODUCTION

This Aesthetics Technical Report (ATR) provides the County of Los Angeles (County) with the substantial evidence used to make a determination that anticipated significant impacts to aesthetics related to the construction, operation, or maintenance of the proposed Santa Susana Mountains Trails Master Plan – Phase II (SSMTMP-P II or proposed project) would be reduced to below the level of significance with the implementation of mitigation measures.

1.1 CEQA COMPLIANCE

The County of Los Angeles Department of Parks and Recreation (DPR) proposes to complete the SSMTMP-P II, ultimately to amend the Parks and Recreation Element of the Los Angeles County General Plan 2035 (County General Plan) to include the SSMTMP-P II, which would guide future trail development and recommend improvements to existing trails. The proposed project would ultimately result in the construction and use of trails in public and private lands, some of which may involve the expenditure of public funds, and thus constitutes a project pursuant to the California Environmental Quality Act (CEQA). These trails would be located in the unincorporated territory of Los Angeles County; therefore, the County would be the Lead Agency pursuant to CEQA.

1.2 PURPOSE

The purpose of the ATR is to support the County in development of a Master Plan that would minimize the impacts on the surrounding community. It is understood that the County expects to move forward with Phase II of the Trails Master Plan and seeks funding for construction, operation, and maintenance of the Trails Master Plan. This ATR provides the requisite information related to aesthetics to support the County's decision-making process in relation to the Trails Master Plan. The evaluation of the proposed project's potential to result in significant impacts to aesthetics was undertaken in accordance with Appendix G of the CEQA Guidelines, the County DPR Environmental Checklist Form, and the County General Plan. The analysis contained herein for Phase II can be extrapolated to assess the potential for the larger Trails Master Plan to result in significant impacts to aesthetics as currently conceived by the County.

1.3 INTENDED AUDIENCE

This ATR provides information for consideration by DPR and the design team, Alta Planning+Design, engaged in the development of the proposed project. The substantial evidence will be available for the responsible and trustee agencies, and the public, including property owners, during circulation of the draft environmental document for public review. Ultimately, the ATR will be used by the County Board of Supervisors to support their decision-making process related to the proposed project. The ATR will also inform the County and private parties in the ultimate development, operation, and maintenance of trails in the plan area.

1.4 SCOPE

In May 2015, the County adopted the first phase of the Santa Susana Mountains Final Trails Master Plan (SSMFTMP), which involved the extension of the 35.7 miles of existing County-, City-, and

Conservancy-managed trails in the Phase I and Phase II study areas by approximately 35.9 miles with 22 proposed trail segments, for a total of approximately 71.6 miles of trails. In 2017, the County initiated planning efforts for further development of the Phase II study area, which has been expanded to Phase II.a and II.b. This technical report provides the requisite information related to aesthetics to support the County's decision-making process in relation to the proposed project: regulatory framework; methods; existing conditions; thresholds of significance; and the consideration of the potential for direct, indirect, and cumulative impacts. The scope of analysis considered the potential for impacts on aesthetics from the proposed project in relation to scenic vistas; views from existing regional trails; scenic resources within a scenic highway corridor; visual character and quality of the site and its surroundings; and shadows, light, and glare. The County of Los Angeles Trails Manual was consulted for ability of the proposed project to meet the County's objectives related to the visual and aesthetic experience of recreation users and adjacent land uses. As the proposed project is a plan, the analysis was conducted a programmatic level of detail, consistent with the provisions of the State CEQA Guidelines.

1.5 DEFINITIONS

Contrast: The opposition or unlikeness of different forms, lines, colors, or textures in a landscape.

Glare: Perceived glare is the unwanted and potentially objectionable sensation as observed by a person looking directly into the light source (e.g., the sun, the sun's reflection, automobile headlights, or other light fixtures). Reflective surfaces on existing buildings, car windshields, etc., can expose people and property to varying levels of glare.

Key Observation Point (KOP): One or a series of points on a travel route or at a use area or potential use area where the view of a management activity (action) would be the most revealing.

Scenic Resources: Significant visual resources identified by local planning documents that can be maintained and enhanced to promote a positive image in the community, such as natural open spaces, topographic formations, and landscapes that contribute to a high level of visual quality. Natural landforms and landscapes are often established as scenic resources, such as lakes, rivers and streams, mountain meadows, and oak woodlands. However, scenic resources can also include man-made open spaces and the built environment, such as parks, trails, nature preserves, sculpture gardens, and similar features.

Shadow Sensitive Uses: Shadow sensitive uses are land uses that are considered sensitive to the effects of new light-blocking structures casting shadows because sunlight is important to the function, physical comfort, or commerce of the land use. Facilities and operations that are considered sensitive to the effects of shadows include: routinely useable outdoor spaces associated with residential, recreational, or institutional (e.g., schools, convalescent homes) land uses; commercial uses such as pedestrian-oriented outdoor spaces or restaurants with outdoor eating areas; nurseries; and existing solar collectors.²

Viewshed: The landscape that can be directly seen under favorable atmospheric conditions, from a viewpoint or along a transportation corridor.

² City of Los Angeles. 2006. *L.A. CEQA Thresholds Guide*. Chapter A, Aesthetics and Visual Resources. Available at: <http://environmentla.com/programs/Thresholds/A-Aesthetics%20and%20Visual%20Resources.pdf>

SECTION 2.0

PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The County adopted the SSMFTMP in May 2015, which proposed trails within a Phase I study area in the San Fernando Valley and a Phase II study area in the Santa Clarita Valley.³ Phase II is the northerly part of the plan area. In 2017, the County initiated planning efforts for further development of the Phase II study area, which has been expanded to Phase II.a and II.b. The Trails Master Plan (approximately 49 square miles, inclusive of Phase I) is located north and west of the San Fernando Valley in the Santa Susana Mountains, in the western portion of the unincorporated area of the County of Los Angeles (Figure 2.1-1, *Regional Vicinity Map*). The Santa Susana Mountains are centrally located in the Transverse Ranges, a group of east-west trending mountains paralleling the Pacific Ocean between Santa Barbara and San Diego Counties.

2.2 TRAILS MASTER PLAN STUDY AREA

The SSMFTMP-P II is the second phase of the previously approved SSMFTMP. The Trails Master Plan is located in the U.S. Geological Survey (USGS) 7.5-minute series, Newhall, Oat Mountain, Simi Valley East, and Val Verde, California, topographic quadrangles. The Trails Master Plan has elevations that range from approximately 946 to 3,430 feet above mean sea level (msl).

Phase I Area. Phase I of the Trails Master Plan is located on the USGS 7.5-minute series Simi Valley East and Oat Mountain topographic quadrangles. The northern boundary of the Trails Master Plan – Phase I, as described in the SSMFTMP approved in May 2015, is defined by the southern limits of the County’s Newhall Ranch Specific Plan Area and the northern limits of the proposed Santa Susana Mountains / Simi Hills Significant Ecological Area (SEA). The southern boundary is defined by the northern limit of the City of Los Angeles. The eastern boundary is defined by U.S. Interstate 5 (I-5). The western boundary is defined by the corporate boundary between Los Angeles and Ventura Counties (Figure 2.2-1, *Trails Master Plan Location*). The SSMFTMP is divided into two subareas or phases (see Figure 2.2-1). Phase I is the Northwest San Fernando Valley Study Area, and Phase II is the Southwest Santa Clarita Valley Study Area. Phase I includes 16,038.1 acres (25.1 square miles); the northern boundary is defined by the northern limits of the Los Angeles County Oat Mountain Planning Area, the southern boundary is defined by the northern limit of the City of Los Angeles, the eastern boundary is defined by the I-5 freeway, and the western boundary is defined by the boundary between Los Angeles and Ventura Counties.

Phase II Area. Phase II from the SSMFTMP includes 8,084.4 acres (12.6 square miles). The northern boundary is defined by the northern limits of the proposed Santa Susana Mountains / Simi Hills SEA. The southern boundary is defined by the southern limits of the proposed Santa Susana Mountains / Simi Hills SEA. The eastern boundary is defined by the I-5 freeway. The western boundary is defined by the southern and eastern boundaries of the Newhall Ranch Specific Plan area.

³ County of Los Angeles Department of Parks and Recreation. May 2015. *Santa Susana Mountains Final Trails Master Plan*. Available at: <https://trails.lacounty.gov/Documents>

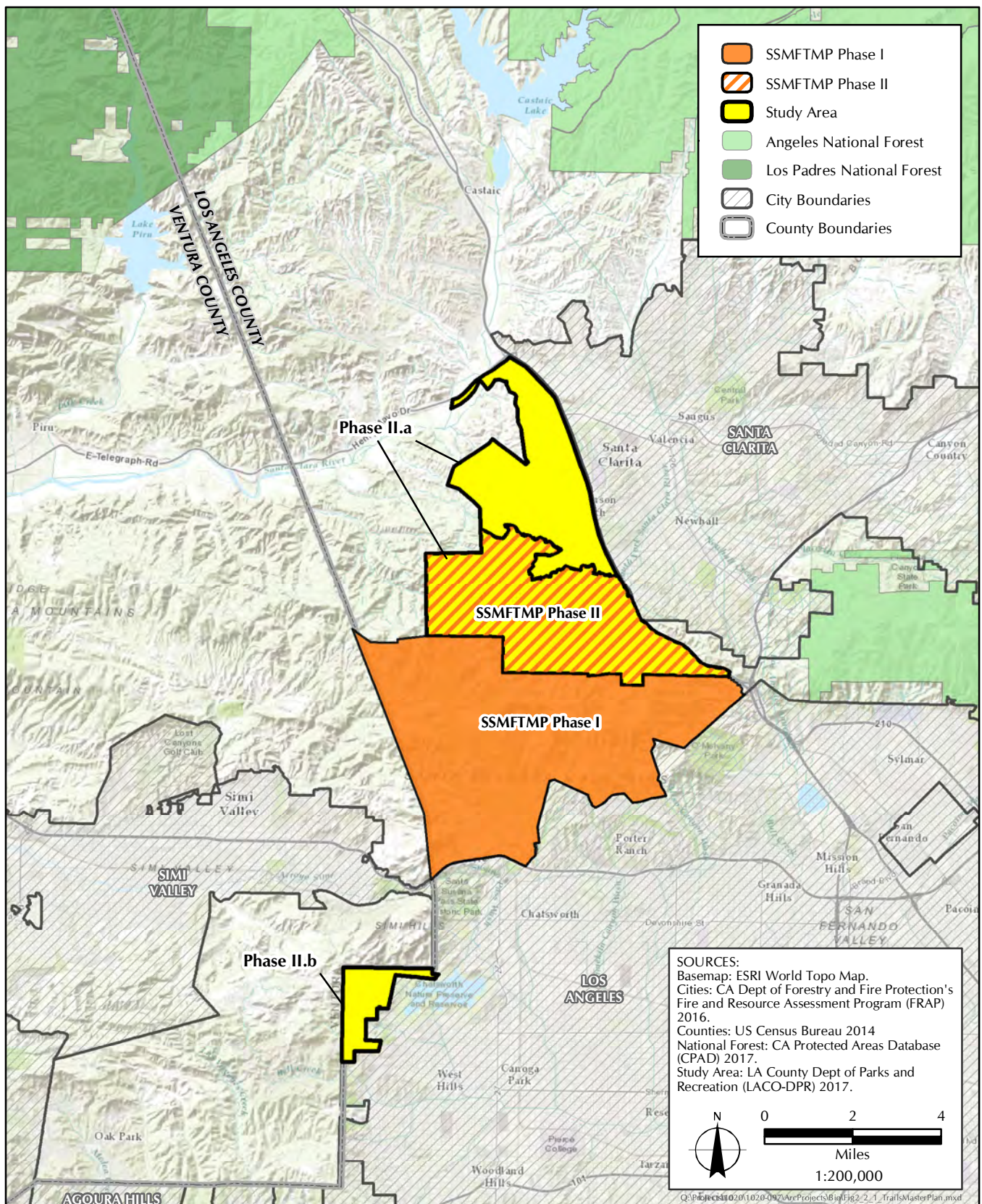


FIGURE 2.2-1
 Trails Master Plan Location

The Trails Master Plan – Phase II has been expanded beyond the spatial extents of Phase II in the SSMFTMP and divided into two subareas. The Phase II.a area is an approximately 22-square-mile area located in the north-facing slopes of the Santa Susana Mountains and the Santa Clarita Valley that is bound by Henry Mayo Drive (State Route [SR] 126) to the north, the I-5 freeway to the east, Phase I of the adopted SSMFTMP Area to the south, and the Newhall Ranch Specific Plan Area to the west. The Phase II.b area is an approximately 2-square-mile area located in the foothills of the Santa Monica Mountains, including Bell Canyon, Dayton Canyon, and Woolsey Canyon, west of the San Fernando Valley, which is bound by Ventura County to the north and west and the city of Los Angeles to the east and south. The expanded Phase II of the Trails Master Plan is located on the Val Verde, Newhall, Simi Valley East (Santa Susana), Oat Mountain, and Calabasas topographic quadrangles (Figure 2.2-2, *Topographic Map with USGS 7.5-minute Quadrangle Index*). Situated along the southern flanks of the Santa Susana Mountains, the topography of the Trails Master Plan is characterized by a series of southwest draining canyons that are separated by steep-sloped and narrow ridge tops.

2.3 PROJECT SUMMARY

The overall work efforts include a trails master plan and associated CEQA documentation. Individual trail alignments would be developed at a later phase of this project, which is intended to provide a trail planning framework for the study area.

Project Goals and Objectives

The SSMTMP-P II would guide future trail development and recommend improvements to existing trails. The Trails Master Plan would provide trail users and local populations with seamless transitions throughout the proposed study area to trails of adjacent jurisdictions and prime destinations within and adjacent to the study area. The plan seeks to accomplish two primary goals:

1. Develop a complete multi-use trail system connecting user groups and local populations to desired recreation destinations and experiences, with seamless transitions to the trails of adjacent jurisdictions, compatibility with adjacent land uses and environmental resources, and a safe and sustainable design that is consistent with the County of Los Angeles Trails Manual.
2. Develop a recreational trail system that supports low-intensity use, including mountain biking, equestrian use, and hiking, to accommodate the population increase anticipated in the Santa Clarita Valley Planning Area and San Fernando Valley Planning Area through the 2035 planning horizon consistent with the Parks and Recreation Element of the County General Plan.

Project Elements

The SSMTMP-P II involves approximately 70 miles of proposed new multi-use trails in the Santa Clarita Valley Planning Area and San Fernando Valley Planning Area (Figure 2.3-1, *Existing and Proposed Trails*). The trails would be multi-use and range from 3 to 11 feet wide based on site conditions, with adequate space for combined pedestrian, equestrian, and mountain biking use, in accordance with the County Trails Manual guidelines.

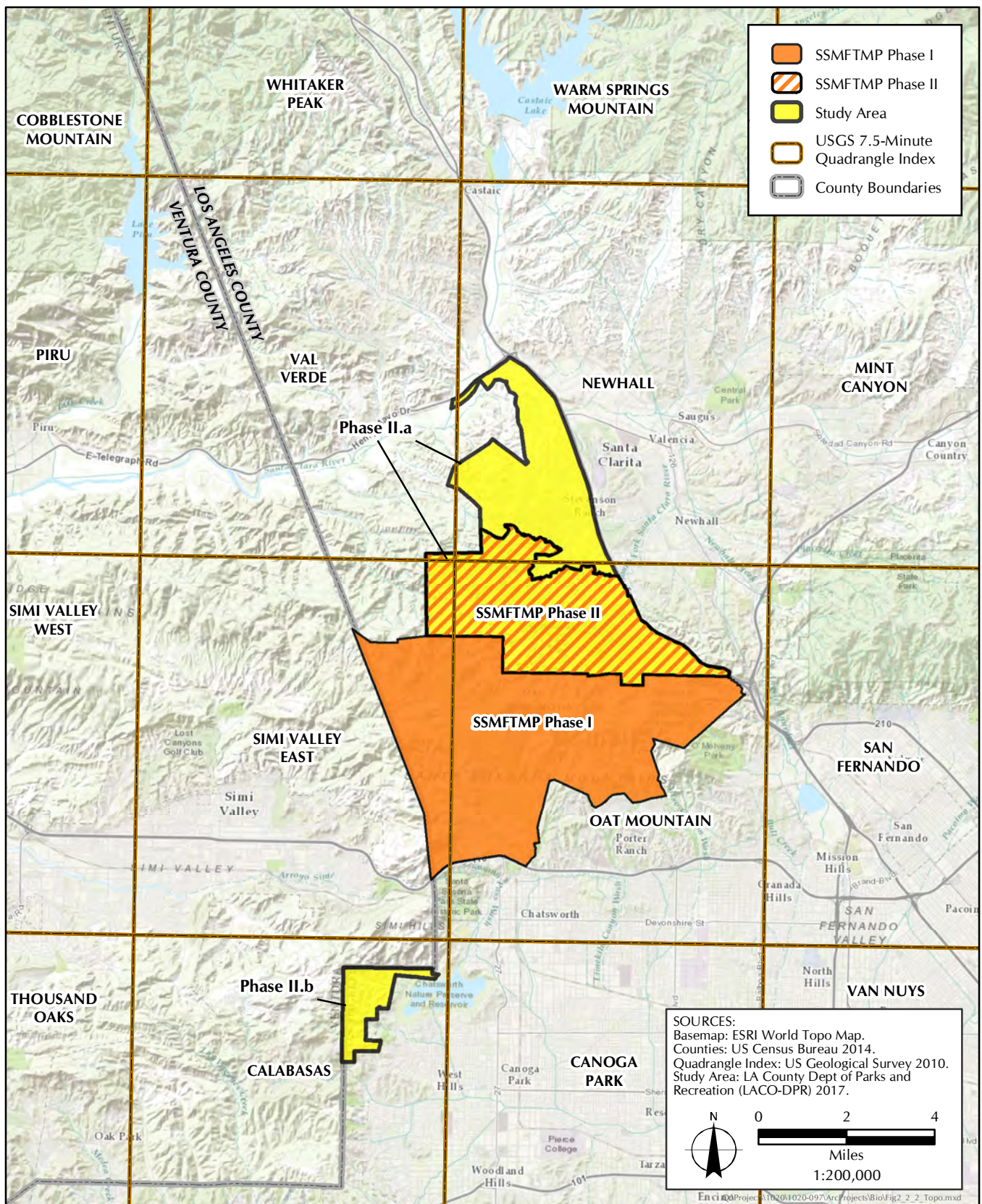


FIGURE 2.2-2

Topographic Map with USGS 7.5 Minute Quadrangle Index

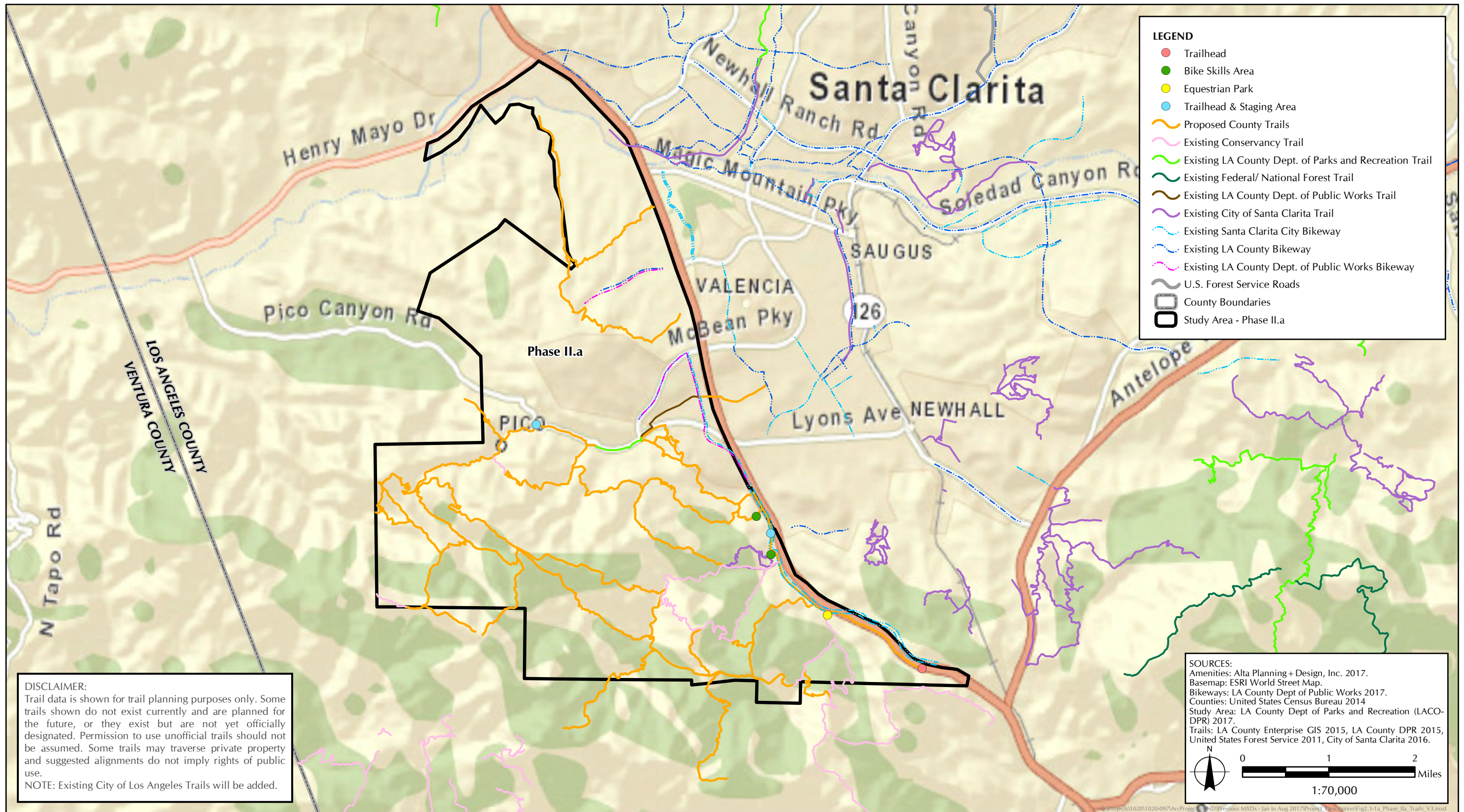


FIGURE 2.3-1a
Existing and Proposed Trails (Phase II.a)

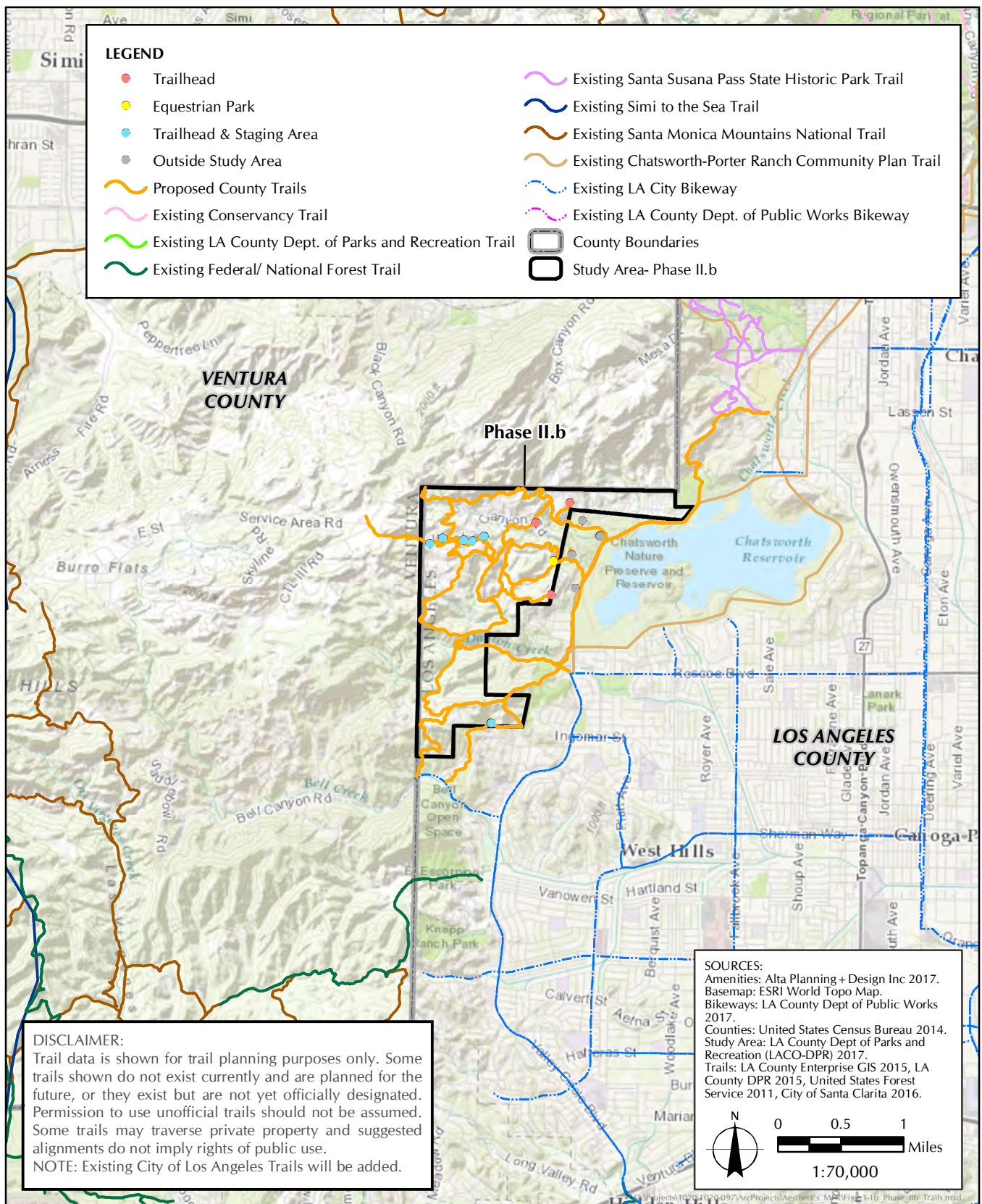


FIGURE 2.3-1b
 Existing and Proposed Trails (Phase II.b)

The proposed trails would provide connections to the proposed Rim of the Valley Trail, trails in the City of Los Angeles, trails in the City of Santa Clarita, trails in the Newhall Ranch Specific Plan area, and trails within other jurisdictions as identified in the Trails Master Plan. The SSMTMP-P11 identifies up to 20 potential locations for proposed facilities, including 4 trailheads, 2 bike skills areas, 2 equestrian parks, 8 trailhead and staging areas, and 4 trailheads outside the study area within the City of Los Angeles that would need to be developed by the City of Los Angeles. As the recommended City of Los Angeles trailheads would not be developed under jurisdiction of the County, this Report considers the 16 proposed facilities located within the SSMTMP-P11 study area.

Trails and supporting facilities within a one-mile radius of officially designated and eligible State scenic highways would be designed, constructed, and maintained (where construction equipment is involved) to preserve scenic resources, including but not limited to trees, rock outcroppings, and historic buildings, within the scenic highway corridor. Where construction of trails or related supporting facilities requires cuts into the slope (which can be seen from a far distance), the visual character of the slope would be restored by planting locally native vegetation as a visual screen. Similarly, restrooms and other supporting structures would be constructed of materials that blend into the landscape, with locally native vegetative screening. As stated in the County Trails Manual, the hours for operation for County trails are typically from dawn to dusk (County Code 17.04.330). In accordance with the guidelines in Section 4.3.18, *Lighting*, of the County Trails Manual, where lighting features are provided for safety and wayfinding reasons, lighting would be installed in a manner to be non-intrusive to adjacent uses, avoid detracting from a natural outdoors experience for trail users, and directed downward to avoid light pollution or spillover in general.⁴

⁴ County of Los Angeles Department of Parks and Recreation. Adopted by the Board of Supervisors on May 17, 2011. Revised June 2013. *County of Los Angeles Trails Manual*. Available at: <https://trails.lacounty.gov/Documents>

3.1 FEDERAL

Federal Land Policy and Management Act of 1976

A portion of the Phase II.a area is administered by the U.S. Department of the Interior Bureau of Land Management (BLM).⁵ Under the Federal Land Policy and Management Act of 1976, public lands administered by the BLM shall be managed in a manner that will protect the quality of resources including scenic values,⁶ and the Secretary of the Interior shall prepare and maintain an inventory of all public lands and their resources and other values, including outdoor recreation and scenic values,⁷ to reflect changes in conditions. The BLM utilizes the Visual Resource Management (VRM) system to classify the visual value (quality) of visual resources to determine the appropriate level of management for BLM-administered lands.⁸ The contrast rating process (Manual Section 8431) provides BLM managers with a systematic means to evaluate proposed projects for conformance with VRM objectives and identify mitigating measures to minimize adverse visual impacts, and the visual resource inventory (VRI) process (Manual Section 8410) provides BLM managers with a means for determining visual values. The VRI process consists of a scenic quality evaluation, sensitivity level analysis, and a delineation of distance zones for classification into four VRI classes based on management objectives: Class I and II (most valued; preserve or retain existing character of the landscape), Class III (moderate value; partially retain existing character), and Class IV (least value; modify the existing character).⁹

National Environmental Policy Act

The National Environmental Policy Act (NEPA) of 1969 requires measures to be taken to assure aesthetically pleasing surroundings and the integration of Environmental Design Arts in the planning and decision-making for federal agency projects.¹⁰ In the absence of a Memorandum of Agreement, the County does not have the authority to plan trails on lands administered by the BLM. Should the desire to link to or cross-through lands administered by the BLM be identified, it is understood that coordination would need to be undertaken with the BLM. Trail development on lands administered by the BLM would be subject to the NEPA.

⁵ County of Los Angeles. 2012. *Santa Clarita Valley Area Plan*. Figure CO-8: Recreation and Open Space. Available at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf Appendix II, Page 281.

⁶ U.S. Department of the Interior Bureau of Land Management. September 2016. *The Federal Land Policy and Management Act of 1976 As Amended*. Section 102 (a)(8), Section 103(c). Available at: <https://www.blm.gov/documents/national-office/public-room/report/federal-land-policy-and-management-act-1976>

⁷ U.S. Department of the Interior Bureau of Land Management. September 2016. *The Federal Land Policy and Management Act of 1976 As Amended*. Section 201(a).azq Available at: <https://www.blm.gov/documents/national-office/public-room/report/federal-land-policy-and-management-act-1976>

⁸ U.S. Department of the Interior Bureau of Land Management. 5 April 1984. *Manual 8400 – Visual Resource Management*. Available at: <https://www.blm.gov/programs/recreation/recreation-programs/visual-resource-management>

⁹ U.S. Department of the Interior Bureau of Land Management. 17 January 1986. *Manual H-8410-1 - Visual Resource Inventory*. Available at: <https://www.blm.gov/programs/recreation/recreation-programs/visual-resource-management>

¹⁰ U.S. Department of the Interior Bureau of Land Management. 5 April 1984. *Manual 8400 – Visual Resource Management*. Available at: <https://www.blm.gov/programs/recreation/recreation-programs/visual-resource-management>

3.2 STATE

California Department of Transportation (Caltrans) California Scenic Highways Program

The California Scenic Highways Program was created in 1963 under Senate Bill 1467, which added Sections 260 through 263 to the Streets and Highways Code, to preserve and protect scenic highway corridors from change that would reduce the aesthetic value of lands adjacent to highways.¹¹ According to Caltrans' Scenic Highway Guidelines, scenic highway corridors consist of land that is visible from, adjacent to, and outside the highway right-of-way, and is composed primarily of scenic and natural features. Topography, vegetation, viewing distance, and/or jurisdictional lines determine the corridor boundaries.¹² To be included in the state program, the highways proposed for designation must meet Caltrans' eligibility requirements and have visual merit. County highways and roads that meet the Caltrans Scenic Highways Program standards may also be officially designated. The state laws governing the Scenic Highway Program are provided in the California Streets and Highways Code, Sections 260 through 263. The State Scenic Highway System includes a list of highways that have been designated by Caltrans as scenic highways or are eligible for designation as scenic highways. These highways are designated in Section 263 of the Streets and Highways Code. A scenic corridor is the land generally adjacent to and visible from the highway and is identified by using a motorist's line of vision. A reasonable boundary is selected when the view extends to the distant horizon. Caltrans outlines the following minimum requirements for scenic corridor protection (Section 261 of the Streets and Highways Code): (1) regulation of land use and intensity (density) of development, (2) detailed land and site planning, (3) control of outdoor advertising, (4) careful attention to and control of earthmoving and landscaping, and (5) the design and appearance of structures and equipment. Caltrans defines noncompliance for a Corridor Protection Program as a program that: (1) no longer complies with the five legislatively required elements under Section 261 of the Street and Highways Code, (2) no longer affords protection because required elements have been amended or changed, or (3) no longer is being enforced by the local governing body. Caltrans also maintains approximately 135 vista points along state highways where motorists can safely view scenery or park and relax.¹³

3.3 COUNTY

County of Los Angeles General Plan

The entire SSMTMP area, including Phase I, Phase II.a, and Phase II.b, is located within the County of Los Angeles and subject to the provisions of the County General Plan. The Land Use Element of the County General Plan provides strategies and planning tools to facilitate and guide future development and revitalization efforts.¹⁴ The County recognizes that scenic features in the region, such as the coastline and mountain vistas, are significant natural resources for the County. The Land Use Element includes land use policies that protect the visual quality of scenic resources,

¹¹ California Department of Transportation. Accessed 1 August 2017. Frequently Asked Questions. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/faq.htm

¹² California Department of Transportation. October 2008. *Scenic Highway Guidelines*. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/guidelines/scenic_hwy_guidelines_04-12-2012.pdf

¹³ California Department of Transportation (Caltrans). Updated 30 September 2016. *Vista Point Planning and Design*. Available at: <http://www.dot.ca.gov/design/lap/livability/vista-points.html>

¹⁴ County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. *Los Angeles County General Plan 2035*. Chapter 6: Land Use Element. Available at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch6.pdf

including Hillside Management Areas (HMAs), ridgelines, scenic viewsheds, and areas along scenic highways. The purpose of the Conservation (OS-C) land use category is to preserve open space and scenic resources in perpetuity.

The Conservation and Natural Resources Element of the County General Plan serves as the policy guide for conservation of scenic resources in Los Angeles County.¹⁵ The Conservation and Natural Resources Element identifies the three official State Scenic Highways in the County, describes scenic viewsheds, and identifies significant ridgelines that need to be protected and preserved. According to **County Policy C/NR 13.10**, significant ridgelines are identified by five criteria: (1) topographic complexity, (2) uniqueness of character and location, (3) presence of cultural or historic landmarks, (4) visual dominance on the skyline or viewshed [e.g., height and elevation of a ridgeline], and (5) environmental significance to natural ecosystems, parks, and trail systems. The Conservation and Natural Resources Element has established **Goal C/NR 13: Protected visual and scenic resources**, supported by six policies relevant to aesthetics in consideration of the proposed project:

- **Policy C/NR 13.1:** Protect scenic resources through land use regulations that mitigate development impacts.
- **Policy C/NR 13.2:** Protect ridgelines from incompatible development that diminishes their scenic value.
- **Policy C/NR 13.3:** Reduce light trespass, light pollution, and other threats to scenic resources.
- **Policy C/NR 13.5:** Encourage required grading to be compatible with the existing terrain.
- **Policy C/NR 13.7:** Encourage the incorporation of roadside rest stops, vista points, and interpretive displays into projects in scenic areas.
- **Policy C/NR 13.9:** Consider the following in the design of a project that is located within an HMA, to the greatest extent feasible:
 - Public safety and the protection of hillside resources through the application of safety and conservation design standards;
 - Maintenance of large contiguous open areas that limit exposure to landslide, liquefaction and fire hazard and protect natural features, such as significant ridgelines, watercourses, and SEAs.

Significant Ecological Areas

The Conservation and Natural Resources Element contains a planning overlay called the Significant Ecological Area (SEA) Program, which designates ecologically important land and water systems to preserve valuable habitat for rare, threatened, or endangered plant and animal species and

¹⁵ County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. *Los Angeles County General Plan 2035*. Chapter 9: Conservation and Natural Resources Element. Available at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch9.pdf

conserve biological diversity in Los Angeles County. It also limits development in unincorporated regions of the County through requirement of a SEA Conditional Use permit for project review by biologists on the SEA Technical Advisory Committee (SEATAC).¹⁶ According to the SEA Program, SEA designations provide an informational basis for review of private projects subject to CEQA requirements, which means that public trails do not fall under SEATAC review.¹⁷

Rural Outdoor Lighting District Ordinance

Approximately 50 percent of the SSMTMP-PII area is located within the County's Rural Outdoor Lighting District (Lighting District) and subject to restrictions in terms of light and glare at night (see Figure 3.3-1, *Significant Ecological Reas and Special Districts*).¹⁸ The Rural Outdoor Lighting District Ordinance, adopted in November 2012, is an amendment to Title 22 (Planning and Zoning of the Los Angeles County Code), which establishes a supplemental district for the rural areas of the County within which outdoor lighting is regulated to maintain dark skies at night for the residents and wildlife in the district.¹⁹ The ordinance also modifies the community standards districts located within the district to be consistent with the dark skies ordinance. Under the ordinance, outdoor lighting shall be fully shielded on properties located in residential, agricultural, open space, or watershed zones. Drop-down lenses, mercury vapor light, ultraviolet lights, searchlights, laser lights, and other lighting that flashes, blinks, alternates, or moves are prohibited within the rural outdoor lighting district.

3.4 LOCAL

Santa Clarita Valley Area Plan (One Valley One Vision)

The entire Phase II.a area is located within the Planning Area of the County's Santa Clarita Valley Area Plan, which comprises the entire Santa Clarita Valley and provides goals, policies, and maps to establish zoning regulations and guide new development proposals.²⁰ The Area Plan has designated Significant Ridgelines as valuable scenic resources to be protected during development and trail planning and construction.²¹ Relevant guiding principles regarding Environmental Resources stated in the Santa Clarita Valley Area Plan include:

¹⁶ County of Los Department of Regional Planning. Accessed 1 August 2017. SEA Program. Available at: <http://planning.lacounty.gov/sea>

¹⁷ Male, Laura, Sapphos Environmental, Inc., Pasadena, CA. 9 July 2013. Telephone conversation with Emma Howard, Los Angeles County, CA. Subject: SEA Program Exemptions.

¹⁸ County of Los Angeles Department of Regional Planning. Accessed 1 August 2017. *GIS-NET3 Public*. Planning & Zoning Information for Unincorporated LA County. Available at: http://gis.planning.lacounty.gov/GIS-NET3_Public/Viewer.html

¹⁹ County of Los Angeles Department of Regional Planning. 28 September 2012. Ordinance No. 2012-0047. Available at: http://planning.lacounty.gov/assets/upl/data/ord_outdoor-lighting.pdf Main website: http://planning.lacounty.gov/view/rural_outdoor_lighting_district_ordinance/

²⁰ County of Los Angeles. 2012. *Santa Clarita Valley Area Plan: One Valley One Vision*. Available at: http://planning.lacounty.gov/view/santa_clarita_valley_area_plan/

²¹ County of Los Angeles. 2012. *Santa Clarita Valley Area Plan: One Valley One Vision*. Appendix II, Page 280. "Figure CO-7: Santa Clarita Valley Area Plan: Scenic Resources." Available at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

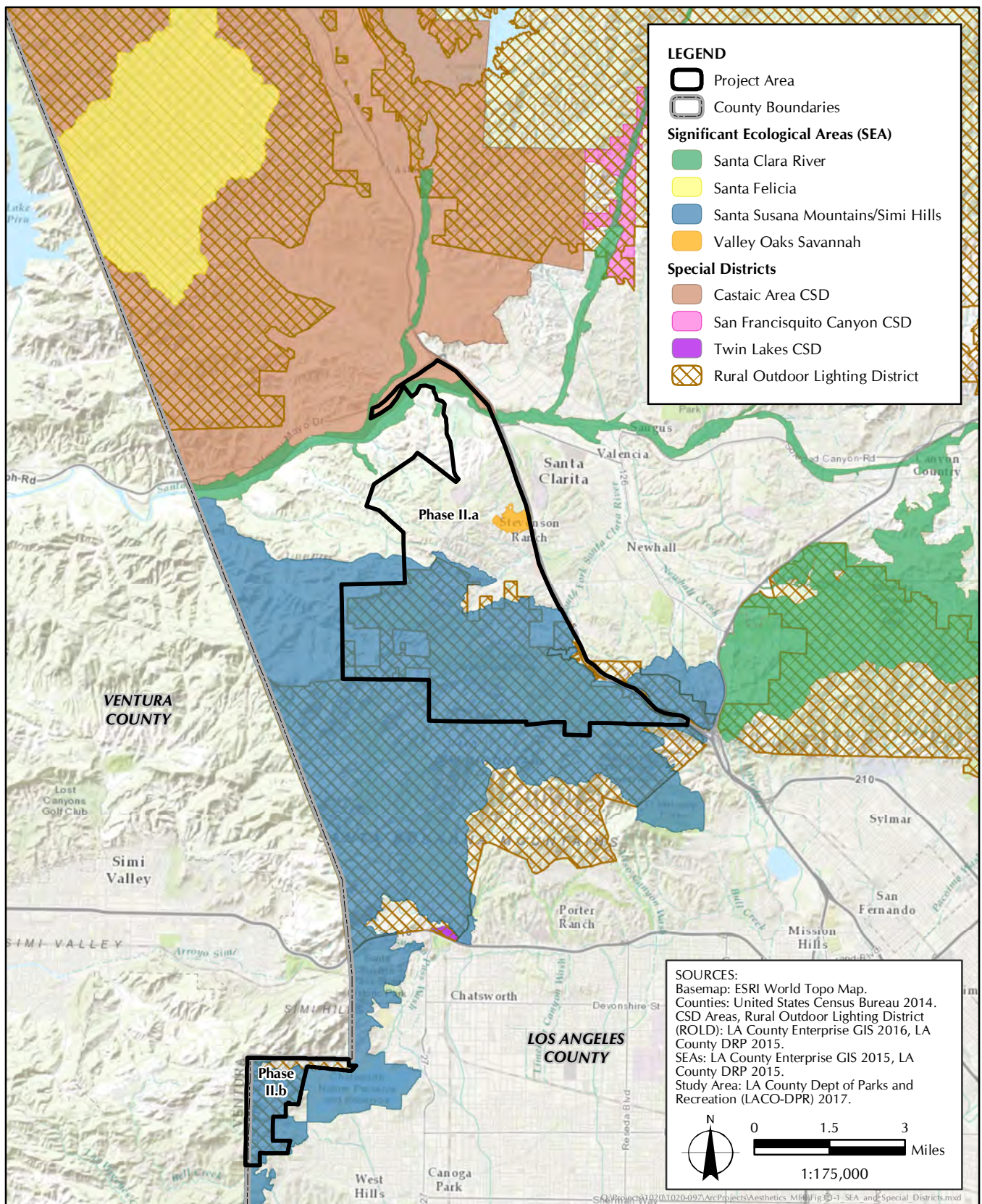


FIGURE 3.3-1

Significant Ecological Areas (SEAs) and Special Districts

- 5. The natural buffer area surrounding the entire Valley, which includes the Angeles National Forest, Santa Susana, San Gabriel, Sierra Pelona, and Del Sur mountains, shall be preserved as a regional recreational, ecological, and aesthetic resource.
- 7. The Santa Clarita Valley's prominent ridgelines shall be preserved and hillside development shall be limited to protect their valuable aesthetic and visual qualities intrinsic to the Valley landscape.

The Land Use Element of the Santa Clarita Valley Area Plan has established two goals, four objectives, and four policies relevant to aesthetics in consideration of the proposed project:

- **Goal LU-1:** Urban Form - An interconnected Valley of Villages providing diverse lifestyles, surrounded by a greenbelt of natural open space.
 - **Objective LU-1.1:** Maintain an urban form for the Santa Clarita Valley that preserves an open space greenbelt around the developed portions of the Valley, protects significant resources from development, and directs growth to urbanized areas served with infrastructure.
 - **Policy LU-1.1.4:** Preserve community character by maintaining natural features that act as natural boundaries between developed areas, including significant ridgelines, canyons, rivers and drainage courses, riparian areas, topographical features, habitat preserves, or other similar features, where appropriate.
 - **Objective LU 1.3:** Plan for density and intensity of development that respects and is reflective of the natural terrain.
 - **Policy LU-1.3.2:** Substantially retain the integrity and natural grade elevations of significant natural ridgelines and prominent landforms that form the Valley's skyline backdrop.
- **Goal LU-6:** Community Appearance - A scenic and beautiful urban environment that builds on the community's history and natural setting.
 - **Objective LU-6.1:** Maintain the natural beauty of the Santa Clarita Valley's hillsides, significant ridgelines, canyons, oak woodlands, rivers, and streams.
 - **Policy LU-6.1.1:** Designate ridgelines throughout the planning area, and preserve these ridgelines from development by encouraging a minimum distance for grading and development from these ridgelines of 50 feet, or more if determined preferable by the reviewing authority based on site conditions.
 - **Objective LU-6.2:** Provide attractive public and open spaces in places visited by residents and visitors, where feasible and appropriate.
 - **Policy LU-6.2.2:** Provide and enhance trail heads where appropriate with landscaping, seating, trash receptacles, and information kiosks.

The Conservation Element provides four goals, nine objectives, and fourteen policies relevant to aesthetics in consideration of the proposed project:

- **Goal CO-2: Geologic Resources** - Conserve the Santa Clarita Valley's hillsides, canyons, ridgelines, soils, and minerals, which provide the physical setting for the natural and built environments.
 - **Objective CO-2.2:** Preserve the Santa Clarita Valley's prominent ridgelines and limit hillside development to protect the valuable aesthetic and visual qualities intrinsic to the Santa Clarita Valley landscape. (Guiding Principle #7)
 - **Policy CO-2.2.2:** Ensure that graded slopes in hillside areas are revegetated with native drought tolerant plants or other approved vegetation to blend manufactured slopes with adjacent natural hillsides, in consideration of fire safety and slope stability requirements.
 - **Policy CO-2.2.3:** Preserve designated natural ridgelines from development by ensuring a minimum distance for grading and development from these ridgelines of 50 feet, or more if determined appropriate by the reviewing authority based on site conditions, to maintain the Santa Clarita Valley's distinctive community character and preserve the scenic setting.
 - **Policy CO-2.2.6:** Encourage building and grading designs that conform to the natural grade, avoiding the use of large retaining walls and build-up walls that are visible from off site, to the extent feasible and practicable.
- **Goal CO-3: Biological Resources** - Conservation of biological resources and ecosystems, including sensitive habitats and species.
 - **Objective CO-3.6:** Minimize impacts of human activity and the built environment on natural plant and wildlife communities.
 - **Policy CO-3.6.1:** Minimize light trespass, sky-glow, glare, and other adverse impacts on the nocturnal ecosystem by limiting exterior lighting to the level needed for safety and comfort; reduce unnecessary lighting for landscaping and architectural purposes, and encourage reduction of lighting levels during non-business nighttime hours.
 - **Policy CO-3.6.5:** Ensure revegetation of graded areas and slopes adjacent to natural open space areas with native plants (consistent with fire prevention requirements).
- **Goal CO-6: Scenic Resources** - Preservation of scenic features that keep the Santa Clarita Valley beautiful and enhance quality of life, community identity, and property values.

- **Objective CO-6.1:** Protect the scenic character of local topographic features.
 - **Policy CO-6.1.1:** Protect scenic canyons from overdevelopment and environmental degradation.
 - **Policy CO-6.1.2:** Preserve significant ridgelines as a scenic backdrop throughout the community by maintaining natural grades and vegetation.
 - **Policy CO-6.1.3:** Protect the scenic quality of unique geologic features throughout the planning area, such as Vasquez Rocks, by including these features within park and open space land where possible.
- **Objective CO-6.2:** Protect the scenic character of view corridors.
- **Objective CO-6.3:** Protect the scenic character of major water bodies.
 - **Policy CO-6.3.2:** Protect the banks of the Santa Clara River and its major tributaries through open space designations and property acquisitions, where feasible, to protect and enhance the scenic character of the river valley.
- **Objective CO-6.4:** Protect the scenic character of oak woodlands, coastal sage, and other habitats unique to the Santa Clarita Valley.
 - **Policy 6.4.1:** Preserve scenic habitat areas within designated open space or parkland, wherever possible.
- **Objective CO-6.5:** Maintain the scenic character of designated routes, gateways, and vista points along roadways.
- **Objective CO-6.6:** Limit adverse impacts by humans on the scenic environment.
 - **Policy CO-6.6.1:** Enhance views of the night sky by reducing light pollution through use of light screens, downward directed lights, minimized reflective paving surfaces, and reduced lighting levels, as deemed appropriate by the reviewing authority.
- **Goal CO-10:** Open Space - Preservation of open space to meet the community's multiple objectives for resource preservation.
 - **Objective CO-10.1:** Identify areas throughout the Santa Clarita Valley which should be preserved as open space in order to conserve significant resources for long-term community benefit.
 - **Policy CO-10.1.1:** Provide and protect a natural greenbelt buffer area surrounding the entire Santa Clarita Valley, which includes the

Angeles National Forest, Santa Susana, San Gabriel, and Sierra Pelona Mountains, as a regional recreational, ecological, and aesthetic resource. (Guiding Principle #5)

- **Policy CO-10.1.2:** The Santa Clara River corridor and its major tributaries shall be preserved as open space to accommodate storm water flows and protect critical plant and animal species, as follows: (Guiding Principle #6)
 - Uses and improvements within the corridor shall be limited to those that benefit the community's use of the river in its natural state.
- **Policy CO-10.1.5:** Maintain open space corridors along canyons and ridgelines as a way of delineating and defining communities and neighborhoods, providing residents with access to natural areas, and preserving scenic beauty."

LACMC 22.44.137 – Castaic Area Community Standards District, 200419

Community Standard Districts (CSDs) are supplemental districts that are established to provide a means of implementing special development standards for neighborhoods and communities within the unincorporated areas of Los Angeles County or to provide a means of addressing special problems which are unique to certain geographic areas within the County (Ord. 93-0047 § 1, 1993: Ord. 87-0130 § 1, 1987: Ord. 83-0065 § 5, 1983: Ord. 1494 Ch. 9 Art. 5 § 905.1, 1927).²² CSD regulations supplement the Countywide zoning and subdivision regulations.²³ The northern portion of the Phase II.a area, near the Santa Clara River, is located within the Castaic Area CSD (see Figure 3.3-1). The purpose of the Castaic Area CSD is to protect rural character, unique appearance, and natural resources of the Castaic Area communities. The Castaic Area CSD requires that outdoor lighting shall be provided in accordance with the applicable provisions of the Rural Outdoor Lighting District and establishes the following significant ridgeline protection standards:

For purposes of this CSD, significant ridgelines shall consist of primary and secondary ridgelines. Except as provided below, no development, grading, construction, or improvements shall be allowed on a significant ridgeline within a 50-foot radius from every point on the crest of a primary ridgeline or within a 25-foot radius from every point on the crest of a secondary ridgeline.

Significant Ridgeline Exemptions

Provided an approval is obtained for an exemption as described below, the following structures or uses may be permitted on significant ridgelines, or within

²² County of Los Angeles Department of Regional Planning. Accessed 1 August 2017. Community Standards Districts. Available at: http://planning.lacounty.gov/view/community_standards_districts

²³ County of Los Angeles. n.d. Los Angeles County, California, Code of Ordinances: Title 22 – Planning and Zoning: Division 1 – Planning and Zoning: Chapter 22.44 – Supplemental Districts: Part 2 Community Standards Districts.. Available at: https://library.municode.com/HTML/16274/level4/TIT22PLZO_DIV1PLZO_CH22.44SUDI_PT2COSTDI.html#TIT22PLZO_DIV1PLZO_CH22.44SUDI_PT2COSTDI_22.44.126ACOSTDI

the respective 50-foot and 25-foot restricted areas surrounding such significant ridgelines:

- i. Accessory buildings or structures;
- ii. Additions and/or modifications to an existing single-family residence;
- iii. New single-family residences where not more than one such residence is proposed to be built by the same person on contiguous parcels of land;
- iv. Open spaces, conservation areas, parks, recreation areas, and/or trails;
- v. Water tanks or transmission facilities;
- vi. Architecturally superior structures, other than new single-family residences, which maximize the aesthetic appeal of the hillsides and significant ridgelines, and minimize the disturbance of the natural setting; and
- vii. Roads providing access to any of the structures or uses described above.

Significant Ridgeline Exemption Approval

No exemption shall be allowed unless the applicant obtains:

- (A) A director's review and approval pursuant to subsection G, below, for structures or uses described in subsection i, ii, and iii; or
 - (B) A conditional use permit, as provided in Part 1, Chapter 22.56, for structures or uses described in subsections iv, v, or vi. The application for the conditional use permit must contain the information either required by or described in Sections 22.56.030, 22.56.040 and, where applicable, subsections D and E of Section 22.56.215.
- ii. In addition to any information required for the director's approval and the conditional use permit, an application for a significant ridgeline exemption approval shall also demonstrate that the proposed use:
- (A) Is compatible with adjacent uses, the character of the neighboring community, and the goals and policies of the general plan;
 - (B) Will leave the crest of the significant ridgeline in its natural state;

- (C) Is designed to minimize the amount of grading necessary and will use landscaping to minimize the visual impact of the project;
- (D) Will not be materially detrimental to the visual character of the neighborhood or the Castaic communities;
- (E) Will not impede the normal and orderly development of surrounding properties and will not promote encroachments on significant ridgelines; and
- (F) Will not degrade the visual integrity of the significant ridgeline, as verified through submission of a precise illustration and depiction."

General Plans of Adjacent Jurisdictions

The Phase II.a area is adjacent to the City of Santa Clarita. The Phase II.b area is adjacent to Ventura County and the City of Los Angeles.

City of Santa Clarita General Plan

The City of Santa Clarita General Plan identifies the same scenic resources in Exhibit CO-7 of the Conservation and Open Space Element to be maintained to preserve visual character that are described in the Santa Clarita Valley Area Plan (see description in Section 5.1.4, *Visual Character*).

Ventura County General Plan

The Resources Appendix of the Ventura County General Plan identifies the viewsheds of County lakes and State and County designated scenic highway corridors as scenic resources to be preserved (see description in Section 5.1.3, *Scenic Highways*, regarding officially designated and eligible State scenic highways).²⁴ The Phase II.b area is located outside the viewshed of the nearest County scenic lake, Lake Piru. Area-specific scenic resources are protected by Area Plans. The Phase II.b area is not located near an Area Plan.²⁵ Protection of Scenic Resources Areas is accomplished through the Scenic Resources Protection (SRP) Overlay Zone of the Non-Coastal Zoning Ordinance.²⁶ The purposes of this zone are to preserve and protect the visual quality within the viewshed of selected County lakes, County adopted scenic highways, and other locations determined by an area plan; minimize development that conflicts with the value of scenic resources; and provide notice to landowners and the general public of the location and value of scenic resources which are of significance to Ventura County. The Phase II.b area is not located near a SRP Overlay Zone.²⁷

²⁴ Ventura County. June 2011. *Ventura County General Plan*. Resources Appendix. Available at: <http://vcrma.org/planning/pdf/plans/General-Plan-Resources-Appendix-6-28-11.pdf>

²⁵ Ventura County. September 2008. *Location Map of Area Plans in Unincorporated Ventura County*. Available at: http://vcrma.org/planning/pdf/plans/Area_Plans.pdf

²⁶ Ventura County. April 18, 2017. *Ventura County Non-Coastal Zoning Ordinance*. Scenic Resource Protection Overlay Zone. Available at: <http://vcrma.org/planning/pdf/ordinances/zoning/VcNCZO.pdf> Sec. 8109-4.1 -

²⁷ Ventura County. Accessed 1 August 2017. *View Ventura County, California*. Available at: <http://gis.ventura.org/CountyViewNew/>

City of Los Angeles General Plan

The Citywide General Plan Framework Element of the City of Los Angeles General Plan establishes the following policies in response to Open Space and Conservation Objective 6.2: *“Maximize the use of the City's existing open space network and recreation facilities by enhancing those facilities and providing connections, particularly from targeted growth areas, to the existing regional and community open space system,”* relevant to the adjacent Phase II.b area of the Trails Master Plan:²⁸

- **Policy 6.2.1:** Establish, where feasible, the linear open space system represented in the Citywide Greenways Network map, to provide additional open space for active and passive recreational uses and to connect adjoining neighborhoods to one another and to regional open space resources.²⁹ This Citywide Greenways Network is hierarchical and is composed of three levels: regional, community, and local/neighborhood. While these levels are of equal importance, they vary in scale and the degree to which they impact the City at large. Additionally, while these levels overlap one another, they can still be differentiated and broken down as follows:
 - a. The regional component of the network is composed of the beaches, the mountains, and the Los Angeles River system - the three most continuous natural features of the urban region and thus the primary elements of the network; river tributaries, arroyos and washes that take storm water to the ocean; rail lines and utility corridors, where feasible without compromising public safety or facility security, that may serve multiple purposes to become connectors to the beaches and the river and link adjacent districts to each other through the network; and all regional parks made accessible from the network. While considering open space improvements of the River and drainages, their primary purpose for flood control shall be considered.
 - b. The community component is composed of parks and civic open spaces connected to the network, including elements such as community and neighborhood parks, connected by linear, non-motorized transportation linkages such as walking and hiking trails and local bike paths
 - c. The local/neighborhood components include pedestrian-supporting streets, open space associated with public facilities such as schools, small parks, and community gardens.
- **Policy 6.2.2:** Protect and expand equestrian resources, where feasible, and maintain safe links in major public open space areas such as Hansen Dam, Sepulveda Basin,

²⁸ Los Angeles City Planning Department. Re-adopted August 8, 2001. *The Citywide General Plan Framework: An Element of the City of Los Angeles General Plan*. Chapter 6: Open Space and Conservation. Available at: <http://cityplanning.lacity.org/cwd/framwk/contents.htm>

²⁹ City of Los Angeles Department of City Planning. April 1996. *Figure 6-1: Citywide Greenways Network Map*. Available at: <http://cityplanning.lacity.org/cwd/framwk/chapters/06/fig61.htm>

Griffith Park, and the San Gabriel, Santa Monica, Santa Susanna Mountains and the Simi Hills.

- a. Maintain the equestrian facilities on publicly owned lands, such as Hansen Dam and the Los Angeles Equestrian Center.
- b. Preserve, where feasible, the "Horsekeeping Supplemental Use District" ("K" District), with links to major open areas.
- c. Support the policies and objectives of the Rim of the Valley Trail Corridor Master Plan, the Urban Greenways Plan, and the Major Equestrian and Hiking Trails Plan (and all amendments) as a foundation for promoting and maintaining a trail system within the City.

The Citywide Greenways Network Map includes existing/recommended greenways for Chatsworth Reservoir and the surrounding land adjacent to the northeastern portion of the Phase II.b Area, leading northeast towards the Phase I area and southeast to the Los Angeles River near De Soto Avenue.

The Conservation Element of the General Plan establishes equine areas in the San Fernando Valley and Santa Monica Mountains as a valuable unique feature of highly urbanized Los Angeles to be protected and encouraged in the K Supplemental Use District, or 'K' Equinekeeping District, of the Zoning Ordinance.³⁰ The City of Los Angeles contains over 90 miles of equine trails, especially near the Phase II.b area around the northern rim of the San Fernando Valley and around the Santa Monica Mountains; new K Districts are typically required by decision makers to provide equestrian trails as part of the City's objective to retain equine oriented uses as a part of the city's heritage, and community plans such as the Chatsworth-Porter Ranch Community Plan (described below) have identified equine areas and trails and policies.³¹ The nearest City recreation resources to the Phase II.b area are discussed in the City of Los Angeles Chatsworth-Porter Ranch Community Plan.

*Chatsworth-Porter Ranch Community Plan, 1993 (amended 2003)*³²

The Chatsworth-Porter Ranch Community Plan Area encompasses approximately 15,500 acres directly south of the Trails Master Plan Area, from the County line on the western side to Beaufait Avenue on the eastern side.³³ The community plan provides an official guide to the future development of the community for the use of local governmental agencies, residents, property owners, businessmen, and private organizations. The community plan was designed in 2010 in anticipation of population and employment growth, with the intent to preserve low density single-family residential areas, conserve open space lands, and preserve and strengthen the Chatsworth Community Business District during the anticipated growth. The community plan encourages the preservation and expansion of "K" Equine Keeping Districts along the western edge of the

³⁰ City of Los Angeles. September 2001. *City of Los Angeles General Plan Conservation Element*. Section 7: Equine Areas, Pages II-14 to II-19. Available at: <http://cityplanning.lacity.org/cwd/gnlpln/consvelt.pdf>

³¹ City of Los Angeles. September 2001. *City of Los Angeles General Plan Conservation Element*. Section 7: Equine Areas, Pages II-14 to II-19. Available at: <http://cityplanning.lacity.org/cwd/gnlpln/consvelt.pdf>

³² City of Los Angeles. 1993. *Chatsworth-Porter Ranch Community Plan*. Available at: <http://cityplanning.lacity.org/complan/pdf/chtcptxt.pdf>

³³ City of Los Angeles. 1993. *Chatsworth-Porter Ranch Community Plan*. Available online at: <http://cityplanning.lacity.org/complan/valley/chtptpage.htm>

Community Plan Area, especially where horsekeeping areas are proposed north of Chatsworth Street and west of De Soto Avenue (including the eastern side of De Soto Avenue) to the City/County line, and along the open space within the Porter Ranch Specific Plan Boundary along the boundary of the SSMTMP Phase I area.³⁴

As Chatsworth-Porter Ranch supports a substantial equestrian-oriented population, the Community Plan emphasizes the preservation of this equestrian lifestyle through preservation of natural topography and wooded areas (consistent with fire safety); proposed utilization and development of County flood control channel and power line rights-of-way for open space purposes and/or hiking, bicycle and equestrian trails where appropriate; and designation of the area north of Stoney Point, east of Topanga Canyon Boulevard and south of State Route (SR) 118 (Simi Freeway) as a cultural/scenic landmark due to its geological, visual, and historic characteristics.³⁵ Additionally, the community plan incorporates the Major Equestrian and Hiking Trails Plan and Bicycle Plan, two elements of the City General Plan, and it incorporates the *Guide to Existing and Potential Equestrian Trails, Twelfth Council District*.³⁶

Recreation resources within the Chatsworth-Porter Ranch Community Plan Area include the Chatsworth Reservoir Department of Water and Power Preserve (adjacent to the Phase II.b area), Santa Susana Pass State Park (approximately 0.6 mile north of the Phase II.b area) and a network of proposed equestrian and hiking trails, a number of which have been realized since the Community Plan was adopted in 1993. The Community Plan identifies Chatsworth Reservoir as a Nature Preserve with regional park, equestrian trail stop and assembly areas, and horsekeeping areas; Valley Circle Boulevard is designated as a scenic corridor near the Phase II.b area from the southwestern corner of the Chatsworth Reservoir open space northeast to State Route 27, paralleled by an existing equestrian and hiking trail on the eastern/southern side of Valley Circle Boulevard.³⁷

³⁴ City of Los Angeles. 1993. *Chatsworth-Porter Ranch Community Plan*. Equestrian Areas and Trails map. http://cityplanning.lacity.org/complan/pdf/cht_horse_2.pdf

³⁵ City of Los Angeles. 1993. *Chatsworth-Porter Ranch Community Plan*. Page 11-12: Features. Available at: <http://cityplanning.lacity.org/complan/pdf/chtcptxt.pdf>

³⁶ City of Los Angeles. 1993. *Chatsworth-Porter Ranch Community Plan*. Page 13: Programs: Public Improvements PDF Available at: <http://cityplanning.lacity.org/complan/pdf/chtcptxt.pdf>

³⁷ City of Los Angeles Department of City Planning. August 20, 2014. *General Plan Land Use Map: Chatsworth – Porter Ranch Community Plan*. Available at: <https://planning.lacity.org/complan/valley/PDF/chtplanmap.pdf>

SECTION 4.0 METHODS

The evaluation of the potential for the proposed project to result in impacts to aesthetics was undertaken in accordance with the County of Los Angeles Department of Parks and Recreation's Environmental Checklist Form and Appendix G of the State CEQA Guidelines, thus considering five key variables: scenic vistas; views from existing regional trails; scenic resources within a scenic highway corridor; visual character and quality of the site and its surroundings; and shadows, light, and glare.

4.1 LITERATURE AND MAP REVIEW

The Los Angeles County General Plan 2035 (County General Plan)³⁸ and County of Los Angeles zoning designations^{39,40} were reviewed to characterize allowable land uses within the SSMTMP-P II area. The County General Plan was also reviewed for descriptions of SEAs and associated allowable land uses. The County General Plan, including the Santa Clarita Valley Area Plan, was reviewed to determine if there were any designated scenic vistas within the SSMTMP-P II area. The California Department of Transportation (Caltrans) website⁴¹ was reviewed to determine the location of the nearest proposed and designated scenic highways and Caltrans-designated scenic vista points. USGS 7.5-minute series topographic quadrangles and aerial photograph imagery available through Google Earth maps were reviewed to delineate existing potential sensitive visual receptor locations where the proposed trail alignments and other facilities might be visible within and adjacent to the SSMTMP-P II area. The County Manual was referenced for trail planning and construction standards and recommendations.⁴² The Cultural Resources Technical Report for the SSMTMP-P II project was reviewed for an understanding of the location of historic resources within the SSMTMP-P II area.

4.2 SITE SURVEY

Two site surveys were conducted on June 17, 2017 and June 28, 2017 to evaluate and document the visual character of publicly accessible portions of the SSMTMP-P II area, with a focus on views from designated and eligible scenic resources. The El Camino Nuevo Trail⁴³ within Santa Susana State Historic Park, Bell Ranch Road and Thompson Avenue near the rock formation identified as "Twelve Apostles" by local residents, and Browns Canyon Road north of SR-118 leading towards Oat Mountain were observed during the site visit to be closed to public access. Nineteen KOPs

³⁸ County of Los Angeles Department of Regional Planning. 6 October 2015. *Los Angeles County General Plan 2035*. Available at: <http://planning.lacounty.gov/generalplan/generalplan>

³⁹ County of Los Angeles Department of Regional Planning. Accessed 1 August 2017. *GIS-NET3 Public*. Planning & Zoning Information for Unincorporated LA County. Available at: http://gis.planning.lacounty.gov/GIS-NET3_Public/Viewer.html

⁴⁰ County of Los Angeles. Accessed 1 August 2017. *Los Angeles County, California Code of Ordinances*. Title 22 – Planning and Zoning, Division 1 – Planning and Zoning, Chapter 22.12 Zones and Districts. Available at: http://library.municode.com/HTML/16274/level3/TIT22PLZO_DIV1PLZO_CH22.12ZODI.html

⁴¹ California Department of Transportation. Accessed 1 August 2017. Officially Designated State Scenic Highways. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/scenic_hwy.htm

⁴² County of Los Angeles Department of Parks and Recreation. [17 May 2011]. June 2013. *County of Los Angeles Trails Manual*. Available at: <https://trails.lacounty.gov/Documents>

⁴³ California State Parks. Accessed 1 August 2017. *Santa Susana Pass State Historic Park Brochure*. Available at: <https://www.parks.ca.gov/pages/611/files/SantaSusanaPassSHPWeb2016.pdf>

were established to document the visual character of the existing SSMTMP-P II area. The KOPs were selected to characterize a range of public vantage points: Eligible State Scenic Highways, existing trail segments, designated scenic canyons and significant ridgelines, and views from adjacent property. Data was recorded for each KOP: location, direction, visual character, and photographic documentation. Several roads provided limited public access to the SSMTMP-P II area; the publicly accessible portions of the SSMTMP-P II area were photographically documented and spatially analyzed for possible views of the trail using Google Earth Street View.

4.3 SPATIAL AND VIEWSHED ANALYSIS

A viewshed analysis was conducted using ArcGIS to evaluate the visibility level of the proposed trail alignments and other related facilities based on terrain analysis from Eligible and Officially Designated State Scenic Highways, County-designated Scenic Drives, City-Designated Scenic Highways, and existing regional trails within a 15-mile (visible) radius of the SSMTMP-P II area. Caltrans' visual impact assessment training module for visual character was used to define the viewshed analysis criteria.⁴⁴ As for a traveler on a highway, viewsheds are directional (the viewshed for a traveler moving in one direction can be quite different than a traveler moving in the opposite direction on the same highway, and the viewshed for a driver is more constrained by direction than it is for a passenger who has more discretion to look to the side or even backward), a traditional viewshed is static and is defined as what can be seen in 360 degrees from a single view point. What a person can see from a single spot is limited by objects—such as hills, trees, buildings—that obscure what he or she can see. A five-foot viewer elevation was established to identify the visibility level of trail alignments and related facilities from scenic resources by both pedestrians and vehicle occupants, and a 15-mile buffer was established around each scenic resource to define the atmospheric visual limits of the viewshed. Station points were established at every 1,000 feet along the designated scenic routes located within a 15-mile radius of the SSMTMP-P II area. The viewshed was then established from each station point, based on a 10-foot digital elevation model (DEM). As part of the spatial analysis, particular emphasis was placed on the proximity of the project elements to designated significant ridgelines (analysis based on proposed elements within a 50-foot radius of significant ridgelines) and within the viewshed of scenic highway corridors, scenic resources identified in the Santa Clarita Valley Area Plan, and existing regional trails. As the viewshed is defined as if the earth had a lunar landscape and only addresses landform, Google Earth was then used to verify the visibility level of the subject parcels using Street View and Ground View to identify major vegetative or development visual obstructions and identify potential visibility between the station points.

4.3.1 Construction Scenario

This ATR is based on an evaluation of the construction that would be required to build out the proposed trails in the general configurations of the conceptual plan. Proposed trail alignments are conceptual and will require additional survey, design, and engineering work to support dedication of easements and ultimately trail construction, operation, and maintenance. The final trail alignments are subject to refinement in relation to environmental, geologic, hydrologic, ownership, topology, and other factors, as specified in the County Trails Manual. The County Trails Manual outlines various issues affecting trail experience (Section 2.4.3.3) and trail feasibility (Section 2.5), including aesthetics. The Trails Manual recommends that a visibility analysis be performed in a

⁴⁴ California Department of Transportation. Accessed 1 August 2017. *Visual Impact Assessment Training*. Module 2: Visual Character. Lesson 8: Labeling the Landscape. Available at: http://www.dot.ca.gov/hq/LandArch/16_la_design/via/training/mod_2/mod_02_less_08.htm

three-dimensional modeling program to determine if a proposed trail would be visible by the surrounding area residences using vantage points placed at important visual points of interest, known scenic vistas, or individual residences to determine the percentage of the trail that would be visible from the vantage points. Additionally, cross-sections depicting the distance and the elevation of the trails from adjacent residences are recommended to provide a representation of the visibility of proposed trails by incorporating the landscape and vegetation.

The environmental analysis for the proposed project is based on a potential worst-case scenario for construction activities, including improvements to existing trails, construction of new trails, site grading for facilities and access roads, and delivery and hauling of construction materials and equipment. Construction activities associated with the proposed project, as currently conceived, would entail construction of approximately 70 miles of trails. Construction equipment would be limited to mini-dozers; graders; small tractors; a water truck; and hand tools including picks, hoes, shovels, and wheelbarrows. Construction would be conducted in accordance with the guidelines specified in the County Trails Manual.⁴⁵ The County Trails Manual contains specific methods for building trails in areas with steep slopes and riparian crossings. The County Trails Manual should be referenced for further information to determine the constructability of trail segments. Construction activities may include excavation, grading, and construction of trails and small structures at trailheads, rest areas, parking, equestrian facilities, bicycle facilities, and trail staging areas. The County would require preparation of a trail site plan, site-specific geotechnical investigation, survey for biological and cultural resources, and a Categorical Exemption or Initial Study (the appropriate CEQA document) in support of each trail segment before project approval and construction can commence.

⁴⁵ County of Los Angeles Department of Parks and Recreation. [May 2011]. June 2013. *County of Los Angeles Trails Manual*. Available at: <https://trails.lacounty.gov/Documents>

5.1 EXISTING CONDITIONS

5.1.1 Scenic Vistas

No Caltrans- or County-designated scenic vista points are located within a 15-mile radius of the SSMTMP-P II area (Figure 5.1.1-1, *Scenic Vistas*). There are no other officially designated County scenic vistas in the Los Angeles County General Plan 2035. The General Plan programs include Program No. C/NR-6 for the preparation of a Scenic Resources Ordinance that creates a scenic corridor, scenic viewshed, and significant ridgeline program and/or ordinance to protect remaining scenic resources, that may include scenic resources from the County's 1965 Regional Recreation Areas Plan.⁴⁶ However, there is no time commitment or timeframe for an actual project at this time.

Ventura County and the City of Los Angeles have no designated scenic vistas in the vicinity of the SSMTMP-P II area.

State Designated Vista Points

Caltrans has designated one vista point within Los Angeles County, Lamont Odett Vista Point, which is located at Post Mile 57.8 along the northbound side of SR-14 and overlooks the Aerospace Valley, Lake Palmdale, and the California Aqueduct toward the north and northeast.⁴⁷ This vista point is located approximately 26.4 miles northeast of the Phase II.a area and approximately 35.9 miles northeast of the Phase II.b area, on the opposite side of the San Gabriel Mountains. The SSMTMP-P II area is not visible from this vista point due to distance, an intended directional vista towards the north, and intervening topography.

County Designated Public Viewing Areas

The County has designated 30 Public Viewing Areas in the Santa Monica Local Coastal Program, which are located approximately 7.5 to 17.3 miles south of the Phase II.b area (see Figure 5.1.1-1).⁴⁸ The Santa Monica Mountains Local Coastal Program Land Use Plan establishes Land Use Policy LU-54 for protection of Public Viewing Areas from visual blight as a result of the telecommunications network.⁴⁹ The Santa Monica Mountains Local Implementation Program establishes that Public Viewing Areas are intended to reduce visual impacts as a result of new buildings, water tanks, telecommunication facilities, and all projects for which applications for a Coastal Development Permit are required from identified Public Viewing Areas.⁵⁰ As the SSMTMP-

⁴⁶ County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. *County of Los Angeles General Plan – Chapter 16: General Plan Implementation Programs*. Program, C/NR-6. Available at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch16.pdf

⁴⁷ California Department of Transportation. 2016. *2015 Named Freeways, Highways, Structures and Other Appurtenances in California*. Available at: http://www.dot.ca.gov/hq/tsip/hseb/products/Named_Freeways_Final.pdf

⁴⁸ County of Los Angeles Department of Regional Planning. November 2013. Santa Monica Mountains Local Coastal Program map with public viewing areas available at: http://planning.lacounty.gov/assets/upl/project/coastal_adopted-map3.pdf

⁴⁹ County of Los Angeles Department of Regional Planning. August 2014. *Santa Monica Mountains Local Coastal Program: Land Use Plan*. Available at: http://planning.lacounty.gov/assets/upl/project/coastal_adopted-LUP.pdf

⁵⁰ County of Los Angeles Department of Regional Planning. Adopted 2014. *Santa Monica Mountains Local*

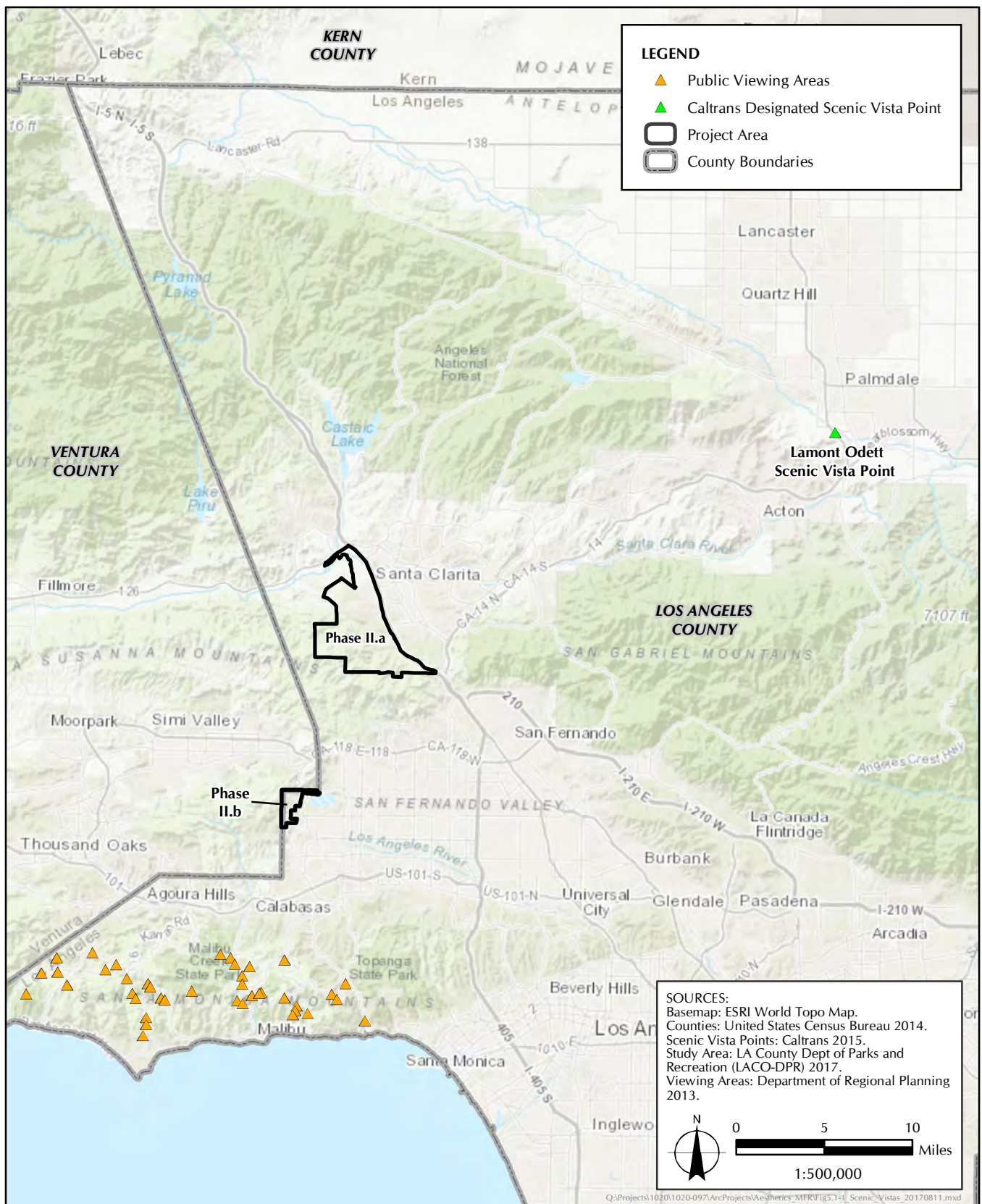


FIGURE 5.1.1-1
 Scenic Vistas

PII area is not located within a Coastal Zone and the proposed project would not require a Coastal Development Permit, the Santa Monica Local Coastal Program is not applicable to the proposed project. Due to distance and intervening topography of the Santa Monica Mountains, the SSMTMP-PII area is not visible from the Public Viewing Areas.

5.1.2 Regional Riding and Hiking Trails

A viewshed analysis was conducted using ArcGIS to evaluate the potential visibility level of the SSMTMP-PII area from existing Federal, Conservancy, County, and State trails located within a 15-mile radius of the SSMTMP-PII area.⁵¹ (See Figure 5.1.2-1, *Existing Regional Trails*). As the Pacific Crest National Scenic Trail (PCT) is located approximately 14.9 miles northeast of the SSMTMP-PII area along a north-facing slope at the nearest point, it is not anticipated that the SSMTMP-PII area would be visible from the PCT due to distance and intervening topography. It was determined that approximately 65.1 percent of the SSMTMP-PII area (approximately 63.1 percent of the Phase II.a area and approximately 86.6 percent of the Phase II.b area) would be visible from regional trails. It should be noted that a viewshed analysis evaluates visibility based solely on topographic data, and the presence of large trees, large shrubs, buildings, and infrastructure between the regional trails and the SSMTMP-PII area would be expected to reduce the potential visibility level further than this estimate.

5.1.3 Scenic Resources within State Scenic Highway Corridors

The nearest officially designated State scenic highway is the recently designated SR-27, which was officially designated on March 22, 2017 and is located approximately 5.1 miles southeast of the SSMTMP-PII area. A viewshed analysis was conducted using ArcGIS to evaluate the potential visibility level of the SSMTMP-PII area from SR-27 and the six eligible state scenic highways located within a 15-mile visible radius of the SSMTMP-PII area.⁵² Approximately 48.1 percent of the SSMTMP-PII area was calculated to be potentially visible from officially designated and eligible State scenic highways. It was determined that approximately 45.3 percent of the Phase II.a area, comprised of the northeast-facing slopes and ridges of the Santa Susana Mountains along Rice Canyon, Leaming Canyon, Wiley Canyon, Towsley Canyon, Dewitt Canyon, Wiley Canyon, Lyon Canyon, Pico Canyon, and the community of Stevenson Ranch; Six Flags Magic Mountain; the north-facing slopes of the community of Stevenson Ranch; and the majority of the Santa Clara River corridor would be visible from officially designated and eligible State scenic highways. The lower elevations and southwest-facing slopes of Rice Canyon, Leaming Canyon, Towsley Canyon, Dewitt Canyon, Pico Canyon, and the Community of Stevenson Ranch, would not be visible from scenic highways. Approximately 78.9 percent of the Phase II.b area, comprised of the rolling hills and developed areas within Chatsworth Lake Manor and Woolsey Canyon, would be visible from officially designated and eligible State scenic highways. It should be noted that a viewshed analysis evaluates visibility based solely on topographic data, and the presence of large trees, large shrubs, buildings, and infrastructure between these highways and the study area would be expected to reduce the potential visibility level further than this estimate. These highway corridors contain trees, rock outcroppings, and the potential to have historic structures.

Implementation Program: Land Use Plan. Available at: http://planning.lacounty.gov/assets/upl/project/coastal_adopted-LIP.pdf

⁵¹ Sapphos Environmental, Inc. August 2017. Viewshed analysis calculated using 10-foot DEM data in ArcGIS.

⁵² Sapphos Environmental, Inc. August 2017. Viewshed analysis calculated using 10-foot DEM data in ArcGIS.

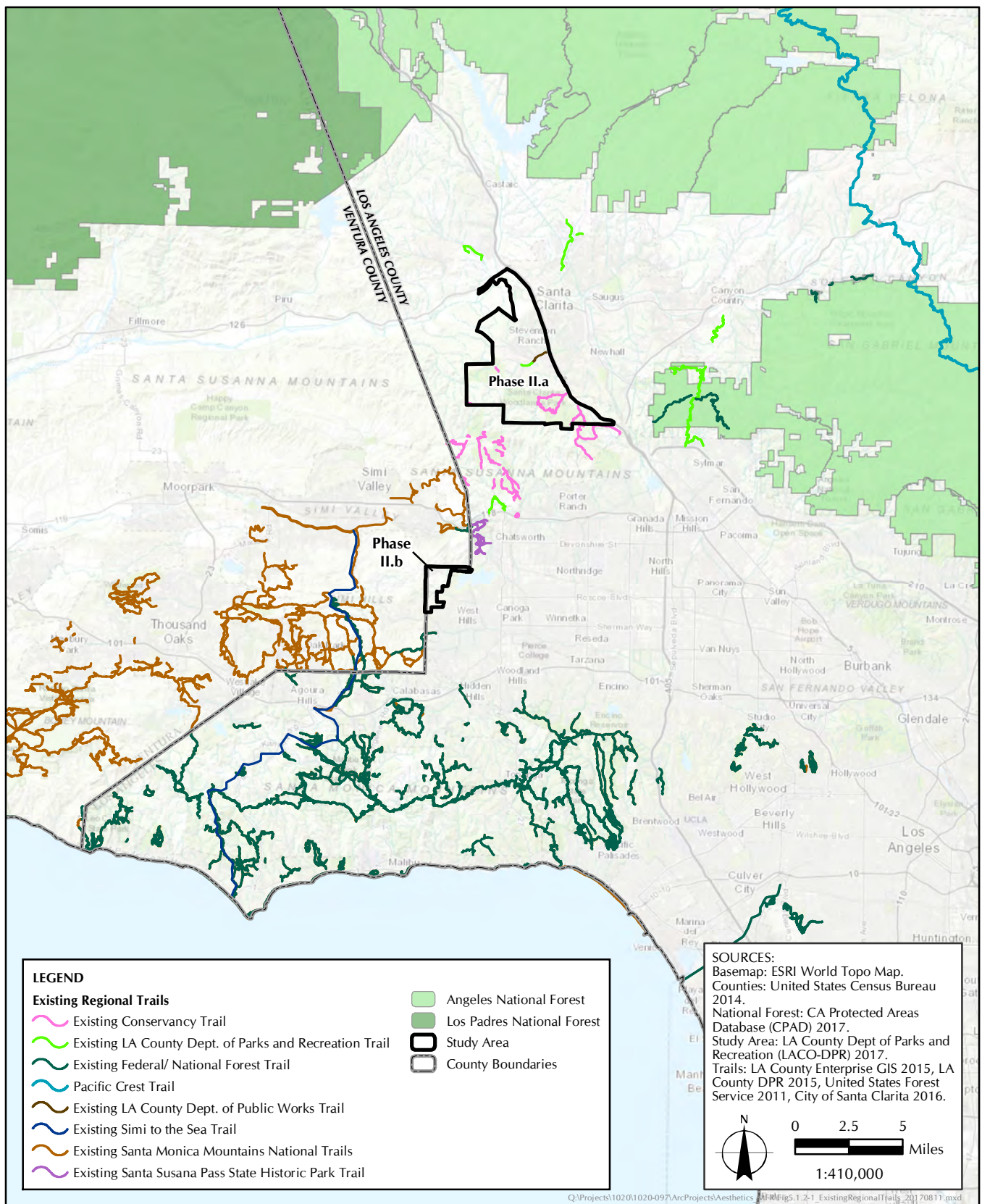


FIGURE 5.1.2-1
 Existing Regional Trails

Due to distance (over 15 miles) and intervening topography, the SSMTMP-P II area would not be visible from two of the three nearest officially designated state scenic highways (Table 5.1.3-1, *State Scenic Highways*; Figure 5.1.3-1, *Designated and Eligible California Scenic Highways*).⁵³ There are six eligible state scenic highways within a 15-mile visible radius of the SSMTMP-P II area. There are two officially designated County scenic highways within Southern California, both of which are located within a 15-mile visible radius of the SSMTMP-P II area.

**TABLE 5.1.3-1
STATE SCENIC HIGHWAYS**

Route	Route Description	Proximity to Phase II.a Area	Proximity to Phase II.b Area
Officially Designated State Scenic Highway			
SR-27	From SR-1 north to Mulholland Drive	12.9 miles south	5.1 miles southeast
SR-2	Within Los Angeles County, from 2.7 miles north of SR-210 at the National Forest Boundary in Los Angeles County east to the San Bernardino County Line	19.2 miles southeast	24.8 miles east
SR-33	Within Ventura County, from 6.4 miles north of SR-150 north to the Santa Barbara County Line	38.7 miles northwest	38.3 miles northwest
Eligible State Scenic Highway			
SR-126	From SR-150 near Santa Paula east to I-5 near Castaic	adjacent to the northern edge	11.5 miles north
I-5	From Interstate 210 North Tunnel Station in Pasadena east to SR-126 near Castaic	adjacent to the eastern edge	9.4 miles northeast
Interstate 210	From I-5 near Tunnel Station east to SR-134	2.2 miles southeast	9.7 miles northeast
SR-118	From SR-23 south to Desoto Avenue near Browns Canyon	4.2 miles south	1.8 miles north
State Route 101	From SR-27 / Topanga Canyon Boulevard west and northwest to SR-46 near Paso Robles	11.5 miles south	3.8 miles southeast
State Route 1	From SR-187 near Santa Monica west to SR-101 near El Rio	20.6 miles south	11.7 miles south
Officially Designated County Scenic Highway			
Malibu Canyon-Las Virgenes Rd	from SR-1 to Lost Hills Road	15.7 miles southwest	6.2 miles southwest
Mulholland Highway ^a	from SR-1 to S. Kanan Dume Road and from Malibu Lake to 0.5 mile west of Cold Canyon Road	20.2 miles southwest	11.3 miles southwest

NOTE:

^a Mulholland Highway is also a designated Scenic Corridor, from SR-1 east to SR-101.²

SOURCES:

¹ California Department of Transportation. Accessed 1 August 2017. *Scenic Highways*. Available at: <http://www.dot.ca.gov/design/lap/livability/scenic-highways/index.html>

² National Park Service. 2012. *Santa Monica Mountains National Recreation Area Map*. Available at: <https://www.nps.gov/samo/planyourvisit/maps.htm>

⁵³ California Department of Transportation. Accessed 1 August 2017. *Scenic Highways*. Available at: <http://www.dot.ca.gov/design/lap/livability/scenic-highways/index.html>

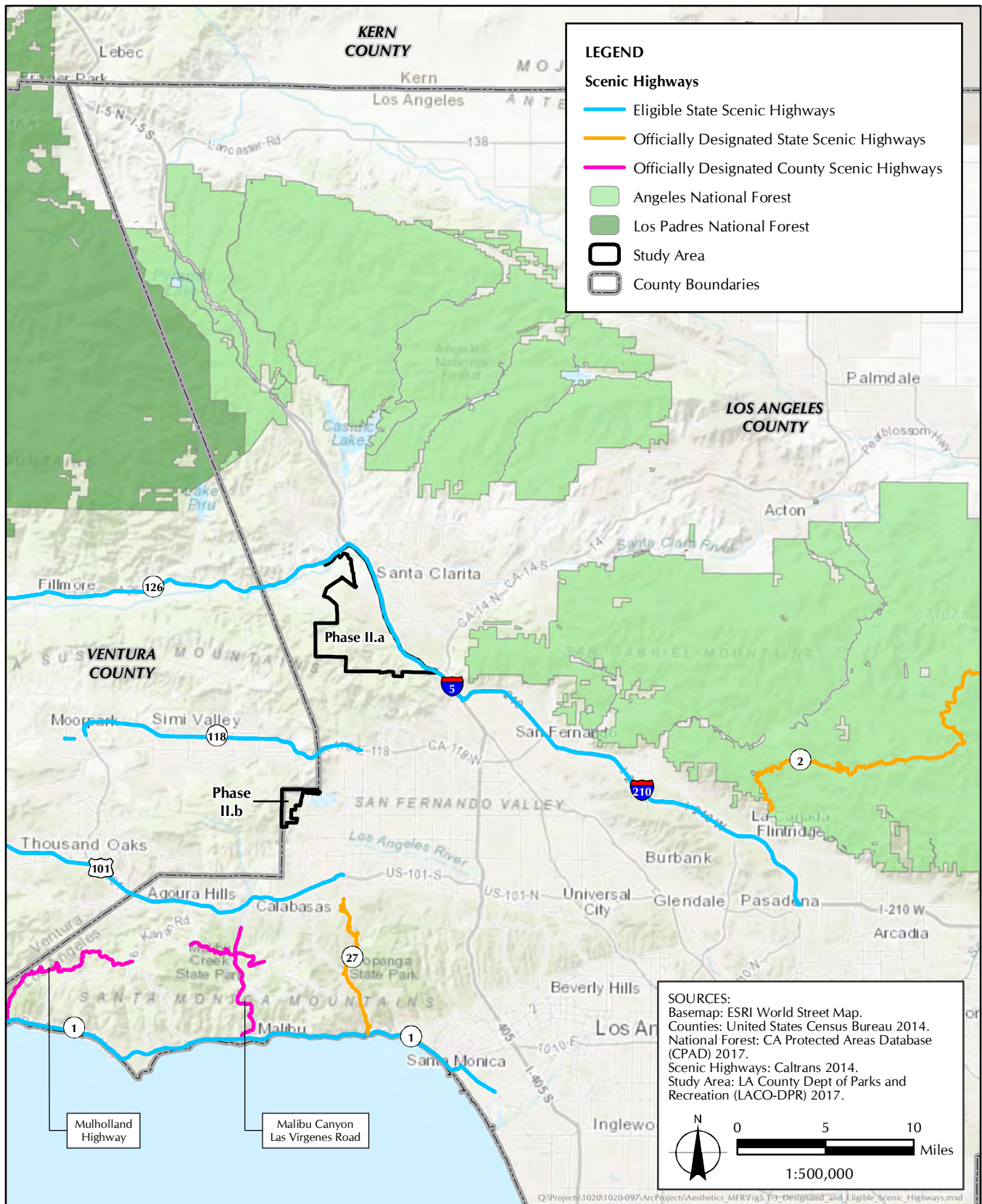


FIGURE 5.1.3-1
Designated and Eligible California Scenic Highways

Based on a review of major visual obstructions using Google Earth Street View and Ground View, there is potential for the SSMTMP-P II area to be visible from SR-27. Due to intervening topography (including the Santa Susana Mountains ridgeline), ornamental trees/shrubs, and development, neither the Phase II.a area nor the Phase II.b area can be seen from the intersection of SR-27 and Mulholland Drive; however, both the Phase II.a area and Phase II.b area have the potential to be visible in the distance from SR-27 from higher elevations. It is unlikely that the SSMTMP-P II area would be visible from Malibu Canyon - Las Virgenes Road, as the scenic route is located within and along the coast-facing slopes of Malibu Canyon. Similarly, the scenic Mulholland Highway route is unlikely to provide vistas of the SSMTMP-P II area as it follows lower elevations within the canyons at the base of the Santa Monica Mountains.

5.1.4 Visual Character and Quality

The SSMTMP-P II area is generally considered rural and includes the existing communities of Stevenson Ranch in the Phase II.a area and Chatsworth Lake Manor in the Phase II.b area. Similar to the Phase I area described in the SSMTMP, the Phase II.a area is characterized by rugged topography, steep ridges, deep canyons with wide creek beds that are tributaries to the Santa Clara River, and several ridgeline and canyon trails and fire roads. The Phase II.a area contains several ridges and canyons and approximately 0.6 miles of existing County trails (Pico Canyon Trail) managed by County DPR. Additionally, there are approximately 15.0 miles of existing Conservancy trails (managed by the Mountains Recreation and Conservation Authority [MRCA]), approximately 0.9 mile of landscaped trail along Pico Canyon Channel (managed by the Los Angeles County Flood Control District) and approximately 5.0 miles of existing City trails (managed by the City of Santa Clarita). The Phase II.b area contains several ridges and canyons and no existing Federal, State, County, or City trails.

Land Use Designation and Zoning

The County land use designations for the SSMTMP-P II area are predominantly Rural Land 20 (RL20), Parks and Recreation (OS-PR). Trails are compatible with all of the County's land use designations for the SSMTMP-P II area.^{54,55} The County zoning designations for the SSMTMP-P II area are predominantly Open Space (OS), Light Agricultural (A-1), Heavy Agricultural, (A-2), and Single-Family Residence (R-1), with other residential zones, manufacturing zones, commercial zones, and institutional zones also comprising portions of the project study area.⁵⁶ The Heavy Agricultural Zone, Light Manufacturing Zone, Unlimited Commercial Zone, Commercial Manufacturing Zone, Commercial Recreation Zone, Restricted Heavy Manufacturing Zone, and Neighborhood Business Zone permit riding and hiking trails; the Open Space Zone, Light Agricultural Zone, Manufacturing – Industrial Planned Zone, and residential zones in the SSMTMP-P II area allow for riding and hiking trails if they have been approved by the Director of the County of Los Angeles Department of Regional Planning (Director); and riding and hiking trails may be allowed in the Institutional Zone upon approval of a Conditional Use Permit (CUP).

⁵⁴ County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. County of Los Angeles General Plan 2035. Chapter 6: Land Use Element. Available at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch6.pdf

⁵⁵ County of Los Angeles Department of Regional Planning. Adopted 27 November 2012. Santa Clarita Valley Area Plan. Chapter 2: Land Use. Available at: http://planning.lacounty.gov/assets/upl/project/ovov_2012-ch-02-landuse.pdf

⁵⁶ County of Los Angeles Department of Regional Planning. n.d. GIS-NET3 Public Mapping Application. Planning & Zoning Information for Unincorporated LA County. Available at: http://rpgis.isd.lacounty.gov/GIS-NET3_Public/Viewer.html

Santa Clarita Valley Area Plan Scenic Resources

The Conservation Element of the Santa Clarita Valley Area Plan has identified four types of scenic resources as significant resources to be maintained to preserve the visual character of the valley that are located within the Phase II.a area (Figure 5.1.4-1, *Santa Clarita Valley Area Plan Designated Scenic Resources*):⁵⁷

- **Scenic Canyons**, which have remained undeveloped and support a variety of natural habitats. One of the seven scenic canyons identified by the Santa Clarita Valley Area Plan is located within the study area: Pico Canyon
- **Scenic Woodlands**, which contribute to rural and scenic character. The Santa Clarita Valley Area Plan strives to protect existing oak woodland and cottonwood-willow riparian forest areas, several areas of which have been adopted by the County as Significant Ecological Areas. These woodlands include:
 - Southern Coast Live Oak Riparian Forest
 - Southern Cottonwood Willow Riparian Forest
 - California Walnut Woodland
 - Valley Oak Woodland
- **Scenic Water Bodies**, which provide scenic visual relief from urbanization as well as habitat for wildlife. Two of the 11 scenic water bodies identified by the Santa Clarita Valley Area Plan are located within the Phase II.a area: Castaic Creek and the South Fork of the Santa Clara River
- **Significant Ridgelines**, which create a sense of place for each neighborhood

Key Observation Points

The existing visual character of the SSMTMP-P11 area was documented in the vicinity of scenic resources and existing trail segments for each of the 19 established Key Observation Points (Figure 5.1.4-2, *Key Observation Points Map*; see Appendix A.1: *Key Observation Points*).

KOP 1: Phase II.a Area from SR-126 Facing East – View from eligible State scenic highway SR-126 facing east towards the northern portion of the Phase II.a area at the confluence of Castaic Creek and the Santa Clara River. The view is characterized by native and non-native riparian and scrub vegetation to the north and south of SR-126, as well as Southern Cottonwood Willow Riparian Forest (a scenic woodland plant community), then Valencia Travel Village in the foreground; mountainous terrain within the Newhall Ranch Specific Plan in the foreground to middleground; and the top of Six Flags Magic Mountain's 415-foot tall *Superman™: Escape from Krypton* ride⁵⁸ and iconic 384-foot tall red Sky Tower⁵⁹ in the background. To the north of SR-126, an electrical transmission corridor parallels SR-126 then Castaic Creek, and does not enter the Phase II.a area.

⁵⁷ County of Los Angeles. 2012. *Santa Clarita Valley Area Plan*. Available at: http://planning.lacounty.gov/view/santa_clarita_valley_area_plan/

⁵⁸ Six Flags. Accessed 1 August 2017. *SUPERMAN: Escape from Krypton*. Available at: <https://www.sixflags.com/magicmountain/attractions/superman-escape-krypton>

⁵⁹ Worden, Leon. 2012. *Sky Tower Construction: Magic Mountain*. Available at: <http://scvhistory.com/scvhistory/mm0100.htm>

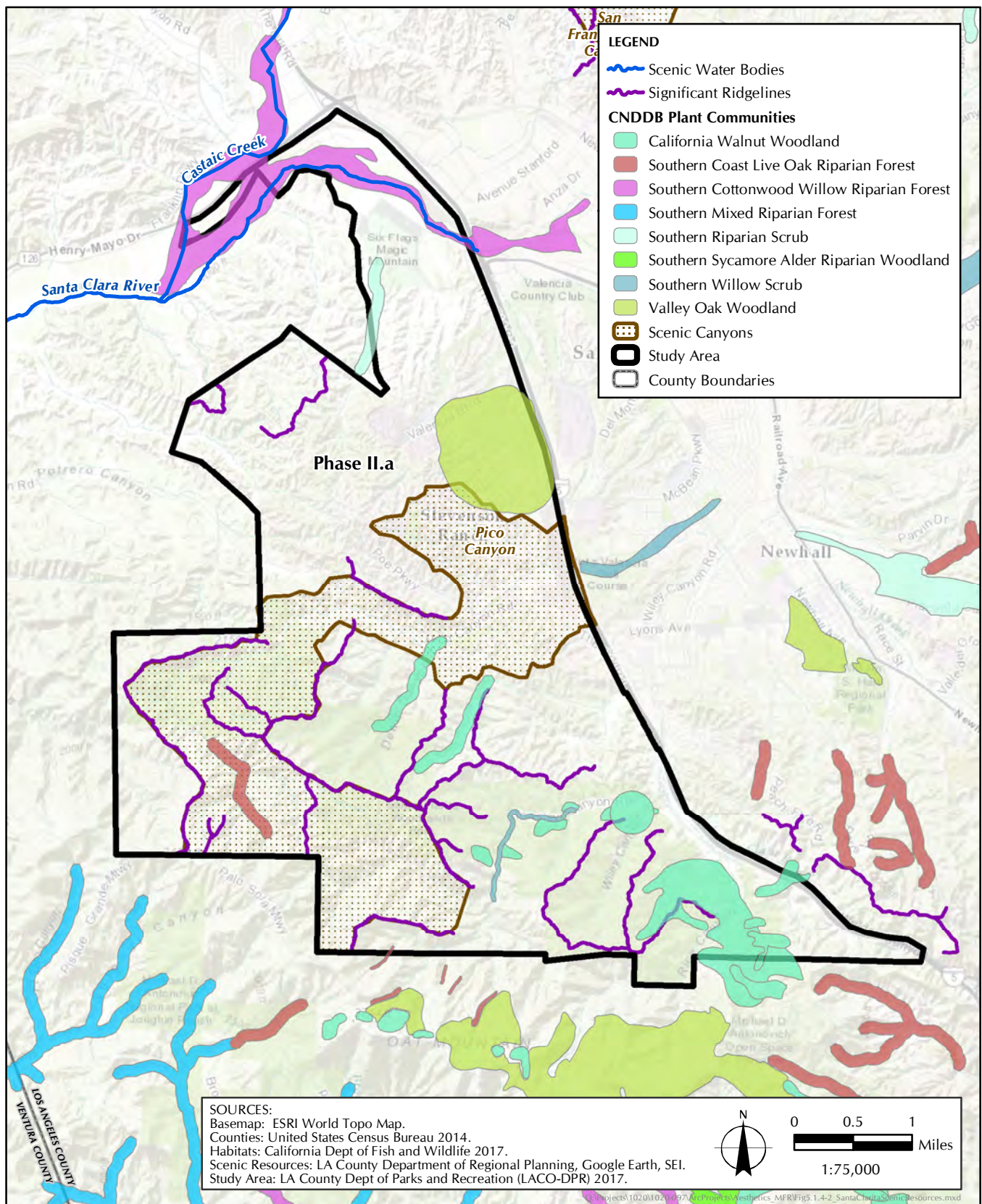


FIGURE 5.1.4-1

Santa Clarita Valley Area Plan Designated Scenic Resources

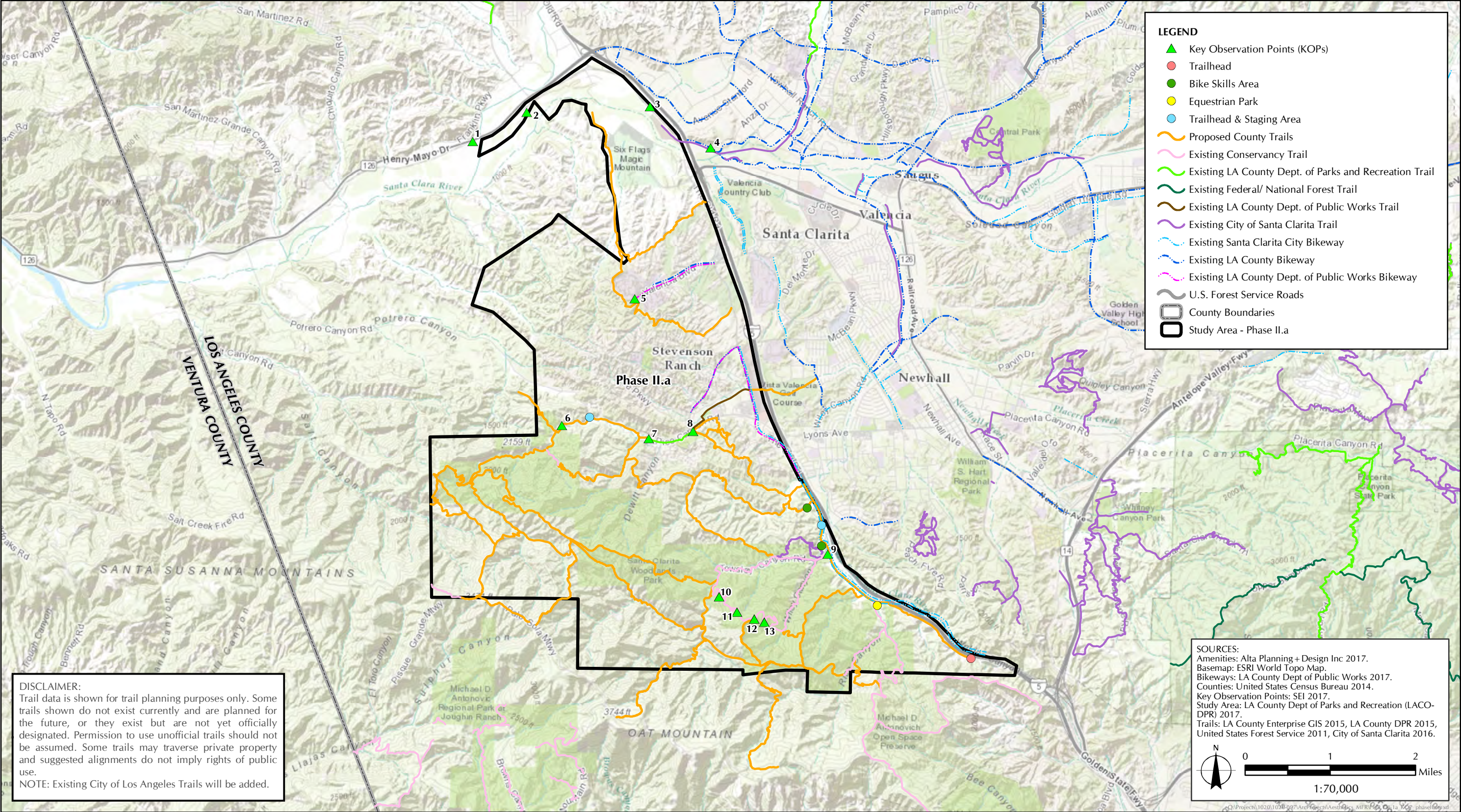




FIGURE 5.1.4-2a
Key Observation Points Map (Phase II.a)

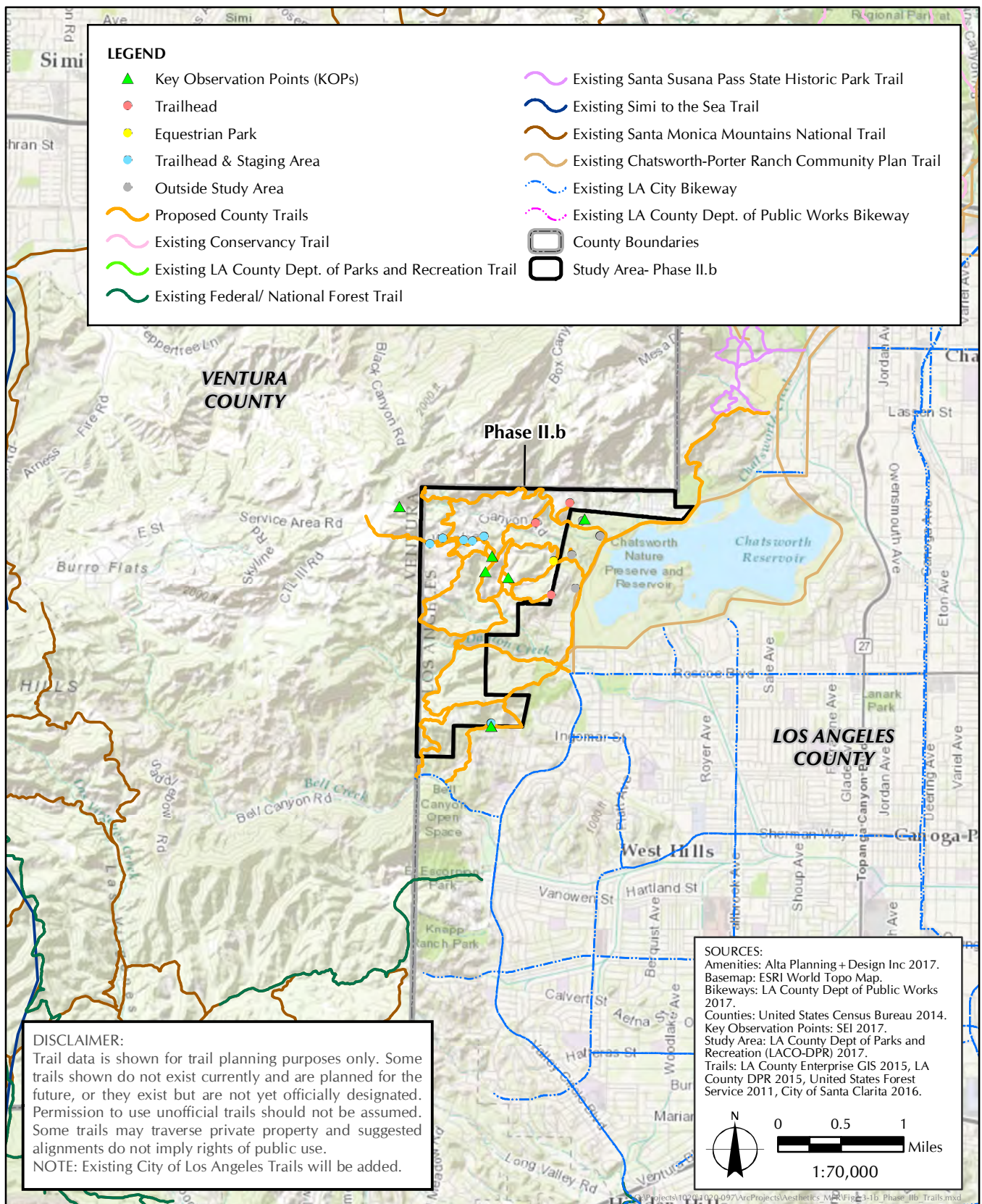


FIGURE 5.1.4-2b
 Key Observation Points Map (Phase II.b)

KOP 2: Phase II.a Area from Henry Mayo Drive Facing East – View from Henry Mayo Drive in Phase II.a area Near Valencia Travel Village facing east towards the Santa Clara River floodplain. The view is characterized by a private road or driveway which parallels Henry Mayo Drive, non-native and native riparian and scrub vegetation, as well as Southern Cottonwood Willow Riparian Forest (a scenic woodland plant community), in the foreground; mountainous terrain within the Newhall Ranch Specific Plan in the foreground to middleground; and the top of Six Flags Magic Mountain's 384-foot tall red Sky Tower in the background. Chain-link fences and overhead street lights along the concrete sidewalk contrast with the Santa Clarita Valley Area Plan designated scenic woodland in the Santa Clara River floodplain.

KOP 3: Phase II.a Area from I-5 and The Old Road Facing Southwest – View from The Old Road near eligible State scenic highway I-5 at the eastern edge of the Phase II.a area southwest towards the Phase II.a area. The view is characterized by The Old Road, non-native and native riparian and scrub vegetation, as well as Southern Cottonwood Willow Riparian Forest (a scenic woodland plant community), in the foreground; and the top of Six Flags Magic Mountain's 415-foot tall *Superman™: Escape from Krypton* ride, 384-foot tall red Sky Tower, and roller coasters in the middleground; and mountainous terrain within the Newhall Ranch Specific Plan in the middleground and background. An overhead electrical transmission corridor, paved and gravel road shoulders, chain-link fences, and overhead street lights along the paved road contrast with the Santa Clarita Valley Area Plan designated scenic woodland in the Santa Clara River floodplain.

KOP 4: Santa Clara River Trail in Santa Clarita Facing West Towards Phase II.a Area – View from the existing paved South Fork of the City of Santa Clarita's Santa Clara River Trail within the Santa Clara River floodplain west towards eligible State scenic highway I-5 and development along the eastern edge of the Phase II.a area. The view is characterized by non-native and native riparian and scrub vegetation, as well as Southern Cottonwood Willow Riparian Forest (a scenic woodland plant community), in the foreground; development along I-5 and The Old Road including water storage tanks, two electrical transmission corridors, office buildings, the Six Flags California sign along Magic Mountain Parkway, and the top of Six Flags Magic Mountain's 415-foot tall *Superman™: Escape from Krypton* ride, 384-foot tall red Sky Tower, and roller coasters in the foreground to middleground; and the top of Six Flags Magic Mountain's 415-foot tall *Superman™: Escape from Krypton* ride, 384-foot tall red Sky Tower, and roller coasters in the middleground; and single-family residential development of the community of Stevenson Ranch and mountainous terrain within the Newhall Ranch Specific Plan in the middleground and background. The overhead electrical transmission corridors, buildings, signs, and water storage tanks near I-5, as well as the roller coasters at Six Flags Magic Mountain, contrast with the Santa Clarita Valley Area Plan designated scenic woodland in the Santa Clara River floodplain.

KOP 5: Edge of Stevenson Ranch Development in Phase II.a Area Facing Southwest – View of the western edge of development near three K-12 schools on Valencia Boulevard in the community of Stevenson Ranch. Within the unincorporated community of Stevenson Ranch, there are several culs-de-sac such as this terminus that dead-end as the edge of development and either non-graded hills or slopes that have been graded for erosion/runoff control as part of the development. The view is characterized by a six-lane paved road with median, sidewalks, and overhead street lamps; planted native shrubs and trees maintained to meet fuel modification requirements; and native scrub and scattered non-native scrub/grassland vegetation on the hills outside the developed area. The ridgeline on the hills is softened by the scrub vegetation. The proposed Entrada trail corridor would be visible from KOP 5.

KOP 6: Mentryville in Phase II.a Area Facing Southeast – View of the Mentryville site historic landmark⁶⁰ within Pico Canyon in Santa Clarita Woodlands Park, including four remaining historic buildings, the road with bridge across a drainage leading to a paid parking lot (behind the structures) and Pico Canyon Road.⁶¹ Mentryville was an 1880-1930's oil boom town building around oil well Pico No. 4,⁶² the site of the first commercially successful oil well in the western United States.^{63,64} Mentryville is maintained by the Santa Monica Mountains Conservancy and open to the public. The view is characterized by paved roads bordered on the south side by an existing narrow dirt trail with fence, an electrical transmission corridor, historic Mentryville structures with ornamental/shade trees near the parking lot, and a mix of native riparian and scrub vegetation and non-native scrub/grassland within the drainage, near the historic structures, and on the surrounding hills of Pico Canyon. The existing trail indicated on a map, which from the intersection of Pico Canyon Road and Potrero Canyon Road along Pico Canyon Road, through Mentryville and Johnson Park via the Pico Canyon Service Road, is not well-delineated as a trail within Pico Canyon. The proposed Pico Canyon trail corridor (comprised of a previously adopted proposed County trail alignment and Pico Canyon Service Road) would be visible from KOP 6.

KOP 7: Western End of Pico Canyon Trail in Phase II.a Area Facing Northeast – View of the western end of the existing Pico Canyon Trail, which is managed by DPR. This 0.6-mile decomposed granite trail parallels the south side of Pico Canyon Road and terminates at the location of a debris basin enclosed by a chain-link fence. The view is characterized by the concrete sidewalk adjacent to the trail, the debris basin, an electrical transmission corridor, the paved Pico Canyon Road, and steep topography vegetated with a mix of native scrub and non-native scrub/grassland. The utility and transportation infrastructure contrast with the vegetated mountainous terrain. The proposed Pico Canyon trail corridor would be extended to the west (left) of the view from KOP 7.

KOP 8: Eastern Edge of Pico Canyon Trail in Phase II.a Area Facing South – View of the eastern end of the existing Pico Canyon Trail, which is managed by DPR. This view is characterized by the decomposed granite trail, non-native grassland and native coast live oak/scrub vegetation, and the suburban residential development within Pico Canyon. The proposed Pico Canyon trail corridor would be extended to the east along Pico Canyon Road and be visible from KOP 8.

KOP 9: Towsley Canyon Trail Parking in Phase II.a Area Facing West – View from the first of two parking lots within Ed Davis Park in Towsley Canyon, which contains existing trails managed by the City of Santa Clarita and the MRCA. This view is characterized by a paved parking lot and driveway leading to the next parking lot, consistent green and white signs directing trail users, an electrical transmission corridor, non-native ornamental shade trees and grassland in the foreground,

⁶⁰ National Register of Historic Places. State Historic Landmark #516-2

⁶¹ City of Santa Clarita. May 2011. *City of Santa Clarita General Plan. Conservation and Open Space Element*. Available at: <http://www.codepublishing.com/CA/SantaClarita/html/SantaClaritaGP/6%20-%20Conservation%20and%20Open%20Space%20Element.pdf>

⁶² National Register of Historic Places. State Historic Landmark #516

⁶³ Santa Monica Mountains Conservancy. Accessed 1 August 2017. *Mentryville*. Available at: <http://www.lamountains.com/parks.asp?parkid=35> Map available at: http://www.lamountains.com/maps/mentryville_Pico.pdf

⁶⁴ City of Santa Clarita. May 2011. *City of Santa Clarita General Plan. Conservation and Open Space Element*. Available at: <http://www.codepublishing.com/CA/SantaClarita/html/SantaClaritaGP/6%20-%20Conservation%20and%20Open%20Space%20Element.pdf>

and native scrub vegetation on the hills further in the canyon. The proposed Pico Canyon trail corridor would parallel The Old Road behind KOP 9.

KOP 10: Towsley Canyon Trail in Phase II.a Area Facing Southwest – View of ridgelines within the southern portion of the Phase II.a study area, with Oat Mountain, Rocky Peak and Sand Rock peak against the skyline. This view is characterized by steep slopes with visible rock outcrops, prominent peaks, and a mix of non-native grassland and native coast live oak/scrub vegetation. Proposed trail corridors may be visible from this vista facing down into the canyon.

KOP 11: Towsley Canyon Trail in Phase II.a Area Facing Northwest – View of ridgelines within the southern portion of the Phase II.a study area, with Oat Mountain and Sand Rock peak against the skyline. This view is characterized by a mix of non-native grassland and native coast live oak/scrub vegetation along the trail and on adjacent slopes in the foreground, one ridgetop utility structure, and a vista of the Santa Clarita Valley beyond the mountainous Phase II.a area. Proposed trail corridors may be visible from this vista facing down into the canyon.

KOP 12: Towsley Canyon Trail in Phase II.a Area Facing Southeast – View from a County-designated significant ridgeline along the existing Towsley Canyon Trail of ridgelines within the southwestern portion of the Phase II.a study area. This view is characterized by a mix of non-native grassland and native coast live oak/scrub vegetation along the trail and on adjacent slopes in the foreground, with Oat Mountain against the skyline, the I-5 freeway in the middleground, and the San Gabriel Mountains in the distance. A proposed trail corridor would extend from near KOP 12 towards the west.

KOP 13: Towsley Canyon Trail in Phase II.a Area Facing Southwest – View from along the existing Towsley Canyon Trail of Wiley Canyon. This view is characterized by a mix of non-native grassland and native coast live oak/scrub vegetation along the trail and on adjacent slopes in the foreground, with clearly defined ridgelines obstructing any distant views. The proposed Rice Canyon trail corridor would be visible from KOP 13.

KOP 14: Woolsey Canyon Road Facing East Towards Phase II.b Area – Elevated view from a boulder adjacent to Woolsey Canyon Road of the Phase II.b area from the west and the San Fernando Valley in the background. The view is characterized by native scrub and non-native grassland vegetation, an electrical transmission corridor, one residence located within the Phase II.b area, and the narrow paved Woolsey Canyon Road. No proposed trail corridors would be visible from KOP 14.

KOP 15: Lake Manor Drive Facing North Towards Phase II.b Area – View of single-family residences with the community of Chatsworth Lake Manor and the rock formation (in Ventura County) referred to by locals as the “Twelve Apostles” in the background. The view is characterized by non-native grassland, ornamental trees, and native scrub vegetation; a gated open space area; Box Canyon Road; and one electrical transmission corridor. Proposed trail corridors would be located to the west of KOP 15 (potentially visible on the left side of the vista) and to the south of KOP 15 (behind this vista). One access area facility would be located northwest of KOP 15 (potentially visible on the left side of this vista). The Trails Master Plan recommends that the City of Los Angeles develop a trailhead facility at the location of KOP 15.

KOP 16: Woolsey Canyon in Phase II.b Area Facing East – View of non-native grassland and native scrub vegetation within Phase II.b area in the foreground, the San Fernando Valley including

Chatsworth Reservoir in the middleground, and the San Gabriel Mountains in the background. Proposed trail corridors would be visible from this KOP.

KOP 17: Woolsey Canyon in Phase II.b Area Facing Northwest – View of non-native grassland and native scrub vegetation within Phase II.b area in the foreground, with scattered residences, existing dirt paths, and dramatic rock formations characteristic of the Phase II.b area. Proposed trail corridors would be visible from this KOP.

KOP 18: Woolsey Canyon in Phase II.b Area Facing North – View of non-native grassland and native scrub and riparian vegetation within Phase II.b area in the foreground, with scattered residences, existing dirt paths, and dramatic rock formations characteristic of the Phase II.b area. Proposed trail corridors would be visible from this KOP.

KOP 19: Edge of Residential Development Facing North Towards Phase II.b Area – View of southern edge of Phase II.b area from residential neighborhood in City of Los Angeles. The proposed RIVA trail corridor would be visible from this KOP. A proposed trailhead and staging area would be located in front of KOP 19.

County Designated Significant Ridgelines

The 2012 Santa Clarita Valley Area Plan has designated Significant Ridgelines in the Phase II.a area to be preserved (see Figure 5.1.4-2).⁶⁵ These ridgelines should be carefully considered during the planning, designation, and construction of trails in the Trails Master Plan.

County Designated Town and Country Scenic Drives

There are nine County-designated Town and Country Scenic Drives located within a 15-mile radius of the Phase II.a area, none of which are located within the SSMTMP-P II area:

- 1) Northern segment of Golden State Freeway/I-5 (north of Phase II.a area)
- 2) Old Ridge Route Road (north of Phase II.a area)
- 3) Lake Hughes Road (north of Phase II.a area)
- 4) San Francisquito Canyon Road (northeast of Phase II.a area)
- 5) Bouquet Canyon Road (northeast of Phase II.a area)
- 6) Antelope Valley Freeway (east of Phase II.a area)
- 7) Soledad Canyon Road (east of Phase II.a area)
- 8) Little Tujunga Road (east of Phase II.a area)
- 9) Big Tujunga Canyon Road (east of Phase II.b area)

There is one Town and Country Scenic Drive located within a 15-mile radius of the Phase II.b area: Little Tujunga Road. A viewshed analysis was conducted using ArcGIS to evaluate the potential visibility level of the SSMTMP-P II area from these nine (9) designated Town and Country Scenic Drives.⁶⁶ It was determined that approximately 48.1 percent of the SSMTMP-P II area would be visible from designated Town and Country Scenic Drives. It should be noted that a viewshed analysis evaluates visibility based solely on topographic data, and the presence of large trees, large shrubs, buildings, and infrastructure between these designated Town and Country Scenic Drives

⁶⁵ These have been incorporated into the County General Plan 2035 Inventory of Significant Ridgelines.

⁶⁶ Sapphos Environmental, Inc. 17 February 2016. Viewshed analysis calculated using 10-foot DEM data in ArcGIS.

and the study area would be expected to reduce the potential visibility level further than this estimate.

Significant Ecological Areas

Three adopted SEAs are located within the SSMTMP-P II area: the Santa Clara River SEA (#20), which is located within the Phase II.a area along Castaic Creek and the Santa Clara River; the Santa Susana Mountains / Simi Hills SEA (#23), which is located in the southern half of the Phase II.a area and the undeveloped southern portion of the Phase II.b area within the Santa Susana mountains and the Simi Hills; and the Valley Oaks Savannah SEA (#26), which is located within the unincorporated community of Stevenson Ranch in the Phase II.a area (Figure 3.3-1).

5.1.5 Shadows, Light, and Glare

The SSMTMP-P II area is generally rural, with suburban areas typically containing single-story to two-story residences, except for the developed community of Stevenson Ranch and the Six Flags Magic Mountain property. Commercial and industrial buildings within the northern and eastern portions of the Phase II.a area, are generally surrounded by parking lots and landscaping that provide a buffer between the buildings and potential shadow sensitive land uses. Approximately 50 percent of the SSMTMP-P II area (10.1 square miles of the Phase II.a area and the entire 2 square-mile Phase II.b area) is located within the County's Rural Outdoor Lighting District and subject to restrictions in terms of light and glare at night (see Figure 3.3-1).

Within Los Angeles County, the major sources of nighttime sky glow are cities, transportation corridors, and established communities. According to Earth at Night 2012 data, a composite of city light data acquired by the SuomiNPP satellite over nine days in April 2012 and 13 days in October 2012, within the vicinity of the SSMTMP-P II area, as with the nearby cities of Santa Clarita, Simi Valley, Thousand Oaks, and Los Angeles; the unincorporated communities of Stevenson Ranch (in northeastern portion of Phase II.a area) and Castaic (near Castaic Lake); and the industrial Castaic Junction area in the northeastern portion of the Phase II.a area experience a high level of existing nighttime sky glow (Figure 5.1.5-1, *Existing Light Levels at Night*).⁶⁷ In April 2017, NASA scientists released the first new global map of Earth at Night since 2012, comprised of a composite of 2016 images, which show a slight expansion of nighttime light from the 2012 data for Los Angeles County; however, this 2016 data is not yet available to the public in ArcGIS. Light levels at night within the SSMTMP-P II area range from low in the southwestern portion of the Phase II.a area (southwest of Sand Rock Peak and near the undeveloped Newhall Ranch Specific Plan area), to moderate in the northwestern portion of the Phase II.b area (near Sage Ranch Park), to high in the northeastern portion of the Phase II.a area (surrounding Stevenson Ranch, Six Flags Magic Mountain, and the City of Santa Clarita) and the southeastern portions of the Phase II.b area, adjacent to the City of Los Angeles.⁶⁸

⁶⁷ NASA Earth Observatory/NOAA NGDC. April and October 2012. *Earth at Night 2012*. Available from Google Earth.

⁶⁸ NASA Earth Observatory. 2016. *Composite image of Continental U.S. at Night*. Images by Joshua Stevens, using Suomi NPP VIIRS data from Miguel Román, NASA's Goddard Space Flight Center. Available at: City of Santa Clarita. May 2011.

<https://www.nasa.gov/sites/default/files/thumbnails/image/2016-north-america-usa.jpg>. Main website:

<https://www.nasa.gov/feature/goddard/2017/new-night-lights-maps-open-up-possible-real-time-applications>

5.2 IMPACT ANALYSIS

The potential for trails constructed within the SSMTMP-P II area, including related facilities, to result in impacts related to aesthetics was analyzed in relation to the questions in the County of Los Angeles Department of Parks and Recreation's Environmental Checklist Form and Appendix G of the State CEQA Guidelines.⁶⁹ Trails and related facilities constructed within the SSMTMP-P II area would be considered to have a significant impact to aesthetics when the potential for any one of the following five thresholds occurs:

Would the project:

- a) Have a substantial adverse effect on a scenic vista?
- b) Be visible from or obstruct views from a regional riding or hiking trail?
- c) Substantially damages scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?
- d) Substantially degrades the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, character, or other features?
- e) Create a new source of substantial shadows, light or glare that would adversely affect day or nighttime views in the area?

5.2.1 Scenic Vistas

The proposed project would result in no impacts to aesthetics in regard to a substantial adverse effect on a scenic vista. There are no designated scenic vista points within the SSMTMP-P II area; nor is the SSMTMP-P II area visible from scenic vista points designated within the Los Angeles County General Plan 2035 or by Caltrans.^{70,71} Therefore, there would be no impacts to scenic vistas as a result of the proposed project, and no mitigation would be required.

5.2.2 Regional Riding and Hiking Trails

The proposed project would result in less than significant impacts to aesthetics in regard to visibility or obstructing views from a regional riding or hiking trail. Although the proposed project would potentially be visible from nearby existing regional trails, it would not be expected to obstruct views due to intervening topography, trees, and shrubs, as well as the small scale of the proposed facilities. A viewshed analysis was conducted that determined that, based on topography, up to 65.1 percent of the SSMTMP-P II area would potentially be visible from the existing regional riding and hiking trails with clear atmospheric conditions and no intervening trees or shrubs (Figure 5.2.2-1, *Viewshed Map – Existing Regional Trails*). As the Pacific Crest National Scenic Trail (PCT) is located approximately 14.9 miles northeast of the SSMTMP-P II area at the nearest point, it is not anticipated that the proposed trails would be visible from the PCT due to distance and intervening topography.

⁶⁹ *California Code of Regulations*, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

⁷⁰ The County has designated Public Viewing Areas in the Santa Monica Mountains Land Use Plans, which are located more than 15 miles south of the Castaic project area.

⁷¹ Male, Laura, Sapphos Environmental, Inc. Pasadena, CA. 3 July 2015. Communication with Daniel Kitowski, Transportation Manager (GIS), California Department of Transportation.

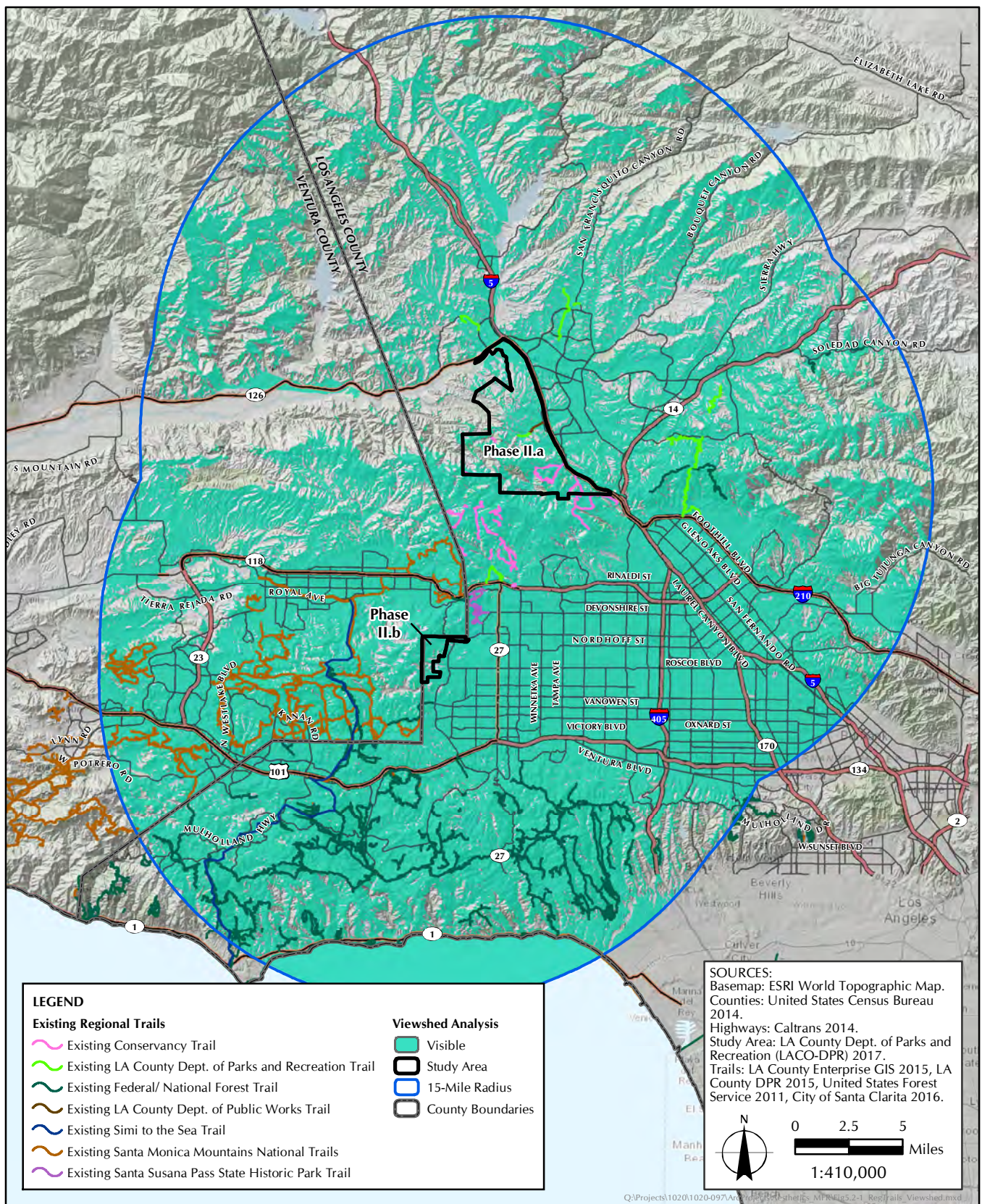


FIGURE 5.2.2-1
 Viewshed Map – Existing Regional Trails

According to the viewshed analysis based on topography, approximately 70.5 percent (49.5 miles of 70.3 miles) of proposed trails have the potential to be visible from existing regional trails with clear atmospheric conditions and no intervening trees or shrubs. It should be noted that several of the proposed trail corridors follow existing dirt roads and de facto trails (unofficial routes where a path has already been cleared), a viewshed analysis evaluates visibility based solely on topographic data, and the presence of large trees, large shrubs, buildings, and infrastructure between regional trails and the SSMTMP-P II area would be expected to reduce the potential visibility level further than this estimate. Furthermore, trails and supporting facility structures would not be expected to dramatically alter the form of ridgelines within the study area and would therefore not be likely to be visible from, or obstruct views from, regional trails.

There is one existing trail segment within the SSMTMP-P II area that is part of the County's Regional Trail System: Pico Canyon Trail (0.6 miles), within the Phase II.a area. Although the proposed project would be visible from these existing regional trail segments because new trail segments would be located adjacent to or within a mile of the existing segments, it would enhance the existing recreational experience and trail system by providing connections between the existing trail segments that would be visible from these trails. The proposed project, which would involve new trails, staging areas, bike skills areas, restrooms, parking lots, and other related trail facilities, would be designed to enhance views from recreational trails and would not be expected to obstruct views from existing regional trails. Therefore, there would be less-than-significant impacts to regional riding or hiking trails as a result of the proposed project, and no mitigation would be required.

5.2.3 Scenic Resources within State Scenic Highway Corridors

The proposed project would result in significant impacts to aesthetics in regard to substantial damage to scenic resources within a state scenic highway corridor. The proposed project would be located within the scenic highway corridor of the two nearest eligible state scenic highways—Henry Mayo Drive (SR-126) and the Golden State Highway (I-5)—because the Phase II.a area is adjacent to these routes and proposed trail corridors would be located a one-mile corridor foreground radius of SR-126 and I-5, including one proposed trail which would cross under I-5 to connect to existing bikeways in the City of Santa Clarita. The nearest officially designated State scenic highway is the recently designated SR-27, which was officially designated on March 22, 2017 and is located approximately 5.1 miles southeast of the SSMTMP-P II area; the proposed project has the potential to be visible from SR-27 in the middleground or background. The proposed project would not be visible from Angeles Crest Highway (SR-2) and Maricopa Highway (SR-33)—due to distance and intervening topography. Angeles Crest Highway is located over 24 miles east of the Castaic project area, and Maricopa Highway is located over 28 miles west of the study area.

Based on viewshed analysis, approximately 24.2 miles located on all of the proposed trail corridors within the Phase II.a area would have the potential to be visible in the foreground to middleground from officially designated and eligible State scenic highways (Figure 5.2.3-1, *Viewshed Map – Designated and Eligible State Scenic Highways*). KOPs 1, 2, and 3 are representative of potential views from SR-126 and I-5 (see Appendix A.1). Approximately 39.4 miles (56.1 percent) of the 70.3 miles of proposed trail corridors have the potential to be visible, based solely on topographic data. As the Phase II.a area is adjacent to SR-126 and I-5, implementation of mitigation measures would be required to reduce the potential for significant impacts to scenic resources within a state scenic highway corridor to below the level of significance.

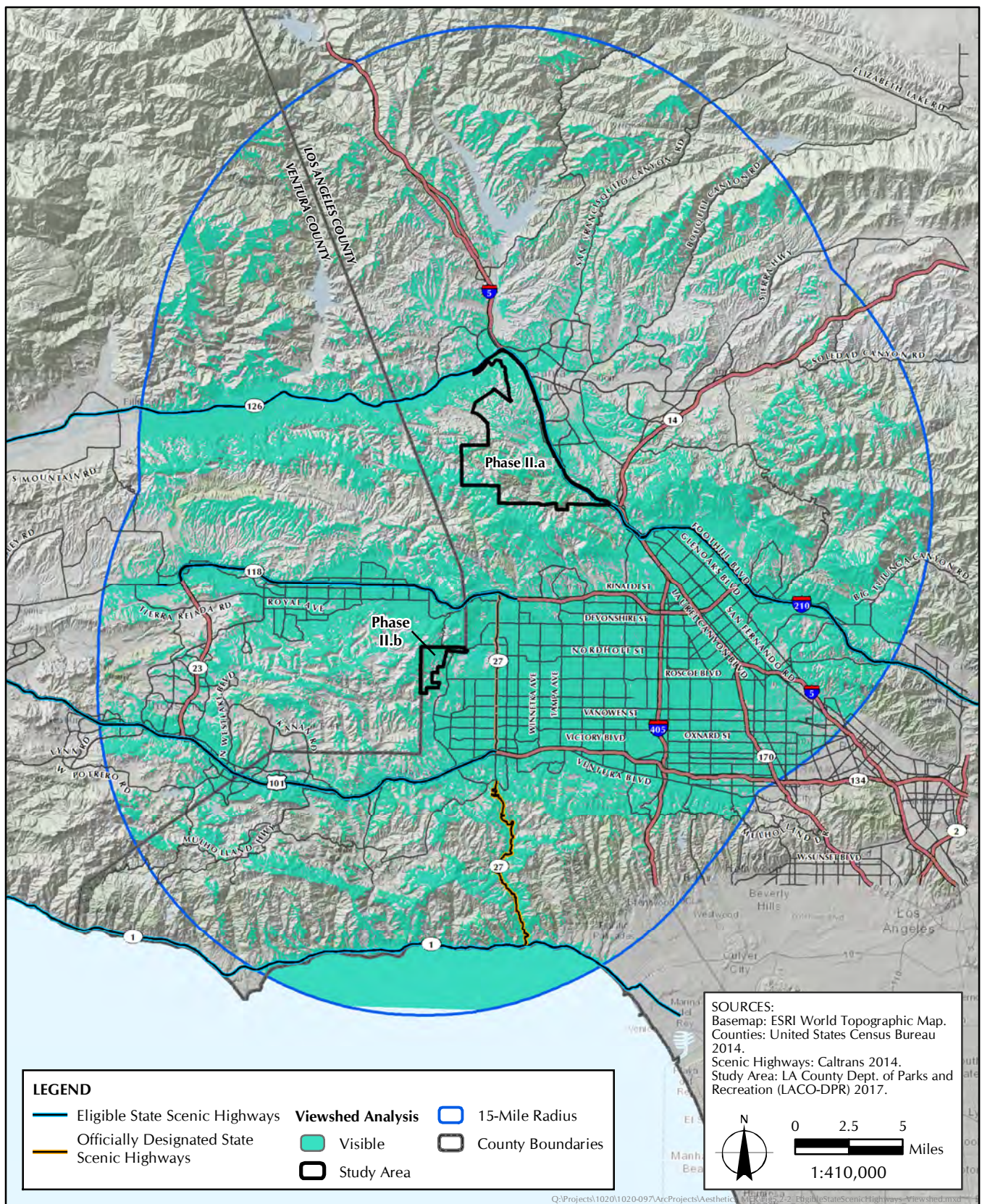


FIGURE 5.2.3-1
 Viewshed Map – Designated and Eligible State Scenic Highways

Based on viewshed analysis, approximately 15.1 miles located on all of the proposed trail corridors within the Phase II.b area would have the potential to be visible in the middleground to background from officially designated and state scenic highways (see Figure 5.2.3-1). As the Phase II.b area is located over one mile from the nearest state scenic highway (SR-118), impacts to scenic resources within state scenic highway corridors as a result of proposed trails within the Phase II.b area would be less than potential impacts within the Phase II.a area.

There is a potential for the proposed project to affect the health of existing coast live oak trees and other protected trees that are located along the proposed trail alignments and supporting facilities that are important to the character of the scenic highway corridors. The proposed project involves trail segments within scenic Pico Canyon, along scenic water bodies including the Santa Clara River, and through scenic forests/woodlands (see Figure 5.1.4-1). Although the construction of trails within these scenic resource areas and sensitive woodland areas would not result in significant impacts to visual character because trail construction can be conducted in a low-impact manner in accordance with the County Trails Manual, there is a potential for significant impacts to occur if scenic trees are removed. Therefore, there would be a potential for significant impacts to scenic resources within a state scenic highway as a result of the proposed project, and mitigation would be required.

5.2.4 Visual Character and Quality

The proposed project would result in less than significant impacts to aesthetics in regard to substantial degradation of the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, character, or other features. Trails and related supporting facilities would generally not be expected to substantially degrade the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, or character because they would be low to the ground, spaced and designed in a pattern that follows the natural topography and existing paved and dirt roads, and be consistent with the scale and character of the rural SSMTMP-P II area that already contains several dirt access roads and fire roads throughout the mountainous and hilly terrain.

Trails and related supporting facilities are generally consistent with the existing visual character of the SSMTMP-P II area and surrounding areas. Although the Santa Clarita Valley Area Plan only directly mentions trails within the Parks and Recreation land use designation, the land use policy defers to the specific allowable uses and development standards determined by underlying zoning designations and adopted Specific Plans. The County zoning designations for the SSMTMP-P II area are predominantly open space and light agricultural, with land designated in the County General Plan for open space, rural land, single-family residential, major commercial, and other uses which are compatible with trails.^{72,73} The Heavy Agricultural Zone, Light Manufacturing Zone, Unlimited Commercial Zone, Commercial Manufacturing Zone, Commercial Recreation Zone, Restricted Heavy Manufacturing Zone, and Neighborhood Business Zone permit riding and hiking trails; the Open Space Zone, Light Agricultural Zone, Manufacturing – Industrial Planned Zone, and residential zones in the project study area allow for riding and hiking trails if they have been approved by the Director of the County of Los Angeles Department of Regional Planning

⁷² County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. *County of Los Angeles General Plan 2035*. Chapter 6: Land Use Element. Available at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch6.pdf

⁷³ County of Los Angeles Department of Regional Planning. Adopted 27 November 2012. *Santa Clarita Valley Area Plan*. Chapter 2: Land Use. Available at: http://planning.lacounty.gov/assets/upl/project/ovov_2012-ch-02-landuse.pdf

(Director); and riding and hiking trails may be allowed in the Institutional Zone upon approval of a Conditional Use Permit (CUP).

Consistent with planning guidelines provided by the County Trails Manual, conceptual trail alignments have been planned to maintain the characteristic rugged aesthetic of the trail. The proposed project has the potential to enhance the trail's visual quality through clarified trail designation, maintenance, and revegetation along constructed portions of the trail with native plants that may not have survived construction of subdivisions. The experience of recreation users would be enhanced through the incorporation of informational signs at trail intersections to provide orientation. The County Trail Manual specifies desired minimum trail widths for multi-use trails (accommodating bicyclists, hikers, and equestrians) at 5 feet, wherever possible, with 6- to 10-foot-wide turn outs in high-traffic areas.⁷⁴ Where trails of up to 10 feet wide are developed or existing trails are expanded up to 10 feet wide, impacts to the visual character of the viewshed from surrounding residences can be avoided through the incorporation of native vegetation as a screening material. Restoration of native vegetation along conceptual trail alignments would have the potential to enhance the visual character within the SSMTMP-P II area. Preserving existing native vegetation adjacent to the trail would protect the aesthetic quality of the SSMTMP-P II area.⁷⁴

Trails proposed as a result of the proposed project would be consistent with the visual character of the SSMTMP-P II area and surrounding areas. The visual nature of the SSMTMP-P II area is dominated by native and non-native vegetation, transmission corridors, roads, isolated structures, suburban and industrial/commercial developed areas, and trails (see Appendix A.1). The proposed trail improvements are compatible with the existing visual character of the SSMTMP-P II area. Several official trails and many unofficial trail segments currently traverse the SSMTMP-P II area. Hiking and riding are passive recreation activities that are compatible with the land use allowed within the three adopted SEAs that encompass small portions of the SSMTMP-P II area. The proposed trail alignments would not substantially degrade or alter the existing visual character of the SSMTMP-P II area. As the majority of trail designations in the proposed project already exist as access roads, fire roads, right-of-ways, and desire line trails (unofficial trails created where a significant number of people want to travel), trail construction would be relatively minor, predominantly consisting of realignments, improvements, and signage. Therefore, future trails anticipated in the proposed project would not be expected to result in significant impacts to aesthetics related to substantial degradation of the existing visual character of the site and its surroundings.

According to the viewshed analysis conducted using ArcGIS to evaluate the potential visibility level of the SSMTMP-P II area from County-designated Town and Country Scenic Drives based on topography, approximately 48 percent (approximately 33.7 miles of a total of 70.3 miles) of the proposed trails would be visible from Town and Country Scenic Drives located within a 15-mile radius of the Castaic project area (Figure 5.2.4-1, *Viewshed Map – County Designated Town and Country Scenic Drives*). It should be noted that a viewshed analysis evaluates visibility based solely on topographic data, and the presence of large trees, large shrubs, buildings, and infrastructure between the Town and Country Scenic Drives and the study area would be expected to reduce the potential visibility level significantly from this estimate. Furthermore, trails and supporting facility structures would not be expected to dramatically alter the form of ridgelines within the study area,

⁷⁴ County of Los Angeles Department of Parks and Recreation. [May 2011] June 2013. *County of Los Angeles Trails Manual*. Available at: <https://trails.lacounty.gov/Files/Documents/69/LA%20County%20Trails%20Manual%20%28Revised%2006-2013%29.compressed.pdf>

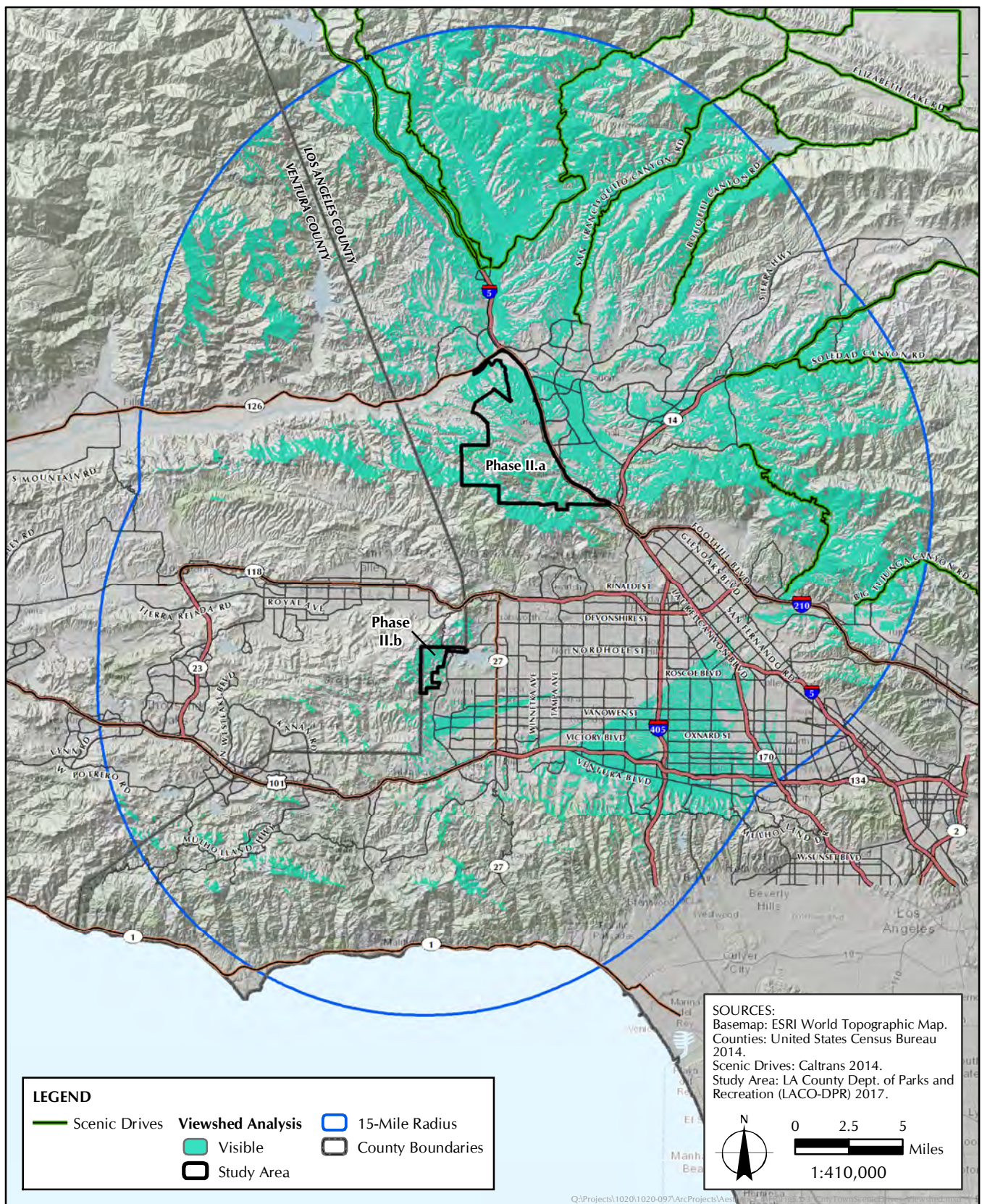


FIGURE 5.2.4-1

Viewshed Map – County-Designated Town and Country Scenic Drives

and would therefore not be likely to be substantially visible from Town and Country Scenic Drives over 5 miles (foreground view) from the study area.

Trails are normally considered a compatible use within a SEA. Trail development within a SEA would likely require preparation of a SEATAC Biota Report to demonstrate that the trail could be constructed, operated, and maintained in a manner that avoids significant impacts to the properties for which the SEA was designated, inclusive of the visual character of the area. Therefore, the proposed project would result in less-than-significant impacts in regard to degradation of the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, character, or other features as a result of the proposed project, and no mitigation would be required.

5.2.5 Shadows, Light, and Glare

The proposed project would result in less-than-significant impacts to aesthetics in relation to the creation of a new source of substantial shadows, light or glare. As the SSMTMP-P II area is generally rural, with suburban areas typically containing single-story to two-story residences and commercial and industrial buildings generally surrounded by parking lots and landscaping that provide a buffer between the buildings and potential shadow sensitive land uses, the structures considered within the proposed project would not be expected to create a new source of substantial shadows. Facilities such as restrooms, shade structures, and parking lots in support of the proposed trails would not be expected to be taller than a two-story building. Where buildings included in the plan are part of subdivision agreements, they would be designed to avoid creating substantial shadows on the new residences.

Approximately 50 percent of the SSMTMP-P II area is located within the County's Rural Outdoor Lighting District and subject to restrictions in terms of light and glare at night to maintain dark skies at night for the residents and wildlife in the district (see Figure 3.3-1).⁷⁵ Under the ordinance, outdoor lighting shall be fully shielded on properties located in residential, agricultural, open space, or watershed zones.⁷⁶ Exterior lighting on restrooms and other trail related supporting facilities would be required to conform to the ordinance. As shown in Figure 3.3-1, the remaining 50 percent of the SSMTMP-P II area (12 square miles in the Phase II.a area) that is not located within the County's Rural Outdoor Lighting District is predominantly characterized by a high level of existing nighttime sky glow, including Six Flags Magic Mountain, the nearby City of Santa Clarita, the community of Stevenson Ranch, and the industrial Castaic Junction area in the northeastern portion of the SSMTMP-P II area. Due to the high level of existing nighttime sky glow, impacts from exterior lighting on restrooms and other trail related supporting facilities, would be less than significant.

The hours of operation for Los Angeles County trails are typically from dawn to dusk (County Code 17.04.330). Therefore, the SSMTMP-P II does not include installation of nighttime lighting along the proposed trails; nor would the trails include nighttime safety lights that may affect nighttime views or add an additional source of light to the surrounding area. For safety purposes and to avoid disturbing the neighborhood from which the site is accessed, construction would not be conducted

⁷⁵ County of Los Angeles Department of Regional Planning. Accessed 16 February 2016. *GIS-NET3 Public*. Planning & Zoning Information for Unincorporated LA County. Available at: http://gis.planning.lacounty.gov/GIS-NET3_Public/Viewer.html

⁷⁶ Los Angeles County Department of Regional Planning. 28 September 2012. *Ordinance No. 2012-0047*. Available at: http://planning.lacounty.gov/assets/upl/data/ord_outdoor-lighting.pdf

at night. In accordance with the guidelines in Section 4.3.18, *Lighting*, of the County Trails Manual, where lighting features are provided for safety and wayfinding reasons, lighting would be installed in a manner to be non-intrusive to adjacent uses, avoid detracting from a natural outdoors experience for trail users, and directed downward to avoid light pollution or spillover in general.⁷⁷ As this guideline is independent of whether the trail segment or related supporting facility is located within the County's Rural Outdoor Lighting District, the proposed project, which must comply with the County Trails Manual, would not be expected to result in a significant new source of nighttime light.

The trail alignments under the SSMTMP-PII would be predominantly natural surface trails that would not create a new source of substantial glare. The proposed project would also include interpretive signage, small structures, new parking lots, and other related supporting facilities which would have the potential to create a source of daytime glare where glass, metal, asphalt, and additional vehicles are involved. However, these facilities would be small and are anticipated to be constructed in the areas with an existing moderate to high daytime glare level, towards the City of Santa Clarita, Los Angeles, and the I-5 freeway, which contain paved roads; commercial, industrial, and residential development and infrastructure; moderate to high vehicle traffic levels on major roads and freeways; and the presence of reflective water bodies. Therefore, the supporting facilities would not be expected to create a new source of substantial glare. Therefore, the proposed project would result in less-than-significant impacts to shadows, light and glare, and no mitigation would be required.

5.3 MITIGATION RECOMMENDATIONS

Mitigation Measures

Mitigation Measure AES-1: Trails and supporting facilities within a one-mile radius of officially designated and eligible state scenic highways shall be designed, constructed, and maintained (where construction equipment is involved) to avoid damaging or removal of scenic resources, including but not limited to trees, rock outcroppings, and historic buildings, within the scenic highway corridor. If any mature trees must be removed that would alter the viewshed, they shall be replaced at a minimum of a 1:1 ratio. Implementation of the Cultural Resources mitigation measures shall be conducted to avoid, minimize, or substantially reduce impacts to cultural resources such as historic buildings and Native American sacred sites. If any new structures or buildings are constructed within a one-mile radius of officially designated and eligible state scenic highways, landscape screening of the structures and buildings shall be installed on the side(s) of the structure facing the scenic highway(s) to reduce visual impacts to the scenic highway corridor.

Mitigation Measure AES-2: Trails and supporting facilities shall be designed, constructed, and maintained to avoid the drip line of any coast live oak trees and other protected trees that are located along the proposed trail alignments, in order to maintain the visual character of the area. Best Management Practices shall be used during construction and trails maintenance activities to protect the root structures of protected trees:

⁷⁷ County of Los Angeles Department of Parks and Recreation. [May 2011] Revised June 2013. *County of Los Angeles Trails Manual*. Available at: <https://trails.lacounty.gov/Files/Documents/69/LA%20County%20Trails%20Manual%20%28Revised%2006-20-13%29.compressed.pdf>

- A Worker Education and Awareness Program (WEAP) shall inform all construction workers of County Ordinances protecting oak trees and the sensitivity of roots to damage from compaction or excessive water.
- Drip line of oak trees shall be designated as off-limits during construction on all construction drawings and diagrams.
- Fencing and/or flagging shall be used to delineate the drip line of the trees as off-limits during trail construction.
- On-site monitors shall be utilized for periods when trail construction will be undertaken within 100 feet of the drip line of the oak trees.
- If a protected tree must be removed, the same species shall be replaced at a minimum of a 1:1 ratio.

Impacts to aesthetics in regard to scenic resources within a state scenic highway corridor would be less than significant after implementation of mitigation measures.

SECTION 6.0 REFERENCES

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KOP 1

Phase II.a Area from SR-126 Facing East



KOP 2

Phase II.a Area from Henry Mayo Drive Facing East





KOP 3
Phase II.a Area from SR-126 Facing Southwest



KOP 4
Santa Clara River Trail in Santa Clarita Facing West Towards Phase II.a Area





KOP 5

Edge of Stevenson Ranch Development in Phase II.a Area Facing Southwest



KOP 6

Mentryville in Phase II.a Area Facing Southeast





KOP 7
Western End of Pico Canyon Trail in Phase II.a Area Facing Northeast



KOP 8
Eastern Edge of Pico Canyon Trail in Phase II.a Area Facing South





KOP 9
Towsley Canyon Trail Parking in Phase II.a Area Facing West



KOP 10
Towsley Canyon Trail in Phase II.a Area Facing Southwest





KOP 11

Towsley Canyon Trail in Phase II.a Area Facing Northwest



KOP 12

Towsley Canyon Trail in Phase II.a Area Facing Southeast





KOP 13

Towsley Canyon Trail in Phase II.a Area Facing Southwest



KOP 14

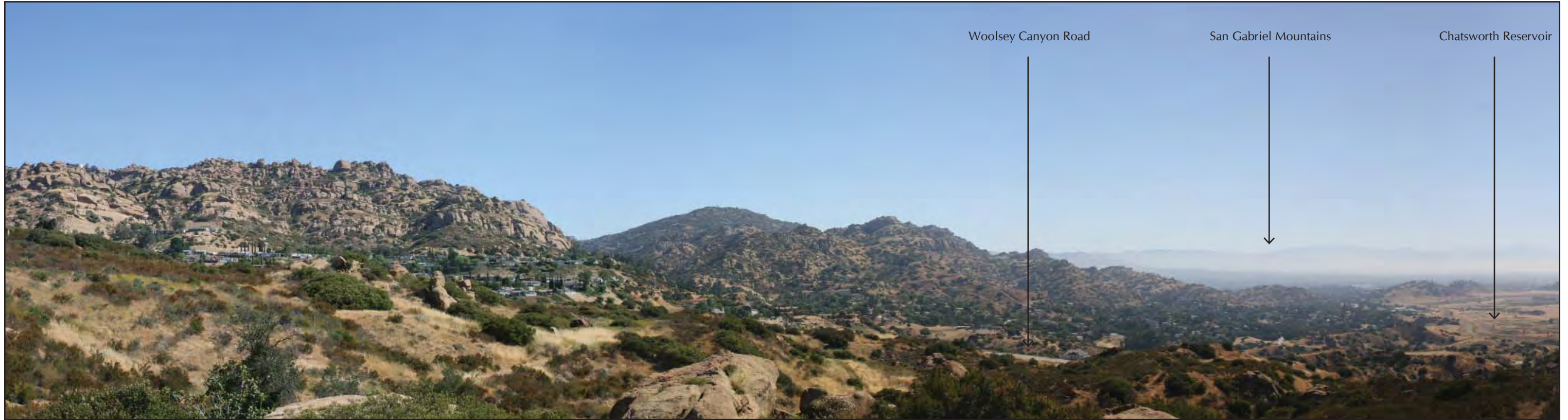
Woolsey Canyon Road Facing East Towards Phase II.b Area





KOP 15

Box Canyon Road Facing North Towards Phase II.b Area



KOP 16

Woolsey Canyon in Phase II.b Area Facing East





KOP 17

Woolsey Canyon in Phase II.b Area Facing Northwest



KOP 18

Woolsey Canyon in Phase II.b Area Facing North





KOP 19

Edge of Residential Development Facing Northwest Towards Phase II.b Area



Appendix B

Air Quality and Greenhouse Gas Emissions Technical Report

SANTA SUSANA MOUNTAINS TRAILS MASTER PLAN – PHASE II

AIR QUALITY AND GREENHOUSE GAS EMISSIONS TECHNICAL REPORT

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NOVEMBER 2, 2017

EXECUTIVE SUMMARY

This Air Quality and Greenhouse Gas Emissions Technical Report addresses potential impacts to air quality and greenhouse gas emissions that could result from proposed work associated with the Santa Susana Mountains Trails Master Plan – Phase II (SSMTMP-PH, or proposed project), located within unincorporated Los Angeles County, California.

Adopted Air Quality Plan and County of Los Angeles 2035 General Plan

The construction, operation, and maintenance of the proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation in the South Coast Air Basin. Therefore, it would not conflict with the South Coast Air Quality Management District's Air Quality Management Plan. The proposed project is consistent with the Air Quality Element of the Los Angeles County General Plan 2035. The proposed project would implement strategies to reduce per capita vehicle miles traveled and, thus, would not contribute to cumulative impacts on air quality in the South Coast Air Basin.

Criteria Air Pollutants

The proposed project area is a non-attainment area for three criteria pollutants. However, the construction, operation, and maintenance of the proposed project would not exceed thresholds of significance for criteria pollutants established by the South Coast Air Quality Management District.

Sensitive Receptors

There would be no significant impacts to the approximately 10,000 sensitive receptors (primarily single-family residences) within a 0.5-mile radius of the proposed project. Based on the CalEEMod results, construction, operation, and maintenance of the proposed project would not expose sensitive receptors to criteria pollutants in excess of Federal and State standards.

Objectionable Odors

There would be no direct, indirect, or cumulative impacts to air quality related to objectionable odors resulting from the construction, operation, or maintenance of the proposed project.

Direct or Indirect Generation of Greenhouse Gas Emissions

There would be less than significant impacts in regard to generating GHG emissions, either directly or indirectly, that would have a significant impact on the environment.

Plans, Policies, and Regulation Related to Regional Greenhouse Gas Emissions

Providing improved recreation opportunities to the approximately 29,000 residents that live in the vicinity of the study area is consistent with the goals, policies, and strategies specified in the Southern California Association of Governments 2016 Regional Transportation Plan/Sustainable Communities Strategy and the Los Angeles County General Plan 2035.

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A	CalEEMod Output for the Santa Susana Mountains Trails Master Plan – Phase II
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SECTION 1.0 INTRODUCTION

This Air Quality and Greenhouse Gas Emissions Technical Report (Report) has been prepared to support the County of Los Angeles (County) Department of Parks and Recreation (DPR) in the development of Phase II of the Santa Susana Mountains Trails Master Plan (SSMTMP-P II or proposed project), located within unincorporated Los Angeles County, California.

1.1 CEQA COMPLIANCE

DPR proposes to complete the SSMTMP-P II, ultimately to amend the Parks and Recreation Element of the Los Angeles County General Plan 2035 (County General Plan) to include the SSMTMP-P II, which would guide future trail development and recommend improvements to existing trails. The proposed project would ultimately result in the construction and use of trails in public and private lands, some of which may involve the expenditure of public funds, and thus constitutes a project pursuant to the California Environmental Quality Act (CEQA). These trails would be located in the unincorporated territory of Los Angeles County; therefore, the County would be the Lead Agency pursuant to CEQA.

1.2 PURPOSE

This Report serves two purposes: (1) to provide information regarding air quality and greenhouse gas (GHG) emissions to inform the planning process; and (2) to provide the substantial evidence required with respect to air quality and GHG emissions for consideration of the potential for environmental effects under CEQA. This Report provides information in relation to the air quality and GHG emissions areas identified in Appendix G of the State CEQA Guidelines.

1.3 INTENDED AUDIENCE

This Report provides information for consideration by DPR and the design team, Alta Planning+Design, engaged in the development of the SSMTMP-P II. The substantial evidence will be available for the responsible and trustee agencies, and the public, including property owners, during circulation of the draft environmental document for public review. Ultimately, the Report will be used by the County Board of Supervisors to support their decision-making process related to the SSMTMP-P II. The Report will also inform the County and private parties in the ultimate development, operation, and maintenance of trails in the plan area.

1.4 SCOPE

In May 2015, the County adopted the first phase of the Santa Susana Mountains Trails Master Plan (SSMTMP), which involved the extension of the 35.7 miles of existing County-, City-, and Conservancy-managed trails in the Phase I and Phase II study areas by approximately 35.9 miles with 22 proposed trail segments, for a total of approximately 71.5 miles of trails. In 2017, the County initiated planning efforts for further development of the Phase II study area, which has been expanded to Phase II.a and II.b. This Report covers an assessment of local, regional, state, and federal level air quality and greenhouse gas emissions regulations, baseline conditions, impact analysis, and mitigation measures, as applicable.

1.5 SOURCES OF RELEVANT INFORMATION

Information used in the preparation of this Report was derived from the South Coast Air Quality Management Plan (AQMP), Air Quality Element of the County General Plan, and Community Climate Action Plan. Sources of relevant information are cited in footnotes and compiled in Section 6, *References*.

1.6 WORKING DEFINITIONS

There are a number of technical terms used in the characterization of baseline conditions and assessment of the potential for the project to affect air quality and greenhouse gas emissions.

Carbon Dioxide (CO₂): Enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.

Carbon Dioxide-Equivalent (CO₂e): The standard unit to measure the amount of GHGs in terms of the amount of CO₂ that would cause the same amount of warming. CO₂e is based on the GWP ratios between the various GHGs relative to CO₂.

Climate Change: Climate change is the variation of earth's climate over time, whether due to natural variability or as a result of human activities. Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to the atmosphere. The primary source of these GHGs is fossil fuel use.

Criteria Pollutants: Health-based air quality standards have been established by California and the federal government for the following criteria pollutants: carbon monoxide (CO), ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), fine particulate matter (PM_{2.5}), respirable particulate matter (PM₁₀), and lead (Pb). California also includes standards for hydrogen sulfide, vinyl chloride, sulfates, and visibility.

The following describes the criteria pollutants and summarizes the health and welfare effects of each criteria pollutant:¹

Carbon Monoxide (CO): CO is a colorless, odorless, relatively inert gas. The major source of CO in urban areas is incomplete combustion of carbon containing fuels, mainly gasoline. CO concentrations are generally highest in the vicinity of major concentrations of vehicular traffic. Health effects include: (1) aggravation of angina pectoris and other aspects of coronary heart disease; (2) decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (3) possible impairment of central nervous system functions; (4) possible increased risk to fetuses.

Ozone (O₃): Ozone, a colorless gas with a sharp odor, is a highly reactive form of oxygen. Health effects include: (1) pulmonary function decrements and localized lung injury in humans and animals; (2) risk to public health implied by alterations in pulmonary morphology and host defense

¹ South Coast Air Quality Management District. March 2017. *Final 2016 Air Quality Management Plan*. Available at: <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>

in animals; (3) increased mortality risk; (4) increased respiratory related hospital admissions and emergency room visits; (5) vegetation damage; (6) property damage.

Nitrogen dioxide (NO₂): NO₂ is a reddish-brown gas with a bleach-like odor. NO₂ is responsible for the brownish tinge of polluted air. Health effects include: (1) potential to aggravate chronic respiratory disease and respiratory symptoms in children with asthma; (2) increased airway responsiveness in asthmatics.

Sulfur Dioxide (SO₂): SO₂ is a colorless gas with a sharp odor. Health effects include respiratory symptoms (bronchoconstriction, possible wheezing or shortness of breath) during exercise or physical activity in persons with asthma.

Fine Particulate Matter (PM_{2.5}): Sources of fine particulate matter (particulate matter less than about 2.5 micrometers in diameter) include fuel combustion from automobiles, power plants, wood burning, industrial processes, and diesel-powered vehicles such as buses and trucks. These fine particles are also formed in the atmosphere when gases such as sulfur dioxide and NO_x are transformed in the air by chemical reactions. Studies have reported an association between long-term exposure to air pollution dominated by fine particles (PM_{2.5}) and increased mortality, reduction in lifespan, and an increased mortality from lung cancer.

Respirable Particulate Matter (PM₁₀): Respirable particles consist of suspended particles or droplets 10 micrometers or smaller in diameter. In populated areas, most PM₁₀ is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities. Health effects include: (1) exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (2) decline in pulmonary function or growth in children; (3) increased risk of premature death; (4) increased risk of lung cancer; (5) increased asthma-related hospital admissions; (6) increased school absences and lost work days; (7) possible link to reproductive effects; (8) visibility reduction.

Lead (Pb): Lead in the atmosphere is present as a mixture of a number of lead compounds. Health effects include: (1) learning disabilities; (2) impairment of blood formation and nerve conduction; (3) cardiovascular effects, including coronary heart disease and hypertension.

Global Warming Potential (GWP): Metric used to describe how much heat a molecule of a GHG absorbs relative to a molecule of carbon dioxide (CO₂) over a given period of time (20, 100, and 500 years). CO₂ has a GWP of 1.

Greenhouse Gases (GHGs): GHGs are those compounds in the earth's atmosphere that play a critical role in determining the earth's surface temperature. Specifically, these gases allow high-frequency solar radiation to enter the earth's atmosphere but retain the low-frequency energy, which is radiated back from the earth to space, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Increased concentrations of GHGs in the earth's atmosphere are thought to be linked to global climate change, such as rising surface temperatures, melting icebergs and snowpack, rising sea levels, and the increasing frequency and magnitude of severe weather.

2.1 PROJECT LOCATION

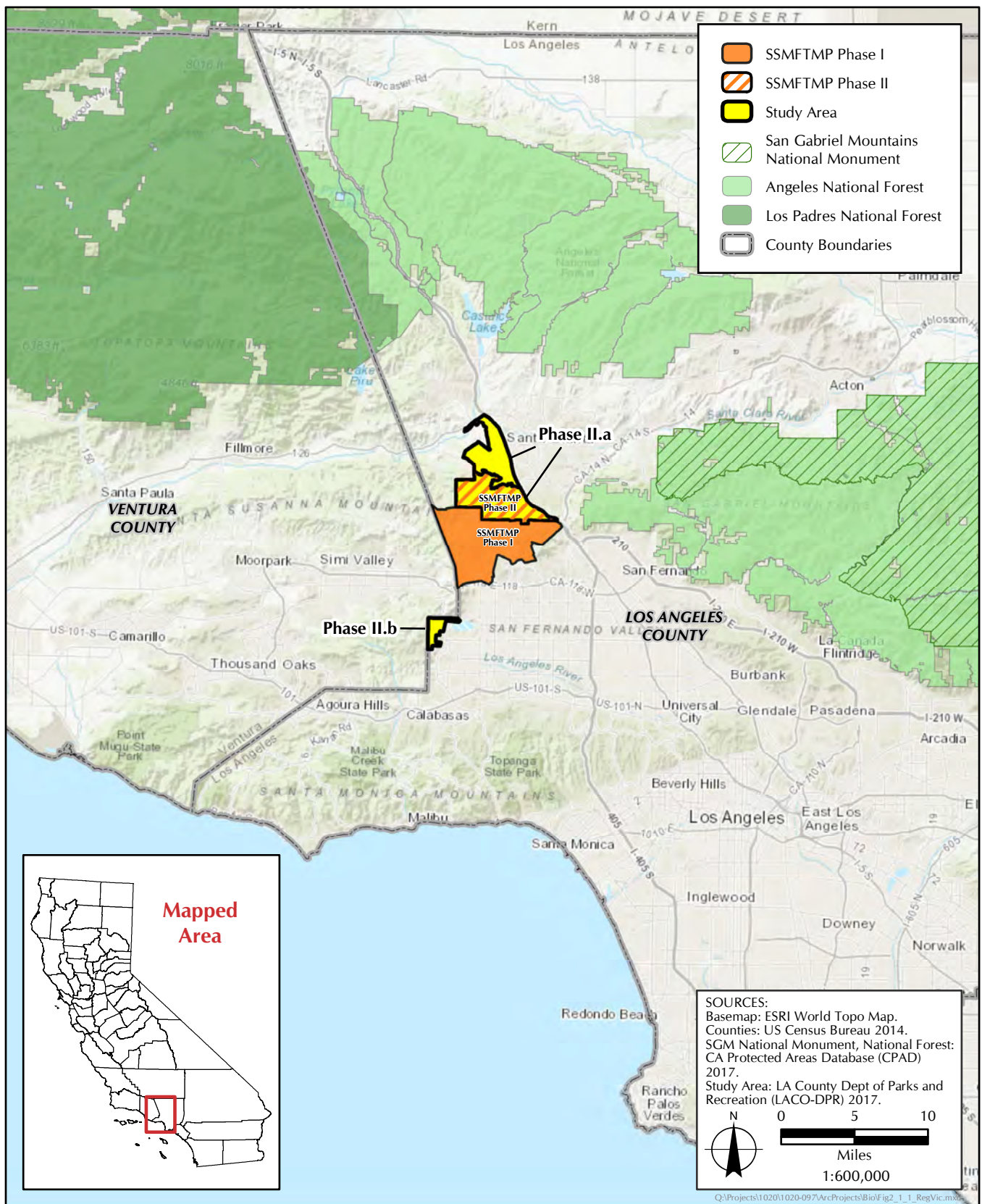
The Trails Master Plan (approximately 49 square miles) is located north and west of the San Fernando Valley in the Santa Susana Mountains, in the western portion of the unincorporated area of the County of Los Angeles (Figure 2.1-1, *Regional Vicinity Map*). The Santa Susana Mountains are centrally located in the Transverse Ranges, a group of east-west trending mountains paralleling the Pacific Ocean between Santa Barbara and San Diego Counties. The proposed designation and improvement of a portion of the Johnson Motorway Trail is an element of the first phase of the Trails Master Plan (SSMFTMP).

2.2 TRAILS MASTER PLAN STUDY AREA

Phase I Area. The northern boundary of the Trails Master Plan – Phase I is defined by the southern limits of the Newhall Ranch Specific Plan Area and the northern limits of the proposed Santa Susana Mountains / Simi Hills Significant Ecological Area (SEA). The southern boundary is defined by the northern limit of the City of Los Angeles. The eastern boundary is defined by U.S. Interstate 5 (I-5). The western boundary is defined by the corporate boundary between Los Angeles and Ventura Counties (Figure 2.2-1, *Trails Master Plan Location*). The SSMFTMP is divided into two subareas or phases (see Figure 2.2-1). Phase I is the Northwest San Fernando Valley Study Area, and Phase II is the Southwest Santa Clarita Valley Study Area. Phase I includes 16,038.1 acres (25.1 square miles); the northern boundary is defined by the northern limits of the Los Angeles County Oat Mountain Planning Area, the southern boundary is defined by the northern limit of the City of Los Angeles, the eastern boundary is defined by the I-5 freeway, and the western boundary is defined by the boundary between Los Angeles and Ventura Counties.

Phase II Area. Phase II includes 8,084.4 acres (12.6 square miles). The northern boundary is defined by the northern limits of the proposed Santa Susana Mountains / Simi Hills SEA. The southern boundary is defined by the southern limits of the proposed Santa Susana Mountains / Simi Hills SEA. The eastern boundary is defined by the I-5 freeway. The western boundary is defined by the southern and eastern boundaries of the Newhall Ranch Specific Plan area.

The Trails Master Plan – Phase II has been expanded beyond the spatial extents of Phase II in the SSMFTMP and also divided into two subareas. The Phase II.a area is an approximately 22-square-mile area located in the north-facing slopes of the Santa Susana Mountains and the Santa Clarita Valley that is bound by Henry Mayo Drive (State Route [SR] 126) to the north, the I-5 freeway to the east, Phase I of the adopted SSMFTMP Area to the south, and the Newhall Ranch Specific Plan Area to the west. The Phase II.b area is an approximately 2-square-mile area located in the foothills of the Santa Monica Mountains, including Bell Canyon, Dayton Canyon, and Woolsey Canyon, west of the San Fernando Valley, that is bound by Ventura County to the north and west and the city of Los Angeles to the east and south.



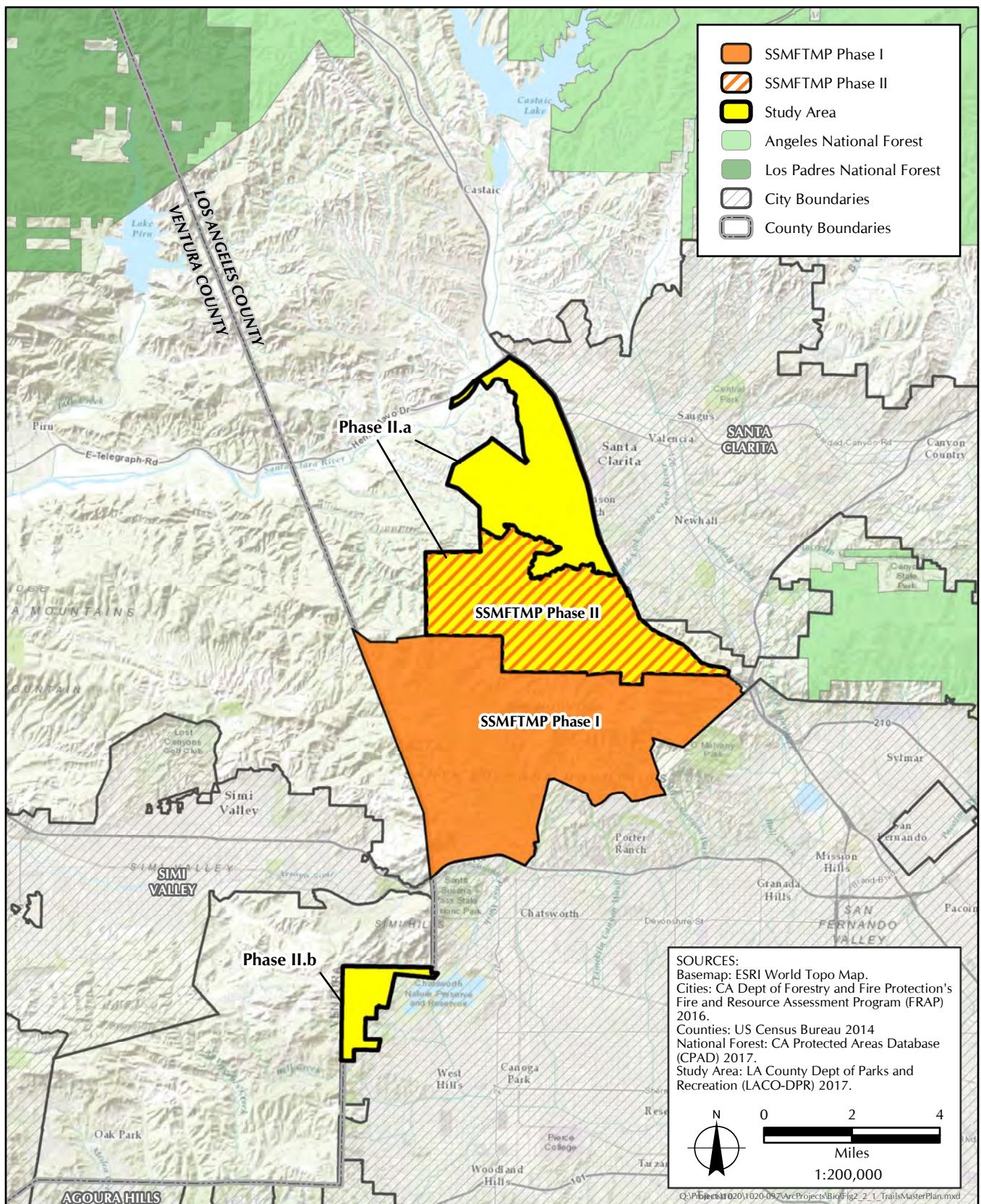


FIGURE 2.2-1
 Trails Master Plan Location

Topography. The Trails Master Plan is located in the U.S. Geological Survey (USGS) 7.5-minute series, Newhall, Oat Mountain, Simi Valley East, and Val Verde, California, topographic quadrangles^{2,3} and includes portions of Township 2 North, Range 16 West (San Bernardino Baseline and Meridian [SBB&M]); Sections 6 and 7, Township 2 North, Range 17 West (SBB&M), Sections 1, 2, 11, and 12; Township 3 North, Range 16 West (SBB&M), Sections 4–10, 13–24, and 26–34; and Township 3 North, Range 17 West (SBB&M), Sections 1, 2, 11–15, 22–27, and 34–36 (Figure 2.2-2, *Topographic Map with USGS 7.5-minute Quadrangle Index*). Phase I of the Trails Master Plan is located on the USGS 7.5-minute series Simi Valley East and Oat Mountain topographic quadrangles. Phase II of the Trails Master Plan is located on the Val Verde, Newhall, Simi Valley East (Santa Susana), Oat Mountain, and Calabasas topographic quadrangles. Situated along the southern flanks of the Santa Susana Mountains, the topography of the Trails Master Plan is characterized by a series of southwest draining canyons that are separated by steep-sloped and narrow ridge tops. The Trails Master Plan has elevations that range from 946 to 3,400 feet above mean sea level (msl). Vegetation in the area is characterized by a Sage and Chaparral plant communities with scattered yucca plants. Although small areas of exposed bedrock are seen along the trail corridor, much of the proposed project area is characterized by thick vegetative coverage, which is particularly dense in the canyon bottoms and at lower elevations.

2.3 PROJECT SUMMARY

The SSMTMP-P II will guide future trail development and recommend improvements to existing trails. The Trails Master Plan will provide trail users and local populations with seamless transitions throughout the proposed study area to trails of adjacent jurisdictions and prime destinations within and adjacent to the study area. The goals of the plan are to:

1. Develop a complete multi-use trail system connecting user groups and local populations to desired recreation destinations and experiences, with seamless transitions to the trails of adjacent jurisdictions, compatibility with adjacent land uses and environmental resources, and a safe and sustainable design that is consistent with the County of Los Angeles Trails Manual.
2. Develop a recreational trail system that supports low-intensity use, including mountain biking, equestrian use, and hiking, to accommodate the population increase anticipated in the Santa Clarita Valley Planning Area and San Fernando Valley Planning Area through the 2035 planning horizon consistent with the Parks and Recreation Element of the Los Angeles County General Plan 2035.

The overall work efforts will include a trails master plan and associated CEQA documentation. Individual trail alignments would be developed at a later phase of this project, which is intended to provide a trail planning framework for the study area.

² U.S. Geological Survey. 1969. 7.5-Minute Series, Oat Mountain, California, Topographic Quadrangle. Scale 1:24,000. Reston, VA.

³ U.S. Geological Survey. 1969. 7.5-Minute Series, Willow Springs, California, Topographic Quadrangle. Reston, VA.

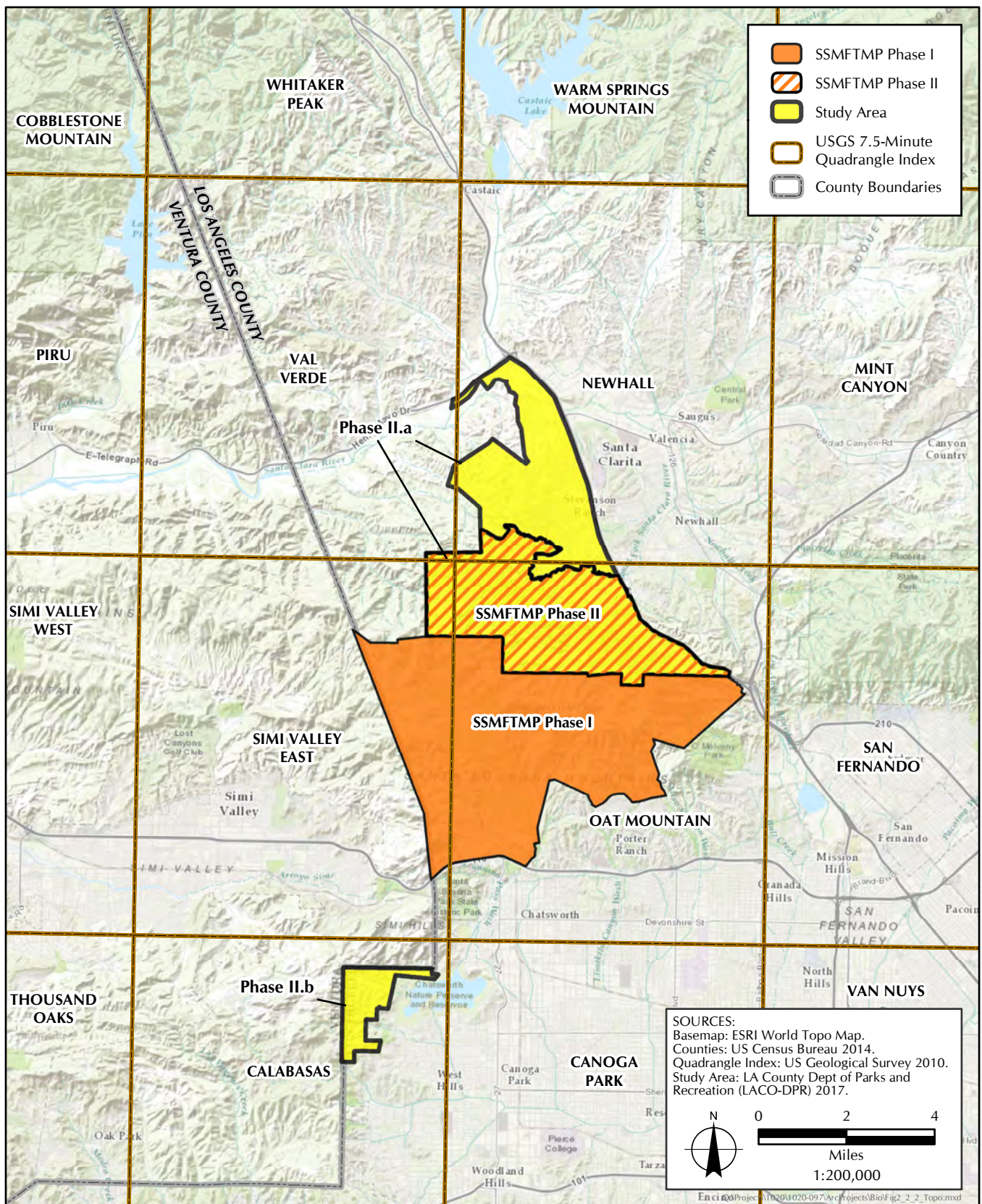


FIGURE 2.2-2

Topographic Map with USGS 7.5 Minute Quadrangle Index

The SSMTMP-P II involves approximately 70 miles of proposed new multi-use trails in the Santa Clarita Valley Planning Area and San Fernando Valley Planning Area (Figure 2.3-1, *Existing and Proposed Trails*). The trails would be multi-use and range from 3 to 12 feet wide based on site conditions, with adequate space for combined pedestrian, equestrian, and mountain biking use, in accordance with the County Trails Manual guidelines. The proposed trails would provide connections to the proposed Rim of the Valley Trail, trails in the City of Los Angeles, trails in the City of Santa Clarita, and trails in the Newhall Ranch Specific Plan, and trails within other jurisdictions as identified in the Trails Master Plan. The SSMTMP-P II identifies up to 20 potential locations for proposed facilities, including 4 trailheads, 2 bike skills areas, 2 equestrian parks, 8 trailhead and staging areas, and 4 additional trailheads within the City of Los Angeles that would need to be developed by the City of Los Angeles (Figure 2.3-1). As the recommended City of Los Angeles trailheads would not be developed under jurisdiction of the County, this Report considers the 16 proposed facilities located within the SSMTMP-P II study area.

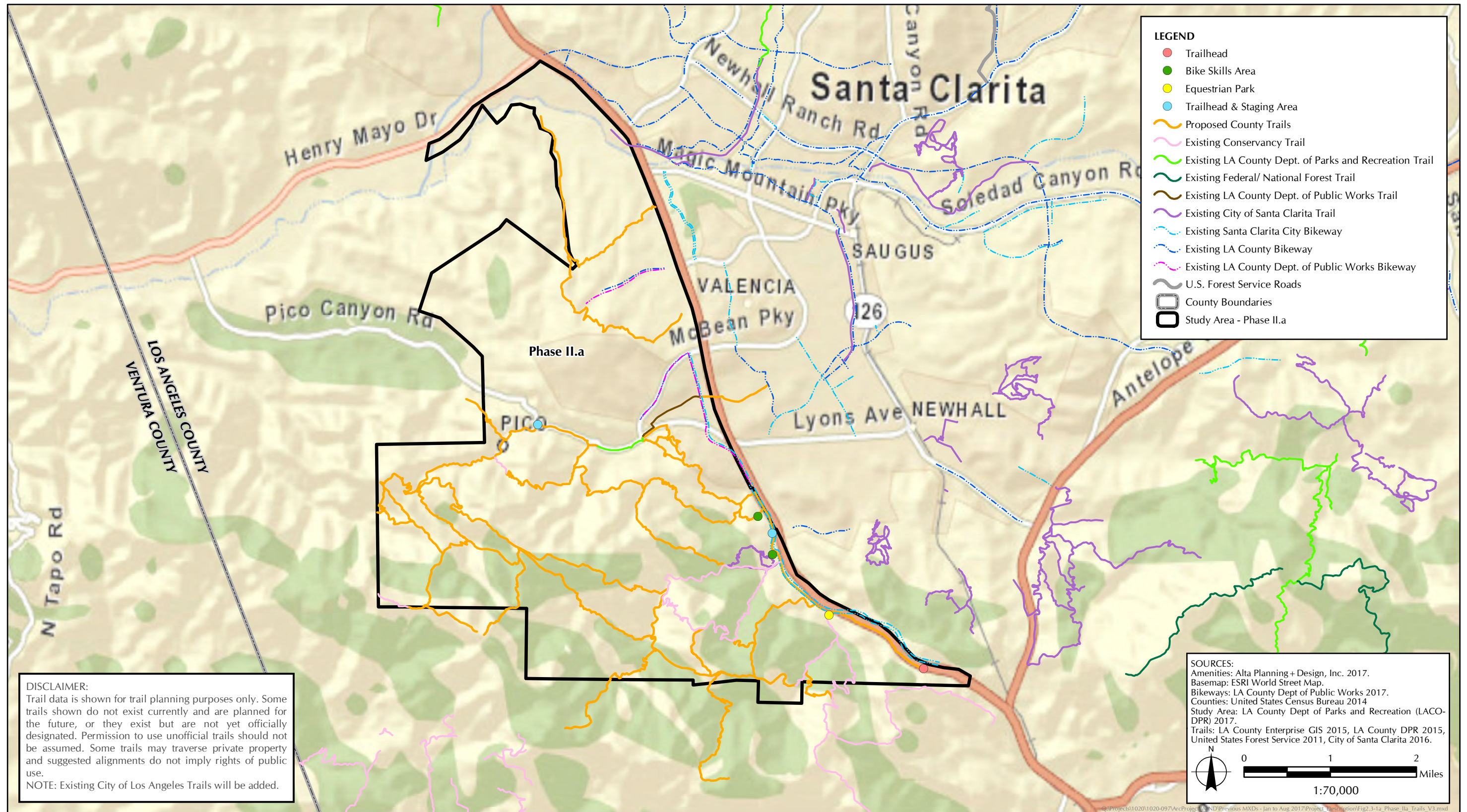
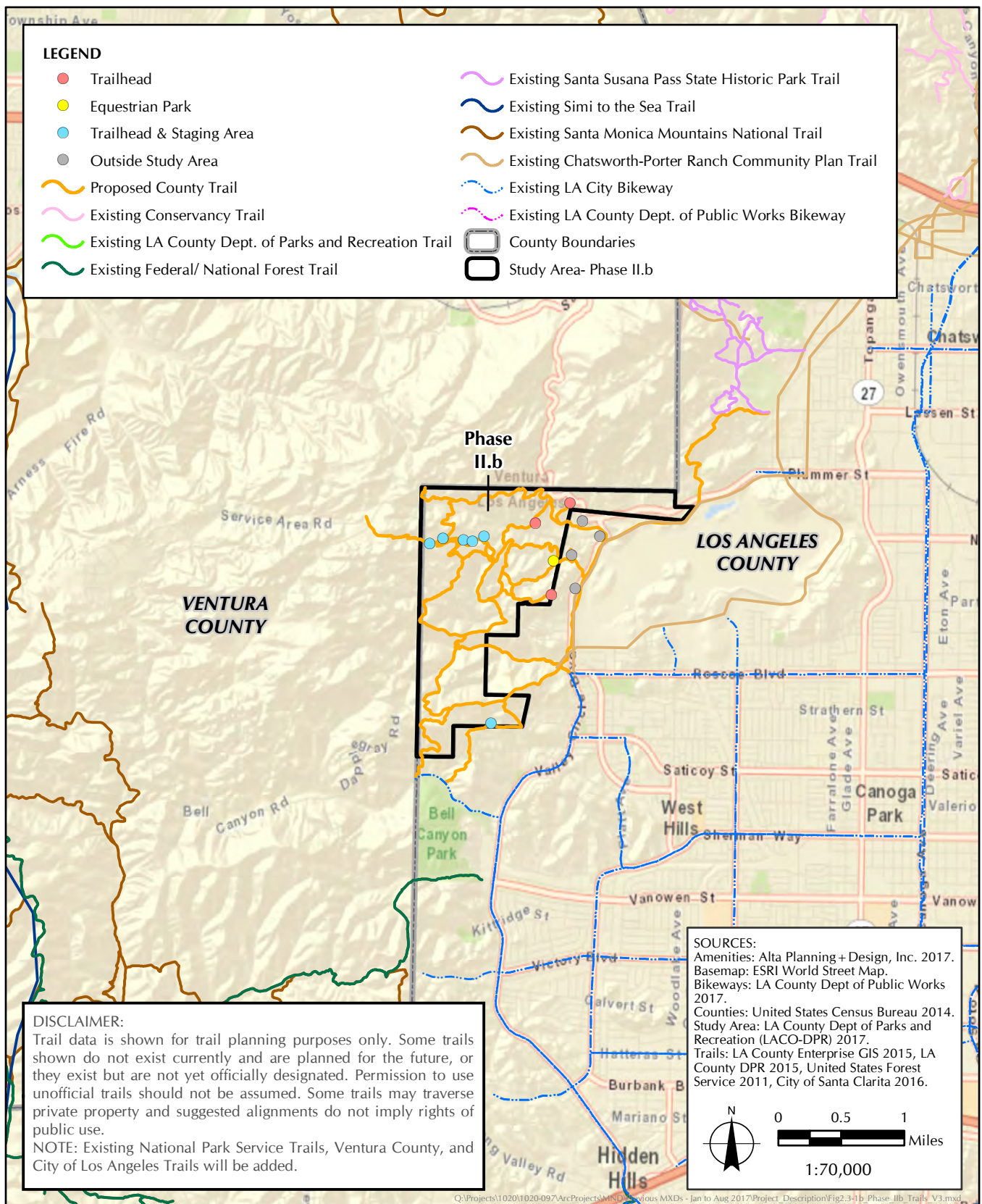


FIGURE 2.3-1a
 Existing and Proposed Trails (Phase II.a)



SECTION 3.0

REGULATORY FRAMEWORK

3.1 FEDERAL

Federal Clean Air Act

Congress passed the first major Clean Air Act (CAA) in 1970 (42 U.S. Code [USC] Sections 7401 et seq.). This Act gives the U.S. Environmental Protection Agency (EPA) broad responsibility for regulating emissions from many sources of air pollution from mobile to stationary sources. Pursuant to the CAA, the EPA is authorized to regulate air emissions from mobile sources like heavy-duty trucks, agricultural and construction equipment, locomotives, lawn and garden equipment, and marine engines; and stationary sources such as power plants, industrial plants, and other facilities. The CAA sets National Ambient Air Quality Standards (NAAQS) for the six most common air pollutants to protect public health and public welfare. These pollutants include particulate matter, ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead. For each pollutant, the EPA designates an area as attainment for meeting the standard or nonattainment for not meeting the standard. A maintenance designation entails an area that was previously designated as nonattainment but is currently designated as attainment. The CAA directs states to develop state implementation plans (SIPs) in order to achieve these standards. New Source Performance Standards (NSPS), described in Section 111 of the Clean Air Act and 40 CFR Part 60, are technology based standards that apply to specific categories of stationary sources. These standards are intended to promote use of the best air pollution control technologies, taking into account the cost of such technology and any other non-air quality, health, and environmental impact and energy requirements.

National Ambient Air Quality Standards

The federal CAA required the EPA to establish NAAQS. The NAAQS set primary standards and secondary standards for specific air pollutants (Table 3.1-1, *National Ambient Air Quality Standards*). Primary standards define limits for the intention of protecting public health, which include sensitive populations such as asthmatics, children, and the elderly. Secondary Standards define limits to protect public welfare to include protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

**TABLE 3.1-1
NATIONAL AMBIENT AIR QUALITY STANDARDS**

Pollutant		Primary/Secondary	Averaging Time	Level
Carbon monoxide		Primary	8 hours	9 ppm
			1 hour	35 ppm
Lead		Primary and secondary	Rolling 3-month average	0.15 $\mu\text{g}/\text{m}^3$
Nitrogen dioxide		Primary	1 hour	100 ppb
		Primary and secondary	Annual	53 ppb
Ozone		Primary and secondary	8 hours	0.070 ppm
Particulate matter	PM _{2.5}	Primary	Annual	12 $\mu\text{g}/\text{m}^3$
		Secondary	Annual	15 $\mu\text{g}/\text{m}^3$
		Primary and secondary	24 hours	35 $\mu\text{g}/\text{m}^3$
	PM ₁₀	Primary and secondary	24 hours	150 $\mu\text{g}/\text{m}^3$
		Primary	1 hour	75 ppb
Sulfur dioxide		Primary	1 hour	75 ppb
		Secondary	3 hours	0.5 ppm

NOTE: ppm = parts per million by volume; ppb = parts per billion by volume; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.

SOURCE: California Air Resources Board. 4 May 2016. *Ambient Air Quality Standards*. Available at: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>

State Implementation Plan / Air Quality Management Plans

A SIP is required by the EPA to ensure compliance with the NAAQS. States must develop a general plan to maintain air quality in areas of attainment and a specific plan to improve air quality for areas of nonattainment. SIPs are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. The SIP verifies that the state has a proper air quality management program that adheres to or strives to reach the most up to date emissions requirements. The 1990 amendments to the federal CAA set deadlines for attainment based on the severity of an area's air pollution problem. In adherence to CAA Section 172, states must adopt additional regulatory programs for nonattainment areas. Particularly in California, the SIP not only complies with NAAQS, but also the more stringent CAAQS.

AQMPs, developed by the air districts, are required to ensure compliance with the state and federal requirements. AQMPs contain scientific information and use analytical tools to demonstrate a pathway towards achieving attainment for the criteria air pollutants. The approval process begins when the regional air districts submit their AQMPs to the California Air Resources Board (CARB). CARB is the lead agency and responsible agency for submitting the SIP to the EPA. CARB forwards SIP revisions to the EPA for approval and publication in the *Federal Register*. The Code of Federal Regulations Title 40, Chapter I, Part 52, Subpart F, Section 52.220, lists all of the items included in the California SIP.

3.2 STATE

California Clean Air Act of 1988

The California CAA of 1988 (Chapter 1568, Statutes of 1988) requires all air pollution control districts in the state to aim to achieve and maintain state ambient air quality standards for ozone, carbon monoxide, and nitrogen dioxide by the earliest practicable date and to develop plans and regulations specifying how the districts will meet this goal. There are no planning requirements for the state PM₁₀ standard. The CARB, which became part of the California Environmental Protection Agency (Cal/EPA) in 1991, is responsible for meeting state requirements of the federal CAA, administering the California CAA, and establishing the CAAQS. The California CAA, amended in 1992, requires all AQMDs in the state to achieve and maintain the CAAQS. The CAAQS are generally stricter than national standards for the same pollutants, but there is no penalty for nonattainment. California has also established state standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles, for which there are no national standards.

California Ambient Air Quality Standards

The federal CAA permits states to adopt additional or more protective air quality standards if needed. California has set standards for certain pollutants, such as particulate matter and ozone, which are more protective of public health than respective federal standards (Table 3.2-1, *California Ambient Air Quality Standards*). California has also set standards for some pollutants that are not addressed by federal standards.

CARB Air Quality and Land Use Handbook

In April 2005, the California Air Resources Board published the Air Quality and Land Use Handbook as an informational and advisory guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. Studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. Reducing diesel particulate emissions is one of CARB's highest public health priorities and the focus of a comprehensive statewide control program that is reducing diesel PM emissions each year. This document highlights the potential health impacts associated with proximity to air pollution sources so planners explicitly consider this issue in planning processes.⁴

⁴ California Air Resources Board. April 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. Available at: <http://www.arb.ca.gov/ch/handbook.pdf>

**TABLE 3.2-1
CALIFORNIA AMBIENT AIR QUALITY STANDARDS**

Pollutant		Averaging Time	Level
Carbon monoxide		8 hours	9 ppm
		1 hour	20 ppm
Lead		30-day average	1.5 $\mu\text{g}/\text{m}^3$
Nitrogen dioxide		1 hour	0.18 ppm
		Annual	0.03 ppm
Ozone		8 hours	0.07 ppm
		1 hour	0.09 ppm
Particulate matter	PM _{2.5}	Annual	12 $\mu\text{g}/\text{m}^3$
	PM ₁₀	24 hours	50 $\mu\text{g}/\text{m}^3$
		Annual	20 $\mu\text{g}/\text{m}^3$
Sulfur dioxide		1 hour	0.25 ppm
		24 hours	0.04 ppm
Sulfates		24 hours	25 $\mu\text{g}/\text{m}^3$
Hydrogen sulfide		1 hour	0.03 ppm
Vinyl chloride		24 hours	0.01 ppm
Visibility Reducing Particles		Extinction coefficient of 0.23 per km – visibility of 10 miles or more due to particles when relative humidity is less than 70 percent ⁵	

NOTE: ppm = parts per million by volume; ppb = parts per billion by volume; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.

SOURCE:

California Air Resources Board. 4 May 2016. *Ambient Air Quality Standards*. Available at: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>

Assembly Bill 32

Assembly Bill 32 (AB 32), also known as the Global Warming Solutions Act of 2006, is a California State Law that addresses climate change by establishing a comprehensive program to reduce GHG emissions from all sources throughout the state. AB 32 requires that the CARB develop regulations and market mechanisms to reduce California's GHG emissions to 1990 levels by 2020. To achieve this goal, AB 32 mandates that CARB establish a quantified emissions cap; institute a schedule to meet the cap; implement regulations to reduce statewide GHG emissions from stationary sources; and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved.

Senate Bill 32

Senate Bill 32 (SB 32) modifies AB 32 to include a GHG emission reduction goal for 2030. Approved on September 8, 2016, SB 32 requires CARB to ensure that the statewide greenhouse gas emissions are reduced to 40 percent below the 1990 level by 2030. This goal was set with the intent to keep global temperature rise to below 2 degrees Celsius. It became effective January 2017.

⁵ South Coast Air Quality Management District. February 2013. *Final 2012 AQMP*. Available at: <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>

*2017 Climate Change Scoping Plan Update*⁶

The 2017 Climate Change Scoping Plan Update establishes the GHG reduction target for 40 percent below 1990 levels by 2030 and details GHG reduction strategies for all sectors with the newly included agriculture and forestry sectors. The 2017 Climate Change Scoping Plan Update is designed to reduce California's dependency on fossil fuels while maintaining a strong economy and providing environmental benefits. The first Climate Change Scoping Plan was required by AB 32, while the 2017 Update acknowledges the commitment made in SB 32. The framework for the 2017 Update focuses on renewable energy, low carbon fuel standard, mobile source strategy, the sustainable freight action plan, short-lived climate pollutant reduction strategy, SB 375 Sustainable Communities Strategy, Cap and Trade, refineries, and developing a Natural and Working Lands Action Plan.

3.3 REGIONAL

2016–2040 Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

The RTP/SCS is a long-range transportation plan that is developed and updated by SCAG every four years. The RTP provides a vision for transportation investments throughout the region. Using growth forecasts and economic trends that project out over a 20-year period, the RTP considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address our mobility needs. The 2016–2040 RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with SB 375, improve public health, and meet the National Ambient Air Quality Standards as set forth by the federal Clean Air Act. Under SB 375, the CARB established per capita targets for GHG reduction for cars and light trucks for the SCS. The GHG reduction targets for the SCAG region are 8 percent in 2020 and 13 percent in 2035.

SCAQMD Air Quality Management Plans

The 2016 AQMP was adopted by the Governing Board of the South Coast Air Quality Management District (SCAQMD) on March 3, 2017. The Plan is a regional and multiagency effort (SCAQMD, CARB, SCAG, and EPA). State and federal planning requirements include developing control strategies, attainment demonstrations, reasonable further progress, and maintenance plans. The 2016 AQMP incorporates the latest scientific and technical information and planning assumptions, including the latest applicable growth assumptions, transportation control measures and strategies, and updated emission inventory methodologies for various source categories.⁷

The 2016 AQMP details integrated strategies and measures to meet the following NAAQS:

- 2008 8-hour Ozone (75 parts per billion [ppb]) by 2031
- 2012 Annual PM_{2.5} (12 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$]) by 2021 (moderate) and 2025 (serious)

⁶ California Air Resources Board. January 20, 2017. *The 2017 Climate Change Scoping Plan Update*. https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf

⁷ South Coast Air Quality Management District. 2016. *Draft Final 2016 AQMP (December 2016)*. Available at: <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-draft-2016-aqmp>

- 2006 24-hour PM_{2.5} (35 µg/m³) by 2019
- 1997 8-hour Ozone (80 ppb) by 2023

Los Angeles County General Plan 2035

The project area is located within the County of Los Angeles and subject to the provisions of the Los Angeles County General Plan 2035. The Air Quality Element of the General Plan 2035 has established three goals and 16 policies related to air quality:⁸

Goal AQ 1: Protection from exposure to harmful air pollutants.

- Policy AQ 1.1: Minimize health risks to people from industrial toxic or hazardous air pollutant emissions, with an emphasis on local hot spots, such as existing point sources affecting immediate sensitive receptors.
- Policy AQ 1.2: Encourage the use of low or no volatile organic compound (VOC) emitting materials.
- Policy AQ 1.3: Reduce particulate inorganic and biological emissions from construction, grading, excavation, and demolition to the maximum extent feasible.
- Policy AQ 1.4: Work with local air quality management districts to publicize air quality warnings, and to track potential sources of airborne toxics from identified mobile and stationary sources.

Goal AQ 2: The reduction of air pollution and mobile source emissions through coordinated land use, transportation and air quality planning.

- Policy AQ 2.1: Encourage the application of design and other appropriate measures when siting sensitive uses, such as residences, schools, senior centers, daycare centers, medical facilities, or parks with active recreational facilities within proximity to major sources of air pollution, such as freeways.
- Policy AQ 2.2: Participate in, and effectively coordinate the development and implementation of community and regional air quality programs.
- Policy AQ 2.3: Support the conservation of natural resources and vegetation to reduce and mitigate air pollution impacts.
- Policy AQ 2.4: Coordinate with different agencies to minimize fugitive dust from different sources, activities, and uses.

Goal AQ 3: Implementation of plans and programs to address the impacts of climate change.

- Policy AQ 3.1: Facilitate the implementation and maintenance of the Community Climate Action Plan to ensure that the County reaches its climate change and greenhouse gas emission reduction goals.
- Policy AQ 3.2: Reduce energy consumption in County operations by 20 percent by 2015.
- Policy AQ 3.3: Reduce water consumption in County operations.

⁸ County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 8: Air Quality Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch8.pdf

- Policy AQ 3.4: Participate in local, regional and state programs to reduce greenhouse gas emissions.
- Policy AQ 3.5: Encourage energy conservation in new development and municipal operations.
- Policy AQ 3.6: Support rooftop solar facilities on new and existing buildings.
- Policy AQ 3.7: Support and expand urban forest programs within the unincorporated areas.
- Policy AQ 3.8: Develop, implement, and maintain countywide climate change adaptation strategies to ensure that the community and public services are resilient to climate change impacts.

Community Climate Action Plan

The Trails Master Plan Study Area is located within the unincorporated portion of Los Angeles County. The Community Climate Action Plan, which is part of the Los Angeles County General Plan, was adopted in 2015 and sets the goal to reduce GHG emissions from the unincorporated areas of Los Angeles County by 11 percent below 2010 levels by 2020. This would equate to an avoidance of 1.9 million metric tons of CO₂e. The Community Climate Action Plan identifies strategies by major emissions sectors to achieve the necessary reductions by 2020.⁹

Santa Clarita Valley Area Plan

The Trails Master Plan Study Area is located within the Santa Clarita Valley and is subject to the 2012 Santa Clarita Valley Area Plan. While there are no specific air quality related goals, the Safety Element of the Santa Clarita Valley Area Plan describes the potential for severe weather conditions including extreme heat and high-velocity winds. Extreme heat can lead to health risks, excessive demands on the grid for energy through air conditioning use, flash floods, wildfires, and increased ozone. High-velocity winds can overturn trees, create dangerous driving conditions, damage utility lines, and spread wildfires.

City of Los Angeles General Plan Air Quality Element¹⁰

While the County is not subject to the City General Plan, this information has been included based on the Phase II.b recommended connections to the immediately adjacent City of Los Angeles trails.

The City of Los Angeles General Plan Air Quality Element outlines the goals, objectives, and policies to guide the City in its implementation of its air quality improvement programs and strategies. The following policies are applicable to the proposed project:

- Policy 4.2.2. Improve accessibilities for the City's residents to places of employment, shopping centers, and other establishments.
- Policy 4.2.5. Emphasize trip reduction, alternative transit and congestion management measures for discretionary projects.

⁹ County of Los Angeles Department of Regional Planning. Adopted August 2015. Unincorporated Los Angeles County Community Climate Action Plan 2020. Available at: http://planning.lacounty.gov/assets/upl/project/ccap_final-august2015.pdf

¹⁰ City of Los Angeles General Plan. 1991. *Air Quality Element*. Available at: <https://planning.lacity.org/cwd/gnlpln/aqltyelt.pdf>

SECTION 4.0

METHODS AND ASSUMPTIONS

Construction activities would include construction of new trails, site grading, and delivery and hauling of construction materials and equipment. Construction activities associated with the proposed project, as currently conceived, would entail construction of approximately 70 miles of trails and up to 12 off-street parking areas with a maximum total of 220 parking spaces. No buildings were included in the analysis. Construction equipment would be limited to dozers; graders; small tractors; water trucks; and hand tools including picks, hoes, shovels, and wheelbarrows.

The development of Phase II of the Trails Master Plan is assumed to occur sporadically between 2018 and 2035. Construction of the trails would be scheduled in compliance with the County Noise Control Ordinance, which limits construction to the hours between 7:00 a.m. and 8:00 p.m. on weekdays and Saturdays.

CalEEMod Version 2016.3.1 was used to estimate construction emissions from the proposed project (Appendix A, *CalEEMod Output for the Santa Susana Mountains Trails Master Plan – Phase II*). Additionally, CalEEMod was used to estimate emissions from the operation of proposed trails that would be likely to result from additional vehicle trips traveling to and from the proposed project study area by trail users. The following assumptions were made:

1. The “recreational” land use category was designated for the air quality analysis to account for the trails, bike skills areas, and equestrian parks. The “parking” land use category was used to account for the 220 parking spaces.
2. Construction would be conducted in accordance with the guidelines specified in the County Trails Manual. The County Trails Manual contains specific methods for building trails in areas with steep slopes and riparian crossings. The County Trails Manual should be referenced for further information to determine the constructability of trail segments.
3. The trail corridor width was assumed to be 12 feet. Actual trail widths range from 2 feet to 11 feet in width, so 12 feet is used as a conservative estimate.
4. The area of disturbance was assumed to be approximately 140 acres. Site preparation and grading were the only construction phases included in the model.

Calculations for acres of disturbance:

71.5 miles trail = 377,520 feet (ft)

Trails area of disturbance = $377,520 \text{ ft} \times 12 \text{ ft wide} = 4,530,240 \text{ ft}^2 = 104 \text{ acres}$

Bike skills areas, area of disturbance: $15 \text{ acres} \times 2 \text{ parks} = 30 \text{ acres}$

Trailing and staging area of disturbance: $0.5 \text{ acre} \times 8 \text{ locations} = 4 \text{ acres}$

Equestrian parks area of disturbance: $0.5 \text{ acre} \times 2 \text{ locations} = 1 \text{ acre}$

Trailheads area of disturbance = $500 \text{ ft}^2 \times 4 \text{ locations} = 0.05 \text{ acre}$

Total area of disturbance = $104 + 30 + 4 + 1 + 0.05 = 139.05 \text{ acres}, \sim 140 \text{ acres}$

5. The derived empirical parking trip rate was 4.0 trips per mile of trail per hour. Default values for other trip characteristics were used.
6. Although the trails and related appurtenant facilities are expected be constructed through 2035 planning horizon in the Los Angeles County General Plan. For the purpose of this analysis, the construction phase was assumed to take 16 years from June 1, 2018, to June 1, 2034. The breakdown of construction was 12 years of site preparation and 4 years of grading to distribute the work efforts. The operational year for the proposed project was assumed to be 2035. This would be a reasonable worst-case scenario provided that funding became available for completion of all proposed trails.
7. To prevent the need for importing/exporting soil from off-site for the proposed project, utilization of “cut-and-fill” best management practices were assumed to be implemented into the construction phase. Default values of zero were used for material exported/imported.
8. The equipment listed in Table 4-1, *Construction Equipment List*, was assumed to calculate construction emissions for the proposed project:

**TABLE 4-1
CONSTRUCTION EQUIPMENT LIST**

Equipment	Horsepower Rating	Hours of Operation/Day
Site Preparation		
Two tractor/loader/backhoe	97	2
One water truck	400	4
Grading		
Four rubber-tired dozers	255	2
Two graders	174	2
One water truck	400	4

NOTE: A load factor indicates the average proportion of rated power used.

One tractor/loader/backhoe operating 8 hours/day for 260 days a year was included as operational off-road equipment for trail maintenance.

9. No area air emissions sources were selected, assuming that area sources in the vicinity of the proposed project would be negligible. While there are oil wells within the study area, many attempts to find oil in the early 1900s were unsuccessful, and many wells were abandoned. There are four (4) active oil wells on the western edge of the Phase IIa project area. These oil/gas wells were not accounted for in the air emission modeling. Operational energy, waste, and water sources were not considered at this programmatic level. Emissions from construction and operation of any buildings or structures within the study area will need to be considered on the project level.
10. Two recommended measures were selected for the construction phase of the proposed project: Reduce vehicular speed on unpaved roads to less than 15 miles per hour (mph). Water exposed areas three times a day. Use low VOC paint for parking.

The analysis of air impacts from construction is based on potential worst-case scenario for construction activities, including the site preparation and grading of trails.

Emissions from construction activities are represented in the model through off-road construction equipment and worker/vendor trips. These sources represent the majority of the construction emissions. All construction activities of the proposed project would be in accordance with all federal, state, and County building codes and the County Trails Manual. The County would require preparation of a trail site plan, site-specific geotechnical investigation, survey for biological and cultural resources, and an appropriate CEQA document in support of each trail segment before project approval and construction can commence.

Construction best management practices would be used. Construction equipment would be turned off when not in use. The construction contractor would ensure that all construction and grading equipment is properly maintained. All vehicles and compressors would utilize exhaust mufflers and engine enclosure covers (as designed by the manufacturer) at all times.

CARB EMFAC 2014 model, which is embedded in CalEEMod, was used to evaluate the proposed project's emissions from mobile sources, such as passenger cars and maintenance vehicles, based on the expected vehicle fleet mix, vehicle speeds, commute distances, and temperature conditions for the estimated start date of the proposed project.

SECTION 5.0

RESULTS

This section provides the characterization and evaluation of the potential for the proposed project to affect air quality and GHG emissions within the Trails Master Plan Study Area. The results described in this section provide the substantial evidence required to address the CEQA scope of analysis related to air quality and GHG emissions.

5.1 EXISTING CONDITIONS

Regional Climate

The SCAQMD governs the air quality in the South Coast Air Quality Basin (Basin), where the proposed project is located (Figure 5.1-1, *Air Districts in the Vicinity of the Project Site*; Figure 5.1-2, *Air Basins in the Vicinity of the Project Site*). Temperature, wind, humidity, precipitation, and the amount of sunshine influence the quality of the air. In addition, the Basin is frequently subjected to an inversion layer that traps air pollutants. Temperature has an important influence on Basin wind flow, pollutant dispersion, vertical mixing, and photochemistry.

Annual average temperatures throughout the Basin vary from the low to middle 60 degrees Fahrenheit (° F). However, due to decreased marine influence, the eastern portion of the Basin shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the Basin, with average minimum temperatures of 47° F in downtown Los Angeles and 36° F in San Bernardino. All portions of the Basin have recorded maximum temperatures above 100° F.

Although the climate of the Basin can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of Basin climate. Humidity restricts visibility in the Basin, and the conversion of SO₂ to SO₄ is heightened in air with high relative humidity. The marine layer is an excellent environment for that conversion process, especially during the spring and summer months. The annual average relative humidity is 71 percent along the coast and 59 percent inland. Because the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90 percent of the Basin's rainfall occurs from November through April. Annual average rainfall varies from approximately 9 inches in Riverside to 14 inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thundershowers near the coast and slightly heavier shower activity in the eastern portion of the region and near the mountains. Rainy days comprise 5 to 10 percent of all days in the Basin, with the frequency being higher near the coast. The influence of rainfall on the contaminant levels in the Basin is minimal. Although some washout of pollution would be expected with winter rains, air masses that bring precipitation of consequence are very unstable and provide excellent dispersion that masks wash-out effects. Summer thunderstorm activity affects pollution only to a limited degree. If the inversion is not broken by a major weather system, high contaminant levels can persist even in areas of light showers.

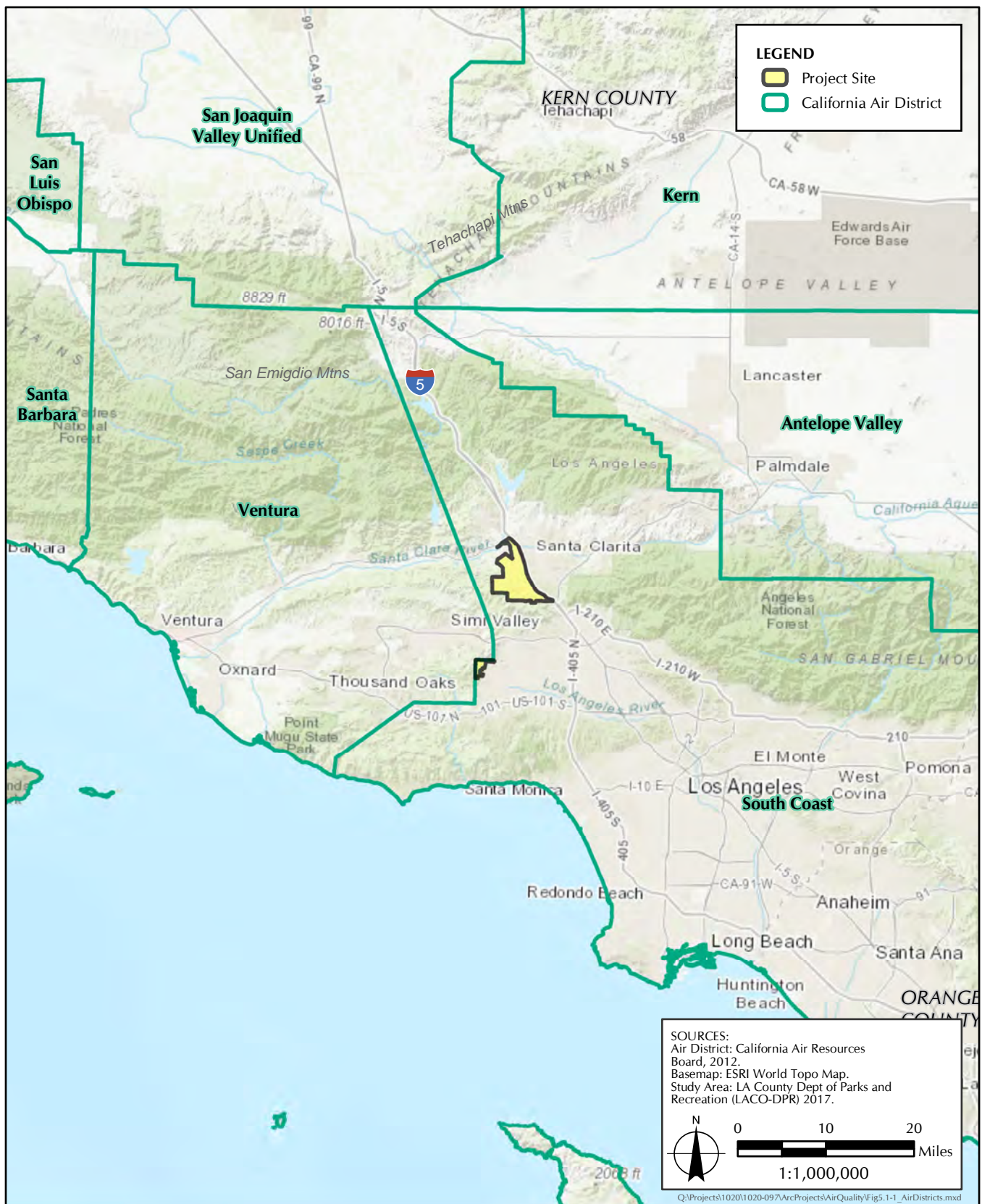


FIGURE 5.1-1
 Air Districts in the Vicinity of the Project Site

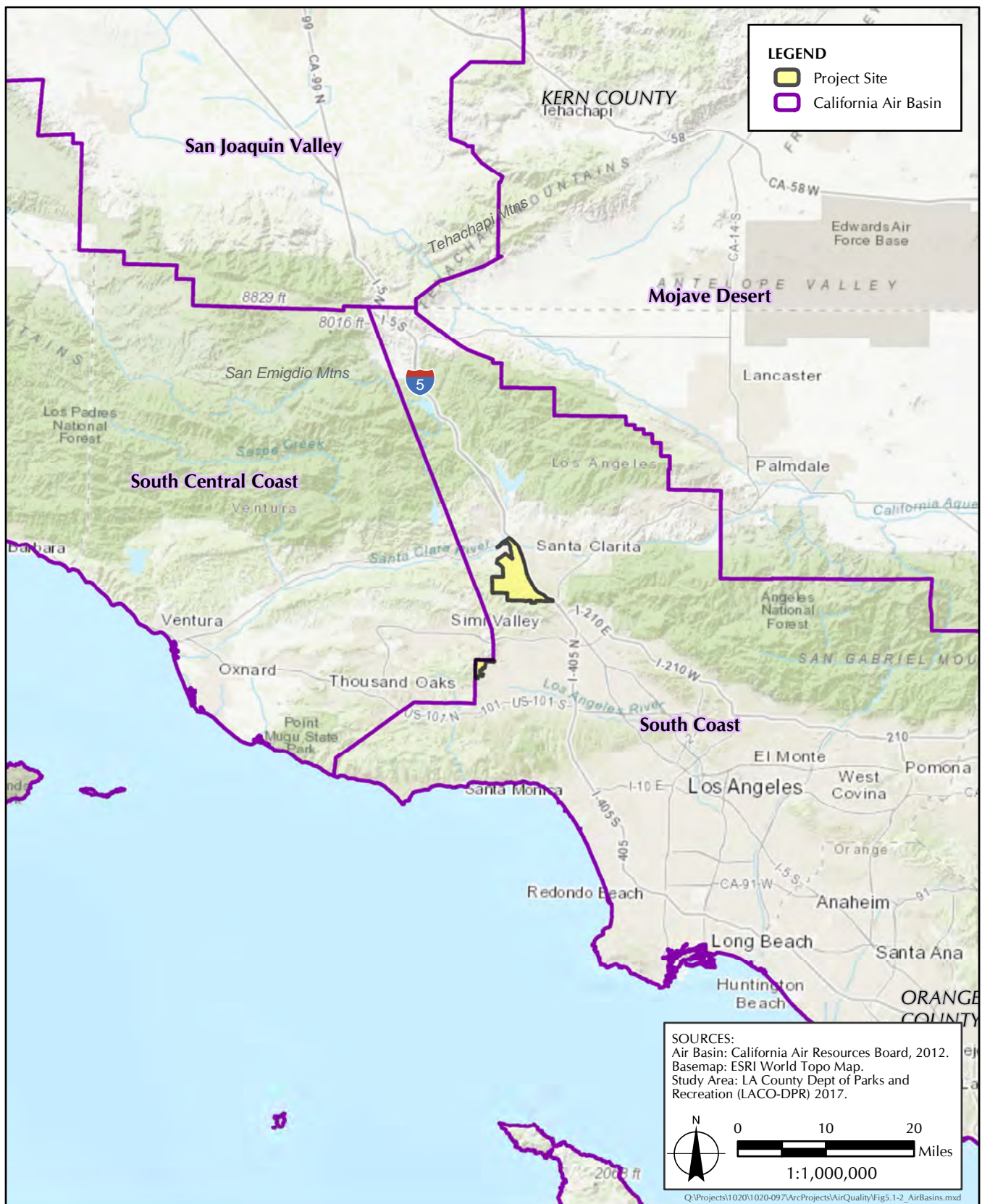


FIGURE 5.1-2
 Air Basins in the Vicinity of the Project Site

Temperature Inversion

The vertical dispersion of air pollutants in the Basin is frequently restricted by the presence of a persistent temperature inversion in the atmospheric layers near the earth's surface. Normally, the temperature of the atmosphere decreases with altitude. However, when the temperature of the atmosphere increases with altitude, the phenomenon is termed an inversion. An inversion condition can exist at the surface or at any height above the ground. The bottom of the inversion, known as the mixing height, is the height of the base of the inversion.

In general, inversions in the Basin are lower before sunrise than during the daylight hours. As the day progresses, the mixing height normally increases as the warming of the ground heats the surface air layer. As this heating continues, the temperature of the surface layer approaches the temperature of the base of the inversion layer. When these temperatures become equal, the inversion layer's lower edge begins to erode and, if enough warming occurs, the layer breaks up. The surface layers are gradually mixed upward, diluting the previously trapped pollutants. The breakup of inversion layers frequently occurs during mid to late afternoon on hot summer days. Winter inversions usually break up by mid-morning.

Regional Air Quality

The air quality in Southern California does not meet the state and federal standards. The American Lung Association consistently gives the County of Los Angeles failing grades in the amount of ozone and particulate pollution in the air. Although smog levels are impacted by seasons and weather patterns, smog is visible in the air on most days.

The County is a large basin with the Pacific Ocean to the west and several mountain ranges with 11,000-foot peaks to the east and south. Frequent sunny days and low rainfall contribute to ozone formation, as well as high levels of fine particles and dust. In addition, the County is home to many diverse industries and the largest goods movement hub on the West Coast. In spite of emission controls that are among the most stringent in the county, power generation and petroleum refining continue to be among the County's largest stationary sources of air pollution.

The determination of whether a region's air quality is healthy or unhealthy is determined by comparing contaminant levels in ambient air samples to national and state standards. These standards were established to protect exposed sensitive receptors from adverse health effects with a margin of safety. Air quality of a region is considered to be in attainment/nonattainment of the state standards.

The South Coast Air Basin is in federal non-attainment for O₃ and PM_{2.5} (Table 5.1-1, *NAAQS and CAAQS Attainment Statuses, South Coast Basin*). The Health and Safety Code section 39607(e) requires CARB to periodically review area designation criteria for CAAQS. These designation criteria provide the basis for CARB to designate areas of California as attainment, nonattainment, or unclassified for the State standards. CARB made the first area designations for CAAQS in 1989, and since then it has reviewed the designations each year, making changes as needed. As of February 2016, the County has been designated as nonattainment for O₃, PM_{2.5}, and PM₁₀.

**TABLE 5.1-1
NAAQS AND CAAQS ATTAINMENT STATUSES, SOUTH COAST AIR BASIN**

Criteria Pollutant	Standard	Averaging Time	Designation	Attainment Date
1-Hour Ozone	NAAQS	1979 1-Hour (0.12 ppm)	Nonattainment (Extreme)	2/6/2023 Originally 11/15/2010 (not attained)
	CAAQS	1-Hour (0.12 ppm)	Nonattainment	N/A
8-Hour Ozone	NAAQS	1997 8-Hour (0.08 ppm)	Nonattainment (Extreme)	6/15/2024
	NAAQS	2008 8-Hour (0.075 ppm)	Nonattainment (Extreme)	7/20/2032
	NAAQS	2015 8-Hour (0.070 ppm)	Designations Pending	~ 2037
	CAAQS	8-Hour (0.070 ppm)	Nonattainment	Beyond 2032
Carbon Monoxide	NAAQS	1-Hour (35 ppm) 8-Hour (9 ppm)	Attainment (Maintenance)	6/11/2007 (attained)
	CAAQS	1-Hour (20 ppm) 8-Hour (9 ppm)	Attainment	6/11/2007 (attained)
Nitrogen Dioxide	NAAQS	1-Hour (0.10 ppm)	Unclassifiable/Attainment	N/A (attained)
	NAAQS	Annual (0.053 ppm)	Attainment (Maintenance)	9/22/1998 (attained)
	CAAQS	1-Hour (0.18 ppm) Annual (0.030 ppm)	Attainment	—
Sulfur Dioxide	NAAQS	1-Hour (75 ppb)	Designations Pending (expect Unclassifiable/Attainment)	N/A (attained)
	NAAQS	24-Hour (0.14 ppm) Annual (0.03 ppm)	Unclassifiable/Attainment	3/19/1979 (attained)
PM ₁₀	NAAQS	1987 24-Hour (150 $\mu\text{g}/\text{m}^3$)	Attainment (Maintenance)	7/26/2013 (attained)
	CAAQS	24-hour (50 $\mu\text{g}/\text{m}^3$) Annual (20 $\mu\text{g}/\text{m}^3$)	Nonattainment	N/A
PM _{2.5}	NAAQS	2006 24-Hour (35 $\mu\text{g}/\text{m}^3$)	Nonattainment (Serious)	12/31/2019
	NAAQS	1997 Annual (15.0 $\mu\text{g}/\text{m}^3$)	Nonattainment	4/5/2015
	NAAQS	2012 Annual (12.0 $\mu\text{g}/\text{m}^3$)	Nonattainment (Serious)	12/31/2025
	CAAQS	Annual (12.0 $\mu\text{g}/\text{m}^3$)	Nonattainment	N/A
Lead	NAAQS	3-Months Rolling (0.15 $\mu\text{g}/\text{m}^3$)	Nonattainment (Partial)	12/31/2015
Hydrogen Sulfide (H ₂ S)	CAAQS	1-Hour (0.03 ppm/42 $\mu\text{g}/\text{m}^3$)	Attainment	—
Sulfates	CAAQS	24-Hour (25 $\mu\text{g}/\text{m}^3$)	Attainment	—
Vinyl Chloride	CAAQS	1-Hour (0.01 ppm/ 26 $\mu\text{g}/\text{m}^3$)	Attainment	—

NOTE: ppm = parts per million; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.

SOURCE: South Coast Air Quality Management District. February 2016. *Air Quality Management Plan (AQMP)*. Available at: <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2>

Air Quality Monitoring Stations

The SCAQMD monitors air quality through a network of 39 permanent, multi-pollutant monitoring stations and 4 additional single-pollutant source impact Lead (Pb) monitoring stations in the Basin and a portion of the Salton Sea Air Basin in Coachella Valley. The closest monitoring station to study area of the proposed project is the Santa Clarita-Placerita Monitoring Station, located approximately 2.3 miles to the east of the project boundary at 22224 Placerita Canyon, Santa Clarita, California 91321. Santa Clarita Monitoring Station measures carbon monoxide, nitrogen dioxide, ozone, PM₁₀, and PM_{2.5}. The nearest monitoring station that records measurements of sulfur dioxide is the Los Angeles-North Main Street Monitoring Station, located approximately 25 miles to the southeast of the project boundary at 1630 North Main Street, Los Angeles California 90012.

Ambient air quality data for the proposed project vicinity recorded at the two monitoring stations from 2014 to 2016 indicated exceedances for the applicable federal standards for 1-hour ozone, 8-hour ozone and the state standards for annual PM₁₀ (Table 5.1-2, *Summary of 2012–2014 Ambient Air Quality Data in the Trails Master Plan Vicinity*).

**TABLE 5.1-2
SUMMARY OF 2014–2016 AMBIENT AIR QUALITY DATA IN THE
TRAILS MASTER PLAN VICINITY**

Pollutant		Pollutant Concentration and Standards	Average and Exceedances		
			2014	2015	2016
Ozone*		Maximum 1-hr concentration (ppm)	0.137	0.126	0.130
		Days above state 1-hr standard	32	23	29
		Maximum 8-hr concentration (ppm)	0.110	0.108	0.115
		Days above state 8-hr 2015 standard	64	52	57
Carbon Monoxide**		Maximum 1-hr concentration (ppm)	—	—	—
		Days above state 1-hr standard	—	—	—
		Maximum 8-hr concentration (ppm)	—	—	—
		Days above state 8-hr standard	—	—	—
Nitrogen Dioxide*		Maximum 1-hr concentration (ppm)	0.057	0.064	0.046
		Days above state 1-hr standard	0	0	0
		Annual average concentration (ppm)	.012	.011	.010
		Exceed 0.03 ppm (state annual standard)?	No	No	No
Particulate Matter	PM _{2.5} *	Maximum 24-hr concentration ($\mu\text{g}/\text{m}^3$)	28.9	34.4	33.9
		Days above federal 24-hr standard	—	—	—
		Annual standard designation value ($\mu\text{g}/\text{m}^3$)	10	10	9
	PM ₁₀ *	Exceed 12 $\mu\text{g}/\text{m}^3$ (state annual standard)?	No	No	No
		Maximum 24-hr concentration ($\mu\text{g}/\text{m}^3$)	47.0	41.0	96.0
		Days above federal 24-hr standard	0	0	0
Sulfur Dioxide**		3-year maximum annual concentration ($\mu\text{g}/\text{m}^3$)	22	22	—
		Exceed 20 $\mu\text{g}/\text{m}^3$ (state annual standard)?	Yes	Yes	—
		Maximum 24-hr concentration (ppm)	—	—	—
		Maximum 1-hr concentration (ppm)	—	—	—
		Exceed 0.04 ppm (State 24-hr standard)?	—	—	—
		Exceed 0.25 ppm (State 1-hr standard)	—	—	—

NOTE: ppm = parts per million; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; — = insufficient (or no) data available to determine the value

* Data for ozone, nitrogen dioxide, and PM_{2.5}, were taken from the Santa Clarita-Placerita Monitoring Station.

**No Data available for carbon monoxide or sulfur dioxide in Los Angeles County

SOURCE: California Air Resources Board. Accessed 26 July 2017. *Air Quality Data Statistics*. Available at: <http://www.arb.ca.gov/adam/>

Sensitive Receptors

Land uses identified to be sensitive receptors by SCAQMD in the Air Quality Handbook include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. People with compromised immune systems may be exposed to emissions released from the construction and operation of the proposed project. The greatest potential for exposure of sensitive receptors to air contaminants would occur during the temporary construction phase.

The proposed project is situated in a rural community with approximately 29,000 residents in the unincorporated communities of Castaic, Castaic Junction, Val Verde, Hasley Canyon, Hillcrest, and Paradise Ranch. Other destinations of note are Castaic Lake; the canyons of Charlie, Tapia, Romero, Sloan, and Violin; the Valencia Commerce Center; and the Peter Pitchess Detention Center. There are 6,681 known sensitive receptors (6,666 residential areas, 6 parks, 9 schools) within the Santa Susana project area. There are an additional 2,966 known sensitive receptors (2,953 residential areas, 1 senior day care center, 4 homes for aged and others, 3 parks, 1 health center, 4 schools) within a 0.5-mile radius of the Santa Susana project area (Figure 5.1-3, *Sensitive Receptors within 0.5 Miles of the Project Site*).

Exposure of sensitive receptors to potential emissions would vary from day to day, depending on the amount of work being conducted, the weather/wind conditions, the location of receptors, and the length of time that receptors would be exposed to air emissions.

Due to the short-term and segmented nature of project construction on this programmatic level, sensitive receptors would not be expected to be significantly affected by the proposed project. In addition, although off-site residents, both adults and children, would have a longer potential duration of exposure to the project's constructional air emissions, exposure is reduced with distance.

Odors

Objectionable odors are typical of agriculture, chemical plants, composting operations, dairies, fiberglass molding, landfills, refineries, rendering plants, rail yards, and wastewater treatment plants.¹¹ The impact from odors varies with wind direction and speed, distance from the source and sensitive receptors, and release height of odor. Identification of sources of odors is necessary during the planning stages to reduce the impact of odors. These sources of odors are regulated by SCAQMD Rule 402 Nuisance with the exception of agriculture.

Air Quality Significance Thresholds

The impacts to air quality were evaluated in accordance with the most recent SCAQMD significance thresholds for criteria pollutants (Table 5.1-3, *SCAQMD Air Quality Significance Thresholds*).

¹¹ South Coast Air Quality Management District. Chapter 2 Land Use – Guidance Document for Air Quality in Local Plans. Available at: <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/chapter-2--air-quality-issues-regarding-land-use.pdf>

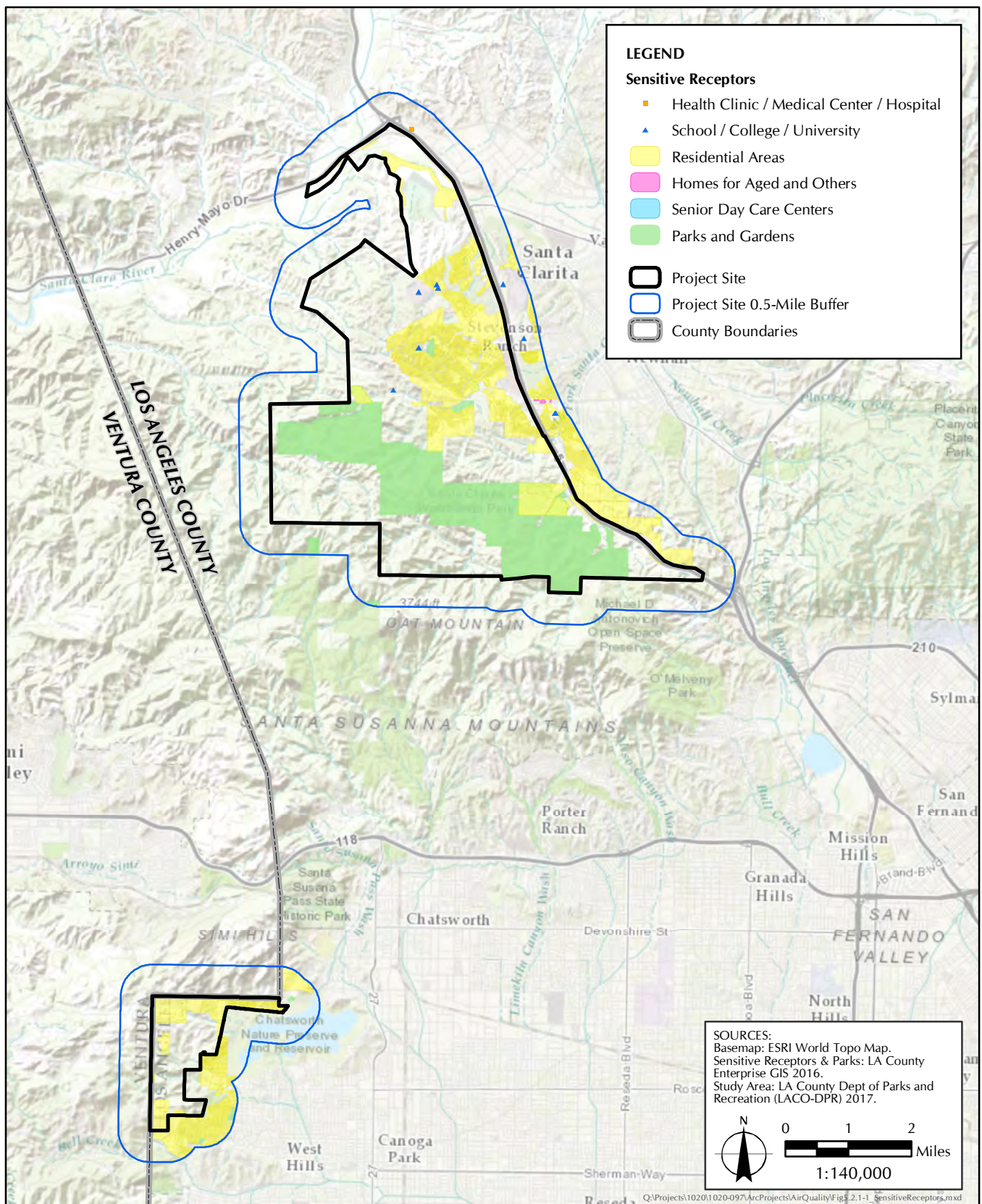


FIGURE 5.1-3

Sensitive Receptors within 0.5 Miles of the Project Site

TABLE 5.1-3
SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS

Pollutant	Construction (pounds/day)	Operation (pounds/day)
Nitrogen Oxides	100	55
Volatile organic compounds (VOC)	75	55
PM ₁₀	150	150
PM _{2.5}	55	55
Sulfur Oxides	150	150
Carbon Monoxide	550	550

SOURCE: South Coast Air Quality Management District. 1993. *CEQA Handbook*.

Greenhouse Gas Emissions

The principal anthropogenic GHGs that enter the atmosphere consist of carbon dioxide (CO₂), methane (CH₄), nitrogen oxides (NO_x), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Among these GHGs, CO₂ emissions are considered to be the most abundant type of GHG emissions contributing to global climate change. In order to establish a reference point for future GHG emissions, carbon dioxide equivalent (CO₂e) emissions have been projected based on an unregulated, business-as-usual, GHG emissions scenario that does not consider the reductions in GHG emissions required by AB 32 or SB 32. In December 2007, CARB stated that California contributed 427 million metric tons (MMT) of GHG emissions in CO₂e in 1990, and under a business-as-usual development scenario, will contribute approximately 509 MMT of CO₂e emissions in 2020, which presents a linear upward trend. These numbers were based on the International Panel on Climate Change's (IPCC's) Second Assessment Report. Under AB 32, California must reduce emissions to 1990 levels by 2020. By 2013, most climate change organizations were adopting the IPCC's Fourth Assessment Report, which revises global warming potentials of GHG. As a result, ARB updated the new 2020 statewide limit to 431 MMT CO₂e by 2020.¹² CARB plans on achieving the reductions by focusing on the following seven sectors: transportation, electricity generation, industrial, residential, agriculture, commercial, and forestry.

Greenhouse Gas Emissions Significance Thresholds

As of February 2016, SCAQMD, state, and federal agencies have not set mandatory significance thresholds for project impacts on climate change and global warming. SCAQMD has set a guidance threshold of 10,000 MT/year CO₂e for industrial facilities, but the guidance does not apply to the proposed project. More broadly, the EPA has set a GHG reporting threshold for facilities emitting at least 25,000 MT CO₂e / year.

¹² California Air Resources Board. June 6, 2017. *California 1990 Greenhouse Gas Emissions Level and 2020 Limit*. Available at: <https://www.arb.ca.gov/cc/inventory/1990level/1990level.htm>

5.2 IMPACT ANALYSIS

Proposed trail width within the proposed project varies between 3 and 12 feet. Therefore, spatial impact analysis for air quality and GHG emissions was based on a worst-case analysis using a maximum width of 12 feet and additional construction disturbances beyond the trail footprint for the bike skills areas, equestrian parks, trailhead and staging areas, and trailheads.

5.2.1 Air Quality

The potential for the proposed project to result in impacts related to air quality was analyzed in relation to the questions in Appendix G of the State CEQA Guidelines,¹³ as modified for the County. Would the project:

- Conflict with or obstruct implementation of applicable air quality plans of either the South Coast AQMD (SCAQMD) or the Antelope Valley AQMD (AVAQMD)?
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation?
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?
- Expose sensitive receptors to substantial pollutant concentrations?
- Create objectionable odors affecting a substantial number of people?

Applicable Air Quality Plans

The proposed project would result in less than significant impacts to air quality in regard to conflicting with or obstructing implementation of applicable air quality plans within SCAQMD. The two main plans of concern are the Air Quality Element of the County General Plan and the 2016 SCAQMD AQMP. The proposed project would also be consistent with SCAG's 2016–2040 RTP/SCS. The construction, operation, and maintenance of the proposed project would not cause a violation of the SCAQMD AQMP because it would not impede the ability of the basin to achieve the NAAQS attainment deadlines for those pollutants not in attainment. Designations for attainment are determined from the ambient air quality. The proposed project would be consistent with the AQMP's goals to invest in strategies that improve air quality by supporting transportation control measures to reduce vehicle miles traveled (VMT). This is also consistent with the Air Quality Element for the County General Plan, which states a direct link between transportation activities and air pollution. The project design measures to limit particulate matter from construction are in alignment with Policy AQ 1.3.

For operations, the proposed project would minimally increase the number of vehicles coming to and from the parks and open space areas in the area by providing recreational opportunities close to where people live and through the long-term conservation of open space lands. These trips would be recreational in purpose, occurring mainly on weekends and/or outside peak hour traffic, and therefore not causing additional traffic. With limited new trips, the proposed project would

¹³ California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

support Goal 2 of the County General Plan by coordinating land use, transportation, and air quality planning. The proposed project would also not have a long-term consequence on achieving attainment deadlines in the SCAQMD AQMP for criteria pollutants that are not in attainment. The proposed project is aligned with the 2016–2040 RTP/SCS because it would reduce VMT and encourage nearby recreation. Therefore, the proposed project would result in less than significant impacts in regard to conflicting with or obstructing implementation of applicable air quality plans, and no mitigation would be required.

Air Quality Standards

The proposed project would result in less than significant impacts to air quality in regard to violating any air quality standard or contributing substantially to an existing or projected air quality violation. Ambient air quality of two nearby monitoring stations is reported in Table 5.1-2.

Construction

The project's daily construction emissions were generated using CalEEMod 2016.3.1. Table 5.2.1-1, *Estimated Daily Construction Emissions*, summarizes the daily construction emissions associated with the proposed project's construction activities and indicates that emissions would be below the SCAQMD daily constructional emissions thresholds of significance.

**TABLE 5.2.1-1
ESTIMATED DAILY CONSTRUCTION EMISSIONS**

Criteria Air Pollutants	Mitigated Construction Emissions¹		Exceed Significance Threshold?
	Maximum Annual Project Emissions² (pounds/day)	SCAQMD Daily Significance Threshold (pounds/day)	
Carbon monoxide (CO)	24.02	550	No
Sulfur Dioxide (SO ₂)	0.07	150	No
Nitrogen oxides (NO _x)	43.33	100	No
Reactive organic gases (ROGs)	4.05	75	No
Particulate matter (PM ₁₀)	16.30	150	No
Fine particulate matter (PM _{2.5})	9.69	55	No

NOTE: ¹ Includes two recommended measures: Reduce speed on unpaved roads to less than 15 mph and water exposed area three times a day.

² Daily emissions taken from CalEEMod Summer Report (Appendix A).

Operation

Given that the proposed project would be operated as trails that would not require any stationary sources for daily operation and maintenance, long-term operation-related air emissions in the proposed project area are likely to result from vehicles traveling to and from the trailheads and minimal usage of a loader/backhoe/tractor for trail maintenance. According to Table 5.2.1-2, *Estimated Daily Operational Emissions*, operational emissions associated with the proposed project are expected to be below the level of significance as determined by the SCAQMD. Therefore, the

proposed project would result in less than significant impacts in regard to air quality standards, and no mitigation would be required.

**TABLE 5.2.1-2
ESTIMATED DAILY OPERATIONAL EMISSIONS**

Criteria Air Pollutants	Mitigated Operational Emissions ¹		Exceed Significance Threshold?
	Project Emissions ² (pounds/day)	SCAQMD Daily Significance Threshold (pounds/day)	
Carbon monoxide (CO)	47.93	550	No
Sulfur dioxide (SO ₂)	0.24	150	No
Nitrogen oxides (NO _x)	20.17	55	No
Reactive organic gases (ROGs)	3.98	55	No
Particulate matter (PM ₁₀)	45.82	150	No
Fine particulate matter (PM _{2.5})	11.88	55	No

NOTE: ¹ Includes one mitigation measure: Reduce speed on unpaved roads to less than 15 mph.

² Daily emissions taken from CalEEMod Summer Report.

Cumulatively Considerable Increase of Any Criteria Pollutant

The proposed project would result in less than significant impacts to air quality in regard to resulting in cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment. Compared to the NAAQS, the County portion of the South Coast Air Basin is a nonattainment area for 1- hour ozone, 8-hour ozone, fine particulate matter (PM_{2.5}), and lead for near-source monitors. Compared to the CAAQS, the County portion of the South Coast Air Basin is a nonattainment area for 1-hour ozone, 8-hour ozone, PM_{2.5}, and respirable particulate matter (PM₁₀). The proposed project would generate these pollutants during the construction of trail improvements. The operations and maintenance phases of the proposed project would not cause a cumulatively considerable net increase of any criteria pollutant, as the proposed project is a recreational trail generating minimal new vehicle trips (4 trips/mile/hour) and requiring minimal equipment for trail maintenance. Short-term cumulative impacts related to air quality could occur if project construction and nearby construction activities were to occur simultaneously. In particular, with respect to local impacts, cumulative construction particulate matter (i.e., fugitive dust) impacts are considered when projects are located within a few hundred yards of each other. Many of the related projects located within the proposed project area are residential subdivisions or other development projects that would require trail easements with the potential to create significant air quality impacts cumulatively during the construction phase. As these development projects are not fully defined in their entirety at this point in time, it is not feasible to quantify the emissions from these projects. Other nearby construction activities would include construction for the Castaic Trails Master Plan, which includes 89 miles of new trails, and Phase I of SSMTMP, which proposes 25 miles of new trails. These related trails would occur over the 2035 planning horizon and therefore are not expected to contribute substantially to daily emission thresholds. The proposed project is first and foremost a trails plan, which provides recreational opportunities close to areas where people live and work. This is consistent with the strategies in the 2016–2040 RTP/SCS for reducing VMT and enhancing public health. Therefore, the proposed project's emissions would not be cumulatively considerable, and mitigation would not be required.

Sensitive Receptors

The proposed project would result in less than significant impacts to air quality in regard to exposing sensitive receptors to substantial pollutant concentrations. There are 6,681 known sensitive receptors (6,666 residential areas, 6 parks, 9 schools) within the proposed project area. There are an additional 2,966 known sensitive receptors (2,953 residential areas, 1 senior day care center, 4 homes for aged and others, 3 parks, 1 health center, 4 schools) within a 0.5-mile radius of the proposed project area (Figure 5.1-3). Exposure of sensitive receptors to potential emissions would vary from day to day, depending on the amount of work being conducted, the weather conditions, the location of receptors, and the length of time that receptors would be exposed to air emissions. The proposed project includes design features to water three times a day and reduce vehicle speeds on unpaved roads to 15 mph to reduce fugitive dust. Best management practices would be required for dust suppression, pursuant to County building codes. Due to the short-term nature of project construction, sensitive receptors would not be expected to be adversely affected by construction. For operation or maintenance of the proposed project, sensitive receptors would experience a longer duration of exposure. These emissions are below the level of significance and would decrease rapidly with distance from the proposed project site. Therefore, impacts in regard to exposing sensitive receptors to substantial pollutant concentrations would be less than significant, and mitigation would not be required.

Objectionable Odors

The proposed project would result in less than significant impacts to air quality in regard to creating objectionable odors affecting a substantial number of people. The construction, operation, and maintenance of the proposed project would not involve the type of land uses or industrial operations typically associated with odor nuisance. There are no land uses typically associated with the generation of nuisance odors in the proposed project area. Construction and maintenance of the proposed project would occur over very short durations. With the exception of providing access for individuals afforded protection pursuant to the Americans with Disabilities Act, the County does not allow the use of motorized equipment on trails or within park facilities, other than those designated for such use. Motor vehicle trips would be limited as well. Therefore, impacts in regard to creation of objectionable odors would be less than significant, and no mitigation would be required.

5.2.2 Greenhouse Gas Emissions

The potential for the proposed project to result in impacts related to GHG emissions was analyzed in relation to the questions in Appendix G of the State CEQA Guidelines,¹⁴ as modified for the County. Would the project:

- Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

¹⁴ *California Code of Regulations*, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

GHG Emissions

The proposed project would result in less than significant impacts in regard to generating GHG emissions, either directly or indirectly, that would have a significant impact on the environment. To quantitatively analyze the proposed project's impacts on global climate change, CalEEMod 2016.3.1 was used to calculate GHG emissions resulting from construction and operation of the proposed project (Appendix A). Approximately 927 MT CO₂e per year would be emitted as result of the proposed project's construction (Appendix A). Operations of the proposed project would be expected to result in approximately 4,362 metric tons of CO₂e emissions per year (Appendix A), mostly from motor vehicle trips of people using the trails. Both construction and operation GHG emissions are well below the suggested GHG reporting threshold of 25,000 MT CO₂e/yr. Therefore, the proposed project would result in less than significant impacts in regard to generating GHG emissions, and no mitigation would be required.

Applicable GHG Plans, Policies, Regulations

The proposed project would result in less than significant impacts in regard to conflicting with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. The primary applicable plan is the County of Los Angeles Community Climate Action Plan (CCAP). CARB has set the following reduction targets for the SCAG region: reduce per capita GHG emissions 8 percent below 2005 levels by 2020 and 13 percent by 2035. The proposed project would help achieve these GHG reduction goals by bringing recreation closer to where people live. The proposed project fulfills the land use and transportation strategy area in the County of Los Angeles CCAP to reduce regionwide VMT and promote sustainability in land use design in the unincorporated areas of the County. Therefore, the proposed project would not conflict with any applicable plan, policy, or regulation related to reducing GHG emissions, and no mitigation would be required.

5.3 MITIGATION RECOMMENDATIONS

No mitigation measures would be required.

Level of Significance after Mitigation

Impacts to air quality and GHG emissions would be less than significant.

SECTION 6.0 REFERENCES

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<http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/chapter-2---air-quality-issues-regarding-land-use.pdf>

U.S. Geological Survey. 1969. 7.5-Minute Series, Oat Mountain, California, Topographic Quadrangle. Scale 1:24,000. Reston, VA.

U.S. Geological Survey. 1969. 7.5-Minute Series, Willow Springs, California, Topographic Quadrangle. Reston, VA.

APPENDIX A
CalEEMod Output for the Santa Susana Mountains
Trails Master Plan – Phase II

Santa Susana Trails Plan - Los Angeles-South Coast County, Annual

Santa Susana Trails Plan
Los Angeles-South Coast County, Annual

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	220.00	Space	1.98	88,000.00	0
City Park	140.00	Acre	140.00	6,098,400.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2035
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Santa Susana Trails Plan - Los Angeles-South Coast County, Annual

Project Characteristics - 2035 operational year, SCE, LA-South Coast

Land Use - 140 acres of land disturbance and 220 parking spaces - see calculations in AQTR Methods section

Construction Phase - Projects would be completed incrementally, but modeling represents total project impact assuming full build out of 71.5 miles of trails in 16 years. It assumes 12 year of site preparation and 4 years of grading.

Off-road Equipment - Grading assumptions: 2 Graders for 2 hrs/day, 4 dozers for 2 hrs/day, 1 off highway truck for 4 hrs/day

Off-road Equipment - Site prep assumptions: 2 backhoes for 2 hrs/day, 1 off highway truck for 4 hrs/day

Trips and VMT - Reduced worker trips/day to 1.25* #Equipment as per AQMD's Appendix A: Calculation Details for CalEEMod. 1 vendor trip is used for the water truck. Assume no hauling.

Demolition - no demo

Grading - 140 acres disturbed, assume balance on site

Vehicle Trips - 4 trips/mi/hr assumed to derived empirical trip rate, as taken from Santa Susana Trails Plan. 4 trips/mi/hr * 12 hours/day * 71.5 mi trails= 3432 trips for 140 acres. Assume ~25 trips/acre/day on Saturday and Sunday and ~15 trip/acre/day during the week.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Road Dust - restrict mean vehicle speed on unpaved roads to 15 mph

Consumer Products - assume no area emissions

Area Coating -

Landscape Equipment -

Energy Use - default lighting energy used for parking lots

Land Use Change -

Construction Off-road Equipment Mitigation - Water construction areas 3x/day. Reduce vehicle speed on unpaved roads to 15 mph.

Mobile Land Use Mitigation -

Area Mitigation - low VOC paint for parking

Energy Mitigation -

Operational Off-Road Equipment - Assume 1 tractor/loader/backhoe for 8 hr/day, 260 days a year for maintenance.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True

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tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	310.00	1,044.00
tblConstructionPhase	NumDays	120.00	3,131.00
tblConstructionPhase	PhaseEndDate	6/1/2022	6/1/2034
tblConstructionPhase	PhaseEndDate	5/31/2019	5/31/2030
tblConstructionPhase	PhaseStartDate	6/1/2019	6/1/2030
tblGrading	AcresOfGrading	2,349.00	140.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2018	2035
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	MeanVehicleSpeed	40	15
tblRoadDust	MeanVehicleSpeed	40	15
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	15.00	4.00
tblTripsAndVMT	WorkerTripNumber	33.00	9.00

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tblVehicleTrips	ST_TR	22.75	25.00
tblVehicleTrips	SU_TR	16.74	25.00
tblVehicleTrips	WD_TR	1.89	15.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

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	ROG	NOx	CO	SO2	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					
2018	0.3080	3.2936	1.2702	2.6400e-003	28.2878	0.1580	28.4458	15.5478	0.1454	15.6932	0.0000	241.3396	241.3396	0.0734	0.0000	243.1744
2019	0.5099	5.3705	2.1251	4.5300e-003	28.2914	0.2580	28.5494	15.5488	0.2374	15.7862	0.0000	407.2704	407.2704	0.1259	0.0000	410.4168
2020	0.4852	5.0254	2.0562	4.5400e-003	28.2914	0.2421	28.5335	15.5488	0.2228	15.7716	0.0000	399.9924	399.9924	0.1263	0.0000	403.1503
2021	0.4649	4.7801	1.9942	4.5200e-003	28.2914	0.2285	28.5199	15.5488	0.2102	15.7590	0.0000	398.2162	398.2162	0.1258	0.0000	401.3613
2022	0.3748	3.8156	1.7891	4.5000e-003	28.2913	0.1783	28.4696	15.5488	0.1640	15.7128	0.0000	396.3520	396.3520	0.1253	0.0000	399.4839
2023	0.3126	3.1240	1.5963	4.5000e-003	28.2913	0.1386	28.4299	15.5488	0.1275	15.6763	0.0000	396.0604	396.0604	0.1253	0.0000	399.1919
2024	0.3180	3.1265	1.6145	4.5300e-003	28.2914	0.1385	28.4299	15.5488	0.1275	15.6763	0.0000	398.9257	398.9257	0.1262	0.0000	402.0811
2025	0.2962	2.8823	1.5499	4.5100e-003	28.2914	0.1239	28.4153	15.5488	0.1140	15.6628	0.0000	397.1132	397.1132	0.1257	0.0000	400.2558
2026	0.2961	2.8821	1.5486	4.5100e-003	28.2914	0.1239	28.4153	15.5488	0.1140	15.6628	0.0000	396.8877	396.8877	0.1257	0.0000	400.0300
2027	0.2960	2.8819	1.5475	4.5100e-003	28.2914	0.1239	28.4153	15.5488	0.1140	15.6628	0.0000	396.6877	396.6877	0.1257	0.0000	399.8297
2028	0.2948	2.8706	1.5406	4.4900e-003	28.2913	0.1234	28.4148	15.5488	0.1136	15.6623	0.0000	394.9919	394.9919	0.1252	0.0000	398.1216
2029	0.2958	2.8815	1.5455	4.5100e-003	28.2914	0.1239	28.4153	15.5488	0.1140	15.6628	0.0000	396.3533	396.3533	0.1257	0.0000	399.4948
2030	0.3798	1.6578	2.3530	7.8400e-003	31.5147	0.0591	31.5739	17.2862	0.0591	17.3454	0.0000	729.9395	729.9395	0.0307	0.0000	730.7072
2031	0.4511	1.8387	3.1301	9.6400e-003	3.2360	0.0647	3.3007	1.7408	0.0647	1.8055	0.0000	914.2437	914.2437	0.0364	0.0000	915.1533
2032	0.4526	1.8455	3.1403	9.6800e-003	3.2361	0.0649	3.3010	1.7409	0.0649	1.8057	0.0000	917.5070	917.5070	0.0365	0.0000	918.4196
2033	0.4489	1.8312	3.1148	9.6000e-003	3.2360	0.0644	3.3004	1.7408	0.0644	1.8052	0.0000	910.2950	910.2950	0.0362	0.0000	911.2003
2034	0.1881	0.7676	1.3052	4.0200e-003	3.2254	0.0270	3.2524	1.7380	0.0270	1.7650	0.0000	381.5471	381.5471	0.0152	0.0000	381.9264
Maximum	0.5099	5.3705	3.1403	9.6800e-003	31.5147	0.2580	31.5739	17.2862	0.2374	17.3454	0.0000	917.5070	917.5070	0.1263	0.0000	918.4196

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2.1 Overall Construction

Mitigated Construction

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	ROG	NOx	CO	SO2	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					
2018	0.3080	3.2936	1.2702	2.6400e-003	22.0698	0.1580	22.2279	12.1287	0.1454	12.2740	0.0000	241.3393	241.3393	0.0734	0.0000	243.1741
2019	0.5099	5.3705	2.1251	4.5300e-003	22.0765	0.2580	22.3345	12.1304	0.2374	12.3677	0.0000	407.2699	407.2699	0.1259	0.0000	410.4163
2020	0.4852	5.0254	2.0562	4.5400e-003	22.0766	0.2421	22.3187	12.1304	0.2228	12.3532	0.0000	399.9919	399.9919	0.1263	0.0000	403.1498
2021	0.4649	4.7801	1.9942	4.5200e-003	22.0765	0.2285	22.3050	12.1304	0.2102	12.3406	0.0000	398.2157	398.2157	0.1258	0.0000	401.3609
2022	0.3748	3.8156	1.7891	4.5000e-003	22.0765	0.1783	22.2547	12.1304	0.1640	12.2944	0.0000	396.3516	396.3516	0.1253	0.0000	399.4835
2023	0.3126	3.1240	1.5963	4.5000e-003	22.0765	0.1386	22.2150	12.1304	0.1275	12.2579	0.0000	396.0600	396.0600	0.1253	0.0000	399.1914
2024	0.3180	3.1265	1.6145	4.5300e-003	22.0766	0.1385	22.2151	12.1304	0.1275	12.2578	0.0000	398.9253	398.9253	0.1262	0.0000	402.0806
2025	0.2962	2.8823	1.5499	4.5100e-003	22.0765	0.1239	22.2004	12.1304	0.1140	12.2444	0.0000	397.1127	397.1127	0.1257	0.0000	400.2554
2026	0.2961	2.8821	1.5486	4.5100e-003	22.0765	0.1239	22.2004	12.1304	0.1140	12.2444	0.0000	396.8872	396.8872	0.1257	0.0000	400.0295
2027	0.2960	2.8819	1.5475	4.5100e-003	22.0765	0.1239	22.2004	12.1304	0.1140	12.2444	0.0000	396.6872	396.6872	0.1257	0.0000	399.8292
2028	0.2948	2.8706	1.5406	4.4900e-003	22.0765	0.1234	22.1999	12.1304	0.1136	12.2439	0.0000	394.9914	394.9914	0.1252	0.0000	398.1211
2029	0.2958	2.8815	1.5455	4.5100e-003	22.0765	0.1239	22.2004	12.1304	0.1140	12.2444	0.0000	396.3529	396.3529	0.1257	0.0000	399.4943
2030	0.3798	1.6578	2.3530	7.8400e-003	24.5968	0.0591	24.6560	13.4871	0.0591	13.5462	0.0000	729.9386	729.9386	0.0307	0.0000	730.7063
2031	0.4511	1.8387	3.1301	9.6400e-003	2.5438	0.0647	2.6085	1.3628	0.0647	1.4274	0.0000	914.2426	914.2426	0.0364	0.0000	915.1522
2032	0.4526	1.8455	3.1403	9.6800e-003	2.5440	0.0649	2.6089	1.3628	0.0649	1.4277	0.0000	917.5059	917.5059	0.0365	0.0000	918.4186
2033	0.4489	1.8312	3.1148	9.6000e-003	2.5437	0.0644	2.6081	1.3627	0.0644	1.4271	0.0000	910.2939	910.2939	0.0362	0.0000	911.1993
2034	0.1881	0.7676	1.3052	4.0200e-003	2.5240	0.0270	2.5510	1.3577	0.0270	1.3847	0.0000	381.5466	381.5466	0.0152	0.0000	381.9260
Maximum	0.5099	5.3705	3.1403	9.6800e-003	24.5968	0.2580	24.6560	13.4871	0.2374	13.5462	0.0000	917.5059	917.5059	0.1263	0.0000	918.4186

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	21.95	0.00	21.82	21.98	0.00	21.76	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	6-1-2018	8-31-2018	1.5569	1.5569
2	9-1-2018	11-30-2018	1.5401	1.5401
3	12-1-2018	2-28-2019	1.4742	1.4742
4	3-1-2019	5-31-2019	1.4804	1.4804
5	6-1-2019	8-31-2019	1.4804	1.4804
6	9-1-2019	11-30-2019	1.4644	1.4644
7	12-1-2019	2-29-2020	1.4003	1.4003
8	3-1-2020	5-31-2020	1.3820	1.3820
9	6-1-2020	8-31-2020	1.3820	1.3820
10	9-1-2020	11-30-2020	1.3671	1.3671
11	12-1-2020	2-28-2021	1.3126	1.3126
12	3-1-2021	5-31-2021	1.3205	1.3205
13	6-1-2021	8-31-2021	1.3204	1.3204
14	9-1-2021	11-30-2021	1.3062	1.3062
15	12-1-2021	2-28-2022	1.1242	1.1242
16	3-1-2022	5-31-2022	1.0590	1.0590
17	6-1-2022	8-31-2022	1.0590	1.0590
18	9-1-2022	11-30-2022	1.0476	1.0476
19	12-1-2022	2-28-2023	0.9139	0.9139
20	3-1-2023	5-31-2023	0.8685	0.8685
21	6-1-2023	8-31-2023	0.8685	0.8685
22	9-1-2023	11-30-2023	0.8591	0.8591

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23	12-1-2023	2-29-2024	0.8561	0.8561
24	3-1-2024	5-31-2024	0.8639	0.8639
25	6-1-2024	8-31-2024	0.8638	0.8638
26	9-1-2024	11-30-2024	0.8545	0.8545
27	12-1-2024	2-28-2025	0.8044	0.8044
28	3-1-2025	5-31-2025	0.8002	0.8002
29	6-1-2025	8-31-2025	0.8002	0.8002
30	9-1-2025	11-30-2025	0.7916	0.7916
31	12-1-2025	2-28-2026	0.7829	0.7829
32	3-1-2026	5-31-2026	0.8001	0.8001
33	6-1-2026	8-31-2026	0.8001	0.8001
34	9-1-2026	11-30-2026	0.7915	0.7915
35	12-1-2026	2-28-2027	0.7828	0.7828
36	3-1-2027	5-31-2027	0.8001	0.8001
37	6-1-2027	8-31-2027	0.8000	0.8000
38	9-1-2027	11-30-2027	0.7914	0.7914
39	12-1-2027	2-29-2028	0.7914	0.7914
40	3-1-2028	5-31-2028	0.8000	0.8000
41	6-1-2028	8-31-2028	0.8000	0.8000
42	9-1-2028	11-30-2028	0.7913	0.7913
43	12-1-2028	2-28-2029	0.7826	0.7826
44	3-1-2029	5-31-2029	0.7999	0.7999
45	6-1-2029	8-31-2029	0.7999	0.7999
46	9-1-2029	11-30-2029	0.7913	0.7913
47	12-1-2029	2-28-2030	0.5417	0.5417
48	3-1-2030	5-31-2030	0.4243	0.4243
49	6-1-2030	8-31-2030	0.5765	0.5765

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50	9-1-2030	11-30-2030	0.5704	0.5704
51	12-1-2030	2-28-2031	0.5641	0.5641
52	3-1-2031	5-31-2031	0.5765	0.5765
53	6-1-2031	8-31-2031	0.5764	0.5764
54	9-1-2031	11-30-2031	0.5703	0.5703
55	12-1-2031	2-29-2032	0.5702	0.5702
56	3-1-2032	5-31-2032	0.5763	0.5763
57	6-1-2032	8-31-2032	0.5763	0.5763
58	9-1-2032	11-30-2032	0.5701	0.5701
59	12-1-2032	2-28-2033	0.5639	0.5639
60	3-1-2033	5-31-2033	0.5762	0.5762
61	6-1-2033	8-31-2033	0.5762	0.5762
62	9-1-2033	11-30-2033	0.5700	0.5700
63	12-1-2033	2-28-2034	0.5638	0.5638
64	3-1-2034	5-31-2034	0.5761	0.5761
65	6-1-2034	8-31-2034	0.0063	0.0063
		Highest	1.5569	1.5569

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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	0.0647	4.0000e-005	4.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9300e-003	8.9300e-003	2.0000e-005	0.0000	9.5100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	24.6740	24.6740	1.0200e-003	2.1000e-004	24.7623
Mobile	0.4275	2.5632	5.7017	0.0297	5.8162	0.0152	5.8314	1.4983	0.0141	1.5124	0.0000	2,766.685 2	2,766.685 2	0.1089	0.0000	2,769.408 4
Offroad	0.0212	0.1252	0.3047	4.9000e-004		1.6500e-003	1.6500e-003		1.6500e-003	1.6500e-003	0.0000	42.4242	42.4242	1.7200e-003	0.0000	42.4671
Waste						0.0000	0.0000		0.0000	0.0000	2.4440	0.0000	2.4440	0.1444	0.0000	6.0549
Water						0.0000	0.0000		0.0000	0.0000	0.0000	590.4788	590.4788	0.0244	5.0400e-003	592.5913
Total	0.5134	2.6884	6.0110	0.0302	5.8162	0.0169	5.8330	1.4983	0.0158	1.5141	2.4440	3,424.271 2	3,426.715 2	0.2805	5.2500e-003	3,435.293 5

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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	0.0647	4.0000e-005	4.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9300e-003	8.9300e-003	2.0000e-005	0.0000	9.5100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	24.6740	24.6740	1.0200e-003	2.1000e-004	24.7623
Mobile	0.4275	2.5632	5.7017	0.0297	5.8162	0.0152	5.8314	1.4983	0.0141	1.5124	0.0000	2,766.685 2	2,766.685 2	0.1089	0.0000	2,769.408 4
Offroad	0.0212	0.1252	0.3047	4.9000e-004		1.6500e-003	1.6500e-003		1.6500e-003	1.6500e-003	0.0000	42.4242	42.4242	1.7200e-003	0.0000	42.4671
Waste						0.0000	0.0000		0.0000	0.0000	2.4440	0.0000	2.4440	0.1444	0.0000	6.0549
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1,180.957 6	1,180.957 6	0.0488	0.0101	1,185.182 5
Total	0.5134	2.6884	6.0110	0.0302	5.8162	0.0169	5.8330	1.4983	0.0158	1.5141	2.4440	4,014.750 0	4,017.194 0	0.3049	0.0103	4,027.884 8

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	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	-17.24	-17.23	-8.69	-96.19	-17.25

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2018	5/31/2030	5	3131	
2	Grading	Grading	6/1/2030	6/1/2034	5	1044	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 140

Acres of Paving: 1.98

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Off-Highway Trucks	1	4.00	402	0.38
Grading	Off-Highway Trucks	1	4.00	402	0.38
Site Preparation	Tractors/Loaders/Backhoes	2	2.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	2.00	187	0.41
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Rubber Tired Dozers	4	2.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

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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
Site Preparation	6	4.00	1.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	13	9.00	1.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2018**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					28.2827	0.0000	28.2827	15.5465	0.0000	15.5465	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3055	3.2815	1.2471	2.5700e-003		0.1579	0.1579		0.1453	0.1453	0.0000	234.7640	234.7640	0.0731	0.0000	236.5912
Total	0.3055	3.2815	1.2471	2.5700e-003	28.2827	0.1579	28.4406	15.5465	0.1453	15.6917	0.0000	234.7640	234.7640	0.0731	0.0000	236.5912

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3.2 Site Preparation - 2018**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	3.9000e-004	0.0102	2.8600e-003	2.0000e-005	5.5000e-004	8.0000e-005	6.2000e-004	1.6000e-004	7.0000e-005	2.3000e-004	0.0000	2.1405	2.1405	1.4000e-004	0.0000	2.1440
Worker	2.1400e-003	1.9000e-003	0.0203	5.0000e-005	4.4900e-003	4.0000e-005	4.5300e-003	1.1900e-003	4.0000e-005	1.2300e-003	0.0000	4.4351	4.4351	1.6000e-004	0.0000	4.4392
Total	2.5300e-003	0.0121	0.0231	7.0000e-005	5.0400e-003	1.2000e-004	5.1500e-003	1.3500e-003	1.1000e-004	1.4600e-003	0.0000	6.5756	6.5756	3.0000e-004	0.0000	6.5832

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					22.0605	0.0000	22.0605	12.1263	0.0000	12.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3055	3.2815	1.2471	2.5700e-003		0.1579	0.1579		0.1453	0.1453	0.0000	234.7638	234.7638	0.0731	0.0000	236.5909
Total	0.3055	3.2815	1.2471	2.5700e-003	22.0605	0.1579	22.2184	12.1263	0.1453	12.2715	0.0000	234.7638	234.7638	0.0731	0.0000	236.5909

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3.2 Site Preparation - 2018**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	3.9000e-004	0.0102	2.8600e-003	2.0000e-005	9.4000e-004	8.0000e-005	1.0100e-003	2.5000e-004	7.0000e-005	3.3000e-004	0.0000	2.1405	2.1405	1.4000e-004	0.0000	2.1440
Worker	2.1400e-003	1.9000e-003	0.0203	5.0000e-005	8.3800e-003	4.0000e-005	8.4200e-003	2.1500e-003	4.0000e-005	2.1800e-003	0.0000	4.4351	4.4351	1.6000e-004	0.0000	4.4392
Total	2.5300e-003	0.0121	0.0231	7.0000e-005	9.3200e-003	1.2000e-004	9.4300e-003	2.4000e-003	1.1000e-004	2.5100e-003	0.0000	6.5756	6.5756	3.0000e-004	0.0000	6.5832

3.2 Site Preparation - 2019**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					28.2827	0.0000	28.2827	15.5465	0.0000	15.5465	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5059	5.3511	2.0896	4.4100e-003		0.2578	0.2578		0.2372	0.2372	0.0000	396.2660	396.2660	0.1254	0.0000	399.4004
Total	0.5059	5.3511	2.0896	4.4100e-003	28.2827	0.2578	28.5406	15.5465	0.2372	15.7837	0.0000	396.2660	396.2660	0.1254	0.0000	399.4004

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3.2 Site Preparation - 2019**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	6.0000e-004	0.0165	4.5000e-003	4.0000e-005	9.4000e-004	1.1000e-004	1.0500e-003	2.7000e-004	1.1000e-004	3.8000e-004	0.0000	3.6368	3.6368	2.3000e-004	0.0000	3.6426
Worker	3.3200e-003	2.8700e-003	0.0310	8.0000e-005	7.7000e-003	7.0000e-005	7.7700e-003	2.0500e-003	6.0000e-005	2.1100e-003	0.0000	7.3675	7.3675	2.5000e-004	0.0000	7.3738
Total	3.9200e-003	0.0194	0.0355	1.2000e-004	8.6400e-003	1.8000e-004	8.8200e-003	2.3200e-003	1.7000e-004	2.4900e-003	0.0000	11.0044	11.0044	4.8000e-004	0.0000	11.0164

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					22.0605	0.0000	22.0605	12.1263	0.0000	12.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5059	5.3511	2.0896	4.4100e-003		0.2578	0.2578		0.2372	0.2372	0.0000	396.2655	396.2655	0.1254	0.0000	399.3999
Total	0.5059	5.3511	2.0896	4.4100e-003	22.0605	0.2578	22.3183	12.1263	0.2372	12.3635	0.0000	396.2655	396.2655	0.1254	0.0000	399.3999

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3.2 Site Preparation - 2019**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	6.0000e-004	0.0165	4.5000e-003	4.0000e-005	1.6100e-003	1.1000e-004	1.7200e-003	4.3000e-004	1.1000e-004	5.4000e-004	0.0000	3.6368	3.6368	2.3000e-004	0.0000	3.6426
Worker	3.3200e-003	2.8700e-003	0.0310	8.0000e-005	0.0144	7.0000e-005	0.0145	3.6800e-003	6.0000e-005	3.7500e-003	0.0000	7.3675	7.3675	2.5000e-004	0.0000	7.3738
Total	3.9200e-003	0.0194	0.0355	1.2000e-004	0.0160	1.8000e-004	0.0162	4.1100e-003	1.7000e-004	4.2900e-003	0.0000	11.0044	11.0044	4.8000e-004	0.0000	11.0164

3.2 Site Preparation - 2020**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					28.2827	0.0000	28.2827	15.5465	0.0000	15.5465	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4816	5.0077	2.0239	4.4200e-003		0.2420	0.2420		0.2226	0.2226	0.0000	389.1954	389.1954	0.1259	0.0000	392.3422
Total	0.4816	5.0077	2.0239	4.4200e-003	28.2827	0.2420	28.5247	15.5465	0.2226	15.7691	0.0000	389.1954	389.1954	0.1259	0.0000	392.3422

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3.2 Site Preparation - 2020**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	5.2000e-004	0.0151	4.1000e-003	4.0000e-005	9.4000e-004	7.0000e-005	1.0200e-003	2.7000e-004	7.0000e-005	3.4000e-004	0.0000	3.6261	3.6261	2.2000e-004	0.0000	3.6316
Worker	3.0800e-003	2.5700e-003	0.0282	8.0000e-005	7.7300e-003	6.0000e-005	7.8000e-003	2.0500e-003	6.0000e-005	2.1100e-003	0.0000	7.1709	7.1709	2.2000e-004	0.0000	7.1765
Total	3.6000e-003	0.0177	0.0323	1.2000e-004	8.6700e-003	1.3000e-004	8.8200e-003	2.3200e-003	1.3000e-004	2.4500e-003	0.0000	10.7970	10.7970	4.4000e-004	0.0000	10.8081

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					22.0605	0.0000	22.0605	12.1263	0.0000	12.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4816	5.0077	2.0239	4.4200e-003		0.2420	0.2420		0.2226	0.2226	0.0000	389.1949	389.1949	0.1259	0.0000	392.3417
Total	0.4816	5.0077	2.0239	4.4200e-003	22.0605	0.2420	22.3025	12.1263	0.2226	12.3489	0.0000	389.1949	389.1949	0.1259	0.0000	392.3417

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3.2 Site Preparation - 2020**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	5.2000e-004	0.0151	4.1000e-003	4.0000e-005	1.6100e-003	7.0000e-005	1.6900e-003	4.4000e-004	7.0000e-005	5.1000e-004	0.0000	3.6261	3.6261	2.2000e-004	0.0000	3.6316
Worker	3.0800e-003	2.5700e-003	0.0282	8.0000e-005	0.0144	6.0000e-005	0.0145	3.7000e-003	6.0000e-005	3.7600e-003	0.0000	7.1709	7.1709	2.2000e-004	0.0000	7.1765
Total	3.6000e-003	0.0177	0.0323	1.2000e-004	0.0161	1.3000e-004	0.0162	4.1400e-003	1.3000e-004	4.2700e-003	0.0000	10.7970	10.7970	4.4000e-004	0.0000	10.8081

3.2 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					28.2827	0.0000	28.2827	15.5465	0.0000	15.5465	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4616	4.7641	1.9646	4.4100e-003		0.2284	0.2284		0.2101	0.2101	0.0000	387.7152	387.7152	0.1254	0.0000	390.8501
Total	0.4616	4.7641	1.9646	4.4100e-003	28.2827	0.2284	28.5111	15.5465	0.2101	15.7566	0.0000	387.7152	387.7152	0.1254	0.0000	390.8501

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3.2 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	4.4000e-004	0.0137	3.7200e-003	4.0000e-005	9.4000e-004	3.0000e-005	9.7000e-004	2.7000e-004	3.0000e-005	3.0000e-004	0.0000	3.5843	3.5843	2.1000e-004	0.0000	3.5896
Worker	2.8600e-003	2.3100e-003	0.0258	8.0000e-005	7.7000e-003	6.0000e-005	7.7700e-003	2.0500e-003	6.0000e-005	2.1000e-003	0.0000	6.9167	6.9167	2.0000e-004	0.0000	6.9217
Total	3.3000e-003	0.0160	0.0296	1.2000e-004	8.6400e-003	9.0000e-005	8.7400e-003	2.3200e-003	9.0000e-005	2.4000e-003	0.0000	10.5010	10.5010	4.1000e-004	0.0000	10.5113

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					22.0605	0.0000	22.0605	12.1263	0.0000	12.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4616	4.7641	1.9646	4.4100e-003		0.2284	0.2284		0.2101	0.2101	0.0000	387.7148	387.7148	0.1254	0.0000	390.8496
Total	0.4616	4.7641	1.9646	4.4100e-003	22.0605	0.2284	22.2889	12.1263	0.2101	12.3364	0.0000	387.7148	387.7148	0.1254	0.0000	390.8496

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3.2 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	4.4000e-004	0.0137	3.7200e-003	4.0000e-005	1.6100e-003	3.0000e-005	1.6400e-003	4.3000e-004	3.0000e-005	4.6000e-004	0.0000	3.5843	3.5843	2.1000e-004	0.0000	3.5896
Worker	2.8600e-003	2.3100e-003	0.0258	8.0000e-005	0.0144	6.0000e-005	0.0144	3.6800e-003	6.0000e-005	3.7400e-003	0.0000	6.9167	6.9167	2.0000e-004	0.0000	6.9217
Total	3.3000e-003	0.0160	0.0296	1.2000e-004	0.0160	9.0000e-005	0.0161	4.1100e-003	9.0000e-005	4.2000e-003	0.0000	10.5010	10.5010	4.1000e-004	0.0000	10.5113

3.2 Site Preparation - 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					28.2827	0.0000	28.2827	15.5465	0.0000	15.5465	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3717	3.8006	1.7619	4.3900e-003		0.1782	0.1782		0.1639	0.1639	0.0000	386.1650	386.1650	0.1249	0.0000	389.2873
Total	0.3717	3.8006	1.7619	4.3900e-003	28.2827	0.1782	28.4609	15.5465	0.1639	15.7104	0.0000	386.1650	386.1650	0.1249	0.0000	389.2873

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3.2 Site Preparation - 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	4.1000e-004	0.0129	3.5100e-003	4.0000e-005	9.4000e-004	3.0000e-005	9.6000e-004	2.7000e-004	2.0000e-005	3.0000e-004	0.0000	3.5391	3.5391	2.0000e-004	0.0000	3.5442
Worker	2.6800e-003	2.0800e-003	0.0237	7.0000e-005	7.6700e-003	6.0000e-005	7.7300e-003	2.0400e-003	6.0000e-005	2.0900e-003	0.0000	6.6479	6.6479	1.8000e-004	0.0000	6.6524
Total	3.0900e-003	0.0150	0.0272	1.1000e-004	8.6100e-003	9.0000e-005	8.6900e-003	2.3100e-003	8.0000e-005	2.3900e-003	0.0000	10.1870	10.1870	3.8000e-004	0.0000	10.1966

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					22.0605	0.0000	22.0605	12.1263	0.0000	12.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3717	3.8006	1.7619	4.3900e-003		0.1782	0.1782		0.1639	0.1639	0.0000	386.1645	386.1645	0.1249	0.0000	389.2869
Total	0.3717	3.8006	1.7619	4.3900e-003	22.0605	0.1782	22.2387	12.1263	0.1639	12.2902	0.0000	386.1645	386.1645	0.1249	0.0000	389.2869

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3.2 Site Preparation - 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	4.1000e-004	0.0129	3.5100e-003	4.0000e-005	1.6000e-003	3.0000e-005	1.6300e-003	4.3000e-004	2.0000e-005	4.6000e-004	0.0000	3.5391	3.5391	2.0000e-004	0.0000	3.5442
Worker	2.6800e-003	2.0800e-003	0.0237	7.0000e-005	0.0143	6.0000e-005	0.0144	3.6700e-003	6.0000e-005	3.7300e-003	0.0000	6.6479	6.6479	1.8000e-004	0.0000	6.6524
Total	3.0900e-003	0.0150	0.0272	1.1000e-004	0.0159	9.0000e-005	0.0160	4.1000e-003	8.0000e-005	4.1900e-003	0.0000	10.1870	10.1870	3.8000e-004	0.0000	10.1966

3.2 Site Preparation - 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					
Fugitive Dust					28.2827	0.0000	28.2827	15.5465	0.0000	15.5465	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3098	3.1125	1.5713	4.4000e-003		0.1385	0.1385		0.1274	0.1274	0.0000	386.2262	386.2262	0.1249	0.0000	389.3490
Total	0.3098	3.1125	1.5713	4.4000e-003	28.2827	0.1385	28.4213	15.5465	0.1274	15.6739	0.0000	386.2262	386.2262	0.1249	0.0000	389.3490

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3.2 Site Preparation - 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	3.0000e-004	9.6200e-003	3.1500e-003	4.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	3.4297	3.4297	1.8000e-004	0.0000	3.4342
Worker	2.5200e-003	1.8800e-003	0.0218	7.0000e-005	7.6700e-003	6.0000e-005	7.7300e-003	2.0400e-003	5.0000e-005	2.0900e-003	0.0000	6.4046	6.4046	1.6000e-004	0.0000	6.4087
Total	2.8200e-003	0.0115	0.0250	1.1000e-004	8.6100e-003	7.0000e-005	8.6800e-003	2.3100e-003	6.0000e-005	2.3700e-003	0.0000	9.8343	9.8343	3.4000e-004	0.0000	9.8429

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					22.0605	0.0000	22.0605	12.1263	0.0000	12.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3098	3.1125	1.5713	4.4000e-003		0.1385	0.1385		0.1274	0.1274	0.0000	386.2257	386.2257	0.1249	0.0000	389.3485
Total	0.3098	3.1125	1.5713	4.4000e-003	22.0605	0.1385	22.1991	12.1263	0.1274	12.2537	0.0000	386.2257	386.2257	0.1249	0.0000	389.3485

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3.2 Site Preparation - 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	3.0000e-004	9.6200e-003	3.1500e-003	4.0000e-005	1.6000e-003	1.0000e-005	1.6100e-003	4.3000e-004	1.0000e-005	4.4000e-004	0.0000	3.4297	3.4297	1.8000e-004	0.0000	3.4342
Worker	2.5200e-003	1.8800e-003	0.0218	7.0000e-005	0.0143	6.0000e-005	0.0144	3.6700e-003	5.0000e-005	3.7200e-003	0.0000	6.4046	6.4046	1.6000e-004	0.0000	6.4087
Total	2.8200e-003	0.0115	0.0250	1.1000e-004	0.0159	7.0000e-005	0.0160	4.1000e-003	6.0000e-005	4.1600e-003	0.0000	9.8343	9.8343	3.4000e-004	0.0000	9.8429

3.2 Site Preparation - 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					
Fugitive Dust					28.2827	0.0000	28.2827	15.5465	0.0000	15.5465	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3153	3.1151	1.5909	4.4300e-003		0.1385	0.1385		0.1274	0.1274	0.0000	389.2290	389.2290	0.1259	0.0000	392.3761
Total	0.3153	3.1151	1.5909	4.4300e-003	28.2827	0.1385	28.4212	15.5465	0.1274	15.6739	0.0000	389.2290	389.2290	0.1259	0.0000	392.3761

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3.2 Site Preparation - 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	3.0000e-004	9.6600e-003	3.0800e-003	4.0000e-005	9.4000e-004	1.0000e-005	9.6000e-004	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	3.4429	3.4429	1.8000e-004	0.0000	3.4474
Worker	2.4100e-003	1.7300e-003	0.0205	7.0000e-005	7.7300e-003	6.0000e-005	7.7900e-003	2.0500e-003	5.0000e-005	2.1100e-003	0.0000	6.2538	6.2538	1.5000e-004	0.0000	6.2576
Total	2.7100e-003	0.0114	0.0236	1.1000e-004	8.6700e-003	7.0000e-005	8.7500e-003	2.3200e-003	6.0000e-005	2.3900e-003	0.0000	9.6967	9.6967	3.3000e-004	0.0000	9.7050

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					22.0605	0.0000	22.0605	12.1263	0.0000	12.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3153	3.1151	1.5909	4.4300e-003		0.1385	0.1385		0.1274	0.1274	0.0000	389.2285	389.2285	0.1259	0.0000	392.3756
Total	0.3153	3.1151	1.5909	4.4300e-003	22.0605	0.1385	22.1990	12.1263	0.1274	12.2536	0.0000	389.2285	389.2285	0.1259	0.0000	392.3756

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3.2 Site Preparation - 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	3.0000e-004	9.6600e-003	3.0800e-003	4.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	3.4429	3.4429	1.8000e-004	0.0000	3.4474
Worker	2.4100e-003	1.7300e-003	0.0205	7.0000e-005	0.0144	6.0000e-005	0.0145	3.7000e-003	5.0000e-005	3.7500e-003	0.0000	6.2538	6.2538	1.5000e-004	0.0000	6.2576
Total	2.7100e-003	0.0114	0.0236	1.1000e-004	0.0161	7.0000e-005	0.0161	4.1400e-003	6.0000e-005	4.2000e-003	0.0000	9.6967	9.6967	3.3000e-004	0.0000	9.7050

3.2 Site Preparation - 2025**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					28.2827	0.0000	28.2827	15.5465	0.0000	15.5465	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2937	2.8712	1.5280	4.4100e-003		0.1238	0.1238		0.1139	0.1139	0.0000	387.7129	387.7129	0.1254	0.0000	390.8478
Total	0.2937	2.8712	1.5280	4.4100e-003	28.2827	0.1238	28.4066	15.5465	0.1139	15.6604	0.0000	387.7129	387.7129	0.1254	0.0000	390.8478

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3.2 Site Preparation - 2025**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	2.9000e-004	9.5400e-003	2.9900e-003	4.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	3.4115	3.4115	1.8000e-004	0.0000	3.4159
Worker	2.2800e-003	1.5700e-003	0.0190	7.0000e-005	7.7000e-003	6.0000e-005	7.7600e-003	2.0500e-003	5.0000e-005	2.1000e-003	0.0000	5.9887	5.9887	1.4000e-004	0.0000	5.9921
Total	2.5700e-003	0.0111	0.0220	1.1000e-004	8.6400e-003	7.0000e-005	8.7100e-003	2.3200e-003	6.0000e-005	2.3800e-003	0.0000	9.4002	9.4002	3.2000e-004	0.0000	9.4081

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					22.0605	0.0000	22.0605	12.1263	0.0000	12.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2937	2.8712	1.5280	4.4100e-003		0.1238	0.1238		0.1139	0.1139	0.0000	387.7125	387.7125	0.1254	0.0000	390.8473
Total	0.2937	2.8712	1.5280	4.4100e-003	22.0605	0.1238	22.1844	12.1263	0.1139	12.2402	0.0000	387.7125	387.7125	0.1254	0.0000	390.8473

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3.2 Site Preparation - 2025**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	2.9000e-004	9.5400e-003	2.9900e-003	4.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.3000e-004	1.0000e-005	4.5000e-004	0.0000	3.4115	3.4115	1.8000e-004	0.0000	3.4159
Worker	2.2800e-003	1.5700e-003	0.0190	7.0000e-005	0.0144	6.0000e-005	0.0144	3.6800e-003	5.0000e-005	3.7400e-003	0.0000	5.9887	5.9887	1.4000e-004	0.0000	5.9921
Total	2.5700e-003	0.0111	0.0220	1.1000e-004	0.0160	7.0000e-005	0.0161	4.1100e-003	6.0000e-005	4.1900e-003	0.0000	9.4002	9.4002	3.2000e-004	0.0000	9.4081

3.2 Site Preparation - 2026**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					28.2827	0.0000	28.2827	15.5465	0.0000	15.5465	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2937	2.8712	1.5280	4.4100e-003		0.1238	0.1238		0.1139	0.1139	0.0000	387.7129	387.7129	0.1254	0.0000	390.8478
Total	0.2937	2.8712	1.5280	4.4100e-003	28.2827	0.1238	28.4066	15.5465	0.1139	15.6604	0.0000	387.7129	387.7129	0.1254	0.0000	390.8478

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3.2 Site Preparation - 2026**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	2.8000e-004	9.4400e-003	2.9400e-003	3.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	3.3941	3.3941	1.7000e-004	0.0000	3.3984
Worker	2.1800e-003	1.4500e-003	0.0177	6.0000e-005	7.7000e-003	5.0000e-005	7.7600e-003	2.0500e-003	5.0000e-005	2.1000e-003	0.0000	5.7807	5.7807	1.3000e-004	0.0000	5.7838
Total	2.4600e-003	0.0109	0.0207	9.0000e-005	8.6400e-003	6.0000e-005	8.7100e-003	2.3200e-003	6.0000e-005	2.3800e-003	0.0000	9.1747	9.1747	3.0000e-004	0.0000	9.1822

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					22.0605	0.0000	22.0605	12.1263	0.0000	12.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2937	2.8712	1.5280	4.4100e-003		0.1238	0.1238		0.1139	0.1139	0.0000	387.7125	387.7125	0.1254	0.0000	390.8473
Total	0.2937	2.8712	1.5280	4.4100e-003	22.0605	0.1238	22.1844	12.1263	0.1139	12.2402	0.0000	387.7125	387.7125	0.1254	0.0000	390.8473

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3.2 Site Preparation - 2026**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	2.8000e-004	9.4400e-003	2.9400e-003	3.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.3000e-004	1.0000e-005	4.5000e-004	0.0000	3.3941	3.3941	1.7000e-004	0.0000	3.3984
Worker	2.1800e-003	1.4500e-003	0.0177	6.0000e-005	0.0144	5.0000e-005	0.0144	3.6800e-003	5.0000e-005	3.7400e-003	0.0000	5.7807	5.7807	1.3000e-004	0.0000	5.7838
Total	2.4600e-003	0.0109	0.0207	9.0000e-005	0.0160	6.0000e-005	0.0161	4.1100e-003	6.0000e-005	4.1900e-003	0.0000	9.1747	9.1747	3.0000e-004	0.0000	9.1822

3.2 Site Preparation - 2027**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					28.2827	0.0000	28.2827	15.5465	0.0000	15.5465	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2937	2.8712	1.5280	4.4100e-003		0.1238	0.1238		0.1139	0.1139	0.0000	387.7129	387.7129	0.1254	0.0000	390.8478
Total	0.2937	2.8712	1.5280	4.4100e-003	28.2827	0.1238	28.4066	15.5465	0.1139	15.6604	0.0000	387.7129	387.7129	0.1254	0.0000	390.8478

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3.2 Site Preparation - 2027**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	2.8000e-004	9.3500e-003	2.8900e-003	3.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	3.3783	3.3783	1.7000e-004	0.0000	3.3826
Worker	2.0900e-003	1.3400e-003	0.0166	6.0000e-005	7.7000e-003	5.0000e-005	7.7500e-003	2.0500e-003	5.0000e-005	2.0900e-003	0.0000	5.5964	5.5964	1.2000e-004	0.0000	5.5993
Total	2.3700e-003	0.0107	0.0195	9.0000e-005	8.6400e-003	6.0000e-005	8.7000e-003	2.3200e-003	6.0000e-005	2.3700e-003	0.0000	8.9748	8.9748	2.9000e-004	0.0000	8.9819

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					22.0605	0.0000	22.0605	12.1263	0.0000	12.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2937	2.8712	1.5280	4.4100e-003		0.1238	0.1238		0.1139	0.1139	0.0000	387.7125	387.7125	0.1254	0.0000	390.8473
Total	0.2937	2.8712	1.5280	4.4100e-003	22.0605	0.1238	22.1844	12.1263	0.1139	12.2402	0.0000	387.7125	387.7125	0.1254	0.0000	390.8473

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3.2 Site Preparation - 2027**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	2.8000e-004	9.3500e-003	2.8900e-003	3.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.3000e-004	1.0000e-005	4.5000e-004	0.0000	3.3783	3.3783	1.7000e-004	0.0000	3.3826
Worker	2.0900e-003	1.3400e-003	0.0166	6.0000e-005	0.0144	5.0000e-005	0.0144	3.6800e-003	5.0000e-005	3.7300e-003	0.0000	5.5964	5.5964	1.2000e-004	0.0000	5.5993
Total	2.3700e-003	0.0107	0.0195	9.0000e-005	0.0160	6.0000e-005	0.0161	4.1100e-003	6.0000e-005	4.1800e-003	0.0000	8.9748	8.9748	2.9000e-004	0.0000	8.9819

3.2 Site Preparation - 2028**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					28.2827	0.0000	28.2827	15.5465	0.0000	15.5465	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2925	2.8602	1.5221	4.4000e-003		0.1234	0.1234		0.1135	0.1135	0.0000	386.2274	386.2274	0.1249	0.0000	389.3503
Total	0.2925	2.8602	1.5221	4.4000e-003	28.2827	0.1234	28.4061	15.5465	0.1135	15.6600	0.0000	386.2274	386.2274	0.1249	0.0000	389.3503

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3.2 Site Preparation - 2028**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	2.7000e-004	9.2400e-003	2.8400e-003	3.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	3.3520	3.3520	1.7000e-004	0.0000	3.3562
Worker	1.9800e-003	1.2300e-003	0.0156	6.0000e-005	7.6700e-003	5.0000e-005	7.7200e-003	2.0400e-003	4.0000e-005	2.0800e-003	0.0000	5.4124	5.4124	1.1000e-004	0.0000	5.4151
Total	2.2500e-003	0.0105	0.0184	9.0000e-005	8.6100e-003	6.0000e-005	8.6700e-003	2.3100e-003	5.0000e-005	2.3600e-003	0.0000	8.7645	8.7645	2.8000e-004	0.0000	8.7713

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					22.0605	0.0000	22.0605	12.1263	0.0000	12.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2925	2.8602	1.5221	4.4000e-003		0.1234	0.1234		0.1135	0.1135	0.0000	386.2270	386.2270	0.1249	0.0000	389.3498
Total	0.2925	2.8602	1.5221	4.4000e-003	22.0605	0.1234	22.1839	12.1263	0.1135	12.2398	0.0000	386.2270	386.2270	0.1249	0.0000	389.3498

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3.2 Site Preparation - 2028**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	2.7000e-004	9.2400e-003	2.8400e-003	3.0000e-005	1.6000e-003	1.0000e-005	1.6100e-003	4.3000e-004	1.0000e-005	4.4000e-004	0.0000	3.3520	3.3520	1.7000e-004	0.0000	3.3562
Worker	1.9800e-003	1.2300e-003	0.0156	6.0000e-005	0.0143	5.0000e-005	0.0144	3.6700e-003	4.0000e-005	3.7100e-003	0.0000	5.4124	5.4124	1.1000e-004	0.0000	5.4151
Total	2.2500e-003	0.0105	0.0184	9.0000e-005	0.0159	6.0000e-005	0.0160	4.1000e-003	5.0000e-005	4.1500e-003	0.0000	8.7645	8.7645	2.8000e-004	0.0000	8.7713

3.2 Site Preparation - 2029**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					28.2827	0.0000	28.2827	15.5465	0.0000	15.5465	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2937	2.8712	1.5280	4.4100e-003		0.1238	0.1238		0.1139	0.1139	0.0000	387.7129	387.7129	0.1254	0.0000	390.8478
Total	0.2937	2.8712	1.5280	4.4100e-003	28.2827	0.1238	28.4066	15.5465	0.1139	15.6604	0.0000	387.7129	387.7129	0.1254	0.0000	390.8478

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3.2 Site Preparation - 2029**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	2.7000e-004	9.2000e-003	2.8200e-003	3.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	3.3529	3.3529	1.7000e-004	0.0000	3.3571
Worker	1.8700e-003	1.1400e-003	0.0147	6.0000e-005	7.7000e-003	4.0000e-005	7.7500e-003	2.0500e-003	4.0000e-005	2.0900e-003	0.0000	5.2875	5.2875	1.0000e-004	0.0000	5.2899
Total	2.1400e-003	0.0103	0.0175	9.0000e-005	8.6400e-003	5.0000e-005	8.7000e-003	2.3200e-003	5.0000e-005	2.3700e-003	0.0000	8.6404	8.6404	2.7000e-004	0.0000	8.6470

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					22.0605	0.0000	22.0605	12.1263	0.0000	12.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2937	2.8712	1.5280	4.4100e-003		0.1238	0.1238		0.1139	0.1139	0.0000	387.7125	387.7125	0.1254	0.0000	390.8473
Total	0.2937	2.8712	1.5280	4.4100e-003	22.0605	0.1238	22.1844	12.1263	0.1139	12.2402	0.0000	387.7125	387.7125	0.1254	0.0000	390.8473

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3.2 Site Preparation - 2029**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	2.7000e-004	9.2000e-003	2.8200e-003	3.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.3000e-004	1.0000e-005	4.5000e-004	0.0000	3.3529	3.3529	1.7000e-004	0.0000	3.3571
Worker	1.8700e-003	1.1400e-003	0.0147	6.0000e-005	0.0144	4.0000e-005	0.0144	3.6800e-003	4.0000e-005	3.7300e-003	0.0000	5.2875	5.2875	1.0000e-004	0.0000	5.2899
Total	2.1400e-003	0.0103	0.0175	9.0000e-005	0.0160	5.0000e-005	0.0161	4.1100e-003	5.0000e-005	4.1800e-003	0.0000	8.6404	8.6404	2.7000e-004	0.0000	8.6470

3.2 Site Preparation - 2030**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					28.2827	0.0000	28.2827	15.5465	0.0000	15.5465	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1161	0.5826	0.5220	2.1800e-003		0.0214	0.0214		0.0214	0.0214	0.0000	193.8157	193.8157	9.4000e-003	0.0000	194.0507
Total	0.1161	0.5826	0.5220	2.1800e-003	28.2827	0.0214	28.3042	15.5465	0.0214	15.5679	0.0000	193.8157	193.8157	9.4000e-003	0.0000	194.0507

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3.2 Site Preparation - 2030**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	1.1000e-004	3.8100e-003	1.1600e-003	1.0000e-005	3.9000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	1.3957	1.3957	7.0000e-005	0.0000	1.3974
Worker	7.3000e-004	4.4000e-004	5.7500e-003	2.0000e-005	3.2200e-003	2.0000e-005	3.2300e-003	8.5000e-004	2.0000e-005	8.7000e-004	0.0000	2.1538	2.1538	4.0000e-005	0.0000	2.1547
Total	8.4000e-004	4.2500e-003	6.9100e-003	3.0000e-005	3.6100e-003	2.0000e-005	3.6300e-003	9.6000e-004	2.0000e-005	9.9000e-004	0.0000	3.5495	3.5495	1.1000e-004	0.0000	3.5522

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					22.0605	0.0000	22.0605	12.1263	0.0000	12.1263	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1161	0.5826	0.5220	2.1800e-003		0.0214	0.0214		0.0214	0.0214	0.0000	193.8154	193.8154	9.4000e-003	0.0000	194.0505
Total	0.1161	0.5826	0.5220	2.1800e-003	22.0605	0.0214	22.0820	12.1263	0.0214	12.1477	0.0000	193.8154	193.8154	9.4000e-003	0.0000	194.0505

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3.2 Site Preparation - 2030**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	1.1000e-004	3.8100e-003	1.1600e-003	1.0000e-005	6.7000e-004	0.0000	6.8000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	1.3957	1.3957	7.0000e-005	0.0000	1.3974
Worker	7.3000e-004	4.4000e-004	5.7500e-003	2.0000e-005	6.0100e-003	2.0000e-005	6.0200e-003	1.5400e-003	2.0000e-005	1.5500e-003	0.0000	2.1538	2.1538	4.0000e-005	0.0000	2.1547
Total	8.4000e-004	4.2500e-003	6.9100e-003	3.0000e-005	6.6800e-003	2.0000e-005	6.7000e-003	1.7200e-003	2.0000e-005	1.7400e-003	0.0000	3.5495	3.5495	1.1000e-004	0.0000	3.5522

3.3 Grading - 2030**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					3.2178	0.0000	3.2178	1.7360	0.0000	1.7360	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2605	1.0643	1.8044	5.5200e-003		0.0376	0.0376		0.0376	0.0376	0.0000	523.8702	523.8702	0.0210	0.0000	524.3949
Total	0.2605	1.0643	1.8044	5.5200e-003	3.2178	0.0376	3.2554	1.7360	0.0376	1.7736	0.0000	523.8702	523.8702	0.0210	0.0000	524.3949

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3.3 Grading - 2030**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	1.5000e-004	5.3100e-003	1.6200e-003	2.0000e-005	5.5000e-004	1.0000e-005	5.5000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	1.9463	1.9463	1.0000e-004	0.0000	1.9487
Worker	2.2900e-003	1.3700e-003	0.0180	7.0000e-005	0.0101	5.0000e-005	0.0102	2.6800e-003	5.0000e-005	2.7300e-003	0.0000	6.7578	6.7578	1.2000e-004	0.0000	6.7607
Total	2.4400e-003	6.6800e-003	0.0197	9.0000e-005	0.0106	6.0000e-005	0.0107	2.8400e-003	6.0000e-005	2.8900e-003	0.0000	8.7041	8.7041	2.2000e-004	0.0000	8.7094

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					2.5099	0.0000	2.5099	1.3540	0.0000	1.3540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2605	1.0643	1.8044	5.5200e-003		0.0376	0.0376		0.0376	0.0376	0.0000	523.8696	523.8696	0.0210	0.0000	524.3943
Total	0.2605	1.0643	1.8044	5.5200e-003	2.5099	0.0376	2.5475	1.3540	0.0376	1.3916	0.0000	523.8696	523.8696	0.0210	0.0000	524.3943

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3.3 Grading - 2030**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	1.5000e-004	5.3100e-003	1.6200e-003	2.0000e-005	9.4000e-004	1.0000e-005	9.4000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	1.9463	1.9463	1.0000e-004	0.0000	1.9487
Worker	2.2900e-003	1.3700e-003	0.0180	7.0000e-005	0.0188	5.0000e-005	0.0189	4.8300e-003	5.0000e-005	4.8800e-003	0.0000	6.7578	6.7578	1.2000e-004	0.0000	6.7607
Total	2.4400e-003	6.6800e-003	0.0197	9.0000e-005	0.0198	6.0000e-005	0.0198	5.0800e-003	6.0000e-005	5.1400e-003	0.0000	8.7041	8.7041	2.2000e-004	0.0000	8.7094

3.3 Grading - 2031**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					3.2178	0.0000	3.2178	1.7360	0.0000	1.7360	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4472	1.8275	3.0984	9.4800e-003		0.0646	0.0646		0.0646	0.0646	0.0000	899.5404	899.5404	0.0360	0.0000	900.4412
Total	0.4472	1.8275	3.0984	9.4800e-003	3.2178	0.0646	3.2823	1.7360	0.0646	1.8005	0.0000	899.5404	899.5404	0.0360	0.0000	900.4412

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3.3 Grading - 2031**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	2.6000e-004	9.0700e-003	2.7800e-003	3.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	3.3359	3.3359	1.6000e-004	0.0000	3.3400
Worker	3.6300e-003	2.1300e-003	0.0290	1.3000e-004	0.0173	9.0000e-005	0.0174	4.6000e-003	8.0000e-005	4.6800e-003	0.0000	11.3674	11.3674	1.8000e-004	0.0000	11.3720
Total	3.8900e-003	0.0112	0.0318	1.6000e-004	0.0183	1.0000e-004	0.0184	4.8700e-003	9.0000e-005	4.9600e-003	0.0000	14.7034	14.7034	3.4000e-004	0.0000	14.7120

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					2.5099	0.0000	2.5099	1.3540	0.0000	1.3540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4472	1.8275	3.0984	9.4800e-003		0.0646	0.0646		0.0646	0.0646	0.0000	899.5393	899.5393	0.0360	0.0000	900.4402
Total	0.4472	1.8275	3.0984	9.4800e-003	2.5099	0.0646	2.5744	1.3540	0.0646	1.4186	0.0000	899.5393	899.5393	0.0360	0.0000	900.4402

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3.3 Grading - 2031**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	2.6000e-004	9.0700e-003	2.7800e-003	3.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	3.3359	3.3359	1.6000e-004	0.0000	3.3400
Worker	3.6300e-003	2.1300e-003	0.0290	1.3000e-004	0.0324	9.0000e-005	0.0324	8.2900e-003	8.0000e-005	8.3700e-003	0.0000	11.3674	11.3674	1.8000e-004	0.0000	11.3720
Total	3.8900e-003	0.0112	0.0318	1.6000e-004	0.0340	1.0000e-004	0.0341	8.7300e-003	9.0000e-005	8.8200e-003	0.0000	14.7034	14.7034	3.4000e-004	0.0000	14.7120

3.3 Grading - 2032**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					3.2178	0.0000	3.2178	1.7360	0.0000	1.7360	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4489	1.8345	3.1103	9.5200e-003		0.0648	0.0648		0.0648	0.0648	0.0000	902.9869	902.9869	0.0362	0.0000	903.8912
Total	0.4489	1.8345	3.1103	9.5200e-003	3.2178	0.0648	3.2826	1.7360	0.0648	1.8008	0.0000	902.9869	902.9869	0.0362	0.0000	903.8912

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3.3 Grading - 2032**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	2.6000e-004	9.0400e-003	2.7700e-003	3.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	3.3419	3.3419	1.6000e-004	0.0000	3.3460
Worker	3.3800e-003	1.9500e-003	0.0273	1.2000e-004	0.0174	8.0000e-005	0.0175	4.6200e-003	8.0000e-005	4.7000e-003	0.0000	11.1782	11.1782	1.7000e-004	0.0000	11.1824
Total	3.6400e-003	0.0110	0.0301	1.5000e-004	0.0183	9.0000e-005	0.0184	4.8900e-003	9.0000e-005	4.9800e-003	0.0000	14.5201	14.5201	3.3000e-004	0.0000	14.5284

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					2.5099	0.0000	2.5099	1.3540	0.0000	1.3540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4489	1.8345	3.1102	9.5200e-003		0.0648	0.0648		0.0648	0.0648	0.0000	902.9858	902.9858	0.0362	0.0000	903.8901
Total	0.4489	1.8345	3.1102	9.5200e-003	2.5099	0.0648	2.5747	1.3540	0.0648	1.4189	0.0000	902.9858	902.9858	0.0362	0.0000	903.8901

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3.3 Grading - 2032**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	2.6000e-004	9.0400e-003	2.7700e-003	3.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	3.3419	3.3419	1.6000e-004	0.0000	3.3460
Worker	3.3800e-003	1.9500e-003	0.0273	1.2000e-004	0.0325	8.0000e-005	0.0326	8.3200e-003	8.0000e-005	8.4000e-003	0.0000	11.1782	11.1782	1.7000e-004	0.0000	11.1824
Total	3.6400e-003	0.0110	0.0301	1.5000e-004	0.0341	9.0000e-005	0.0342	8.7600e-003	9.0000e-005	8.8500e-003	0.0000	14.5201	14.5201	3.3000e-004	0.0000	14.5284

3.3 Grading - 2033**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					3.2178	0.0000	3.2178	1.7360	0.0000	1.7360	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4455	1.8205	3.0865	9.4400e-003		0.0643	0.0643		0.0643	0.0643	0.0000	896.0938	896.0938	0.0359	0.0000	896.9913
Total	0.4455	1.8205	3.0865	9.4400e-003	3.2178	0.0643	3.2821	1.7360	0.0643	1.8003	0.0000	896.0938	896.0938	0.0359	0.0000	896.9913

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3.3 Grading - 2033**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	2.6000e-004	8.9200e-003	2.7400e-003	3.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	3.3110	3.3110	1.6000e-004	0.0000	3.3150
Worker	3.1300e-003	1.7800e-003	0.0256	1.2000e-004	0.0173	8.0000e-005	0.0173	4.5900e-003	7.0000e-005	4.6500e-003	0.0000	10.8902	10.8902	1.5000e-004	0.0000	10.8941
Total	3.3900e-003	0.0107	0.0283	1.5000e-004	0.0182	9.0000e-005	0.0183	4.8600e-003	8.0000e-005	4.9300e-003	0.0000	14.2012	14.2012	3.1000e-004	0.0000	14.2090

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					2.5099	0.0000	2.5099	1.3540	0.0000	1.3540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4455	1.8205	3.0865	9.4400e-003		0.0643	0.0643		0.0643	0.0643	0.0000	896.0928	896.0928	0.0359	0.0000	896.9902
Total	0.4455	1.8205	3.0865	9.4400e-003	2.5099	0.0643	2.5742	1.3540	0.0643	1.4184	0.0000	896.0928	896.0928	0.0359	0.0000	896.9902

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3.3 Grading - 2033**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	2.6000e-004	8.9200e-003	2.7400e-003	3.0000e-005	1.6000e-003	1.0000e-005	1.6100e-003	4.3000e-004	1.0000e-005	4.4000e-004	0.0000	3.3110	3.3110	1.6000e-004	0.0000	3.3150
Worker	3.1300e-003	1.7800e-003	0.0256	1.2000e-004	0.0322	8.0000e-005	0.0323	8.2600e-003	7.0000e-005	8.3300e-003	0.0000	10.8902	10.8902	1.5000e-004	0.0000	10.8941
Total	3.3900e-003	0.0107	0.0283	1.5000e-004	0.0338	9.0000e-005	0.0339	8.6900e-003	8.0000e-005	8.7700e-003	0.0000	14.2012	14.2012	3.1000e-004	0.0000	14.2090

3.3 Grading - 2034**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					3.2178	0.0000	3.2178	1.7360	0.0000	1.7360	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1868	0.7632	1.2940	3.9600e-003		0.0270	0.0270		0.0270	0.0270	0.0000	375.6701	375.6701	0.0151	0.0000	376.0463
Total	0.1868	0.7632	1.2940	3.9600e-003	3.2178	0.0270	3.2447	1.7360	0.0270	1.7629	0.0000	375.6701	375.6701	0.0151	0.0000	376.0463

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3.3 Grading - 2034**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	1.1000e-004	3.7200e-003	1.1500e-003	1.0000e-005	3.9000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	1.3863	1.3863	7.0000e-005	0.0000	1.3880
Worker	1.2300e-003	6.9000e-004	0.0101	5.0000e-005	7.2400e-003	3.0000e-005	7.2700e-003	1.9200e-003	3.0000e-005	1.9500e-003	0.0000	4.4906	4.4906	6.0000e-005	0.0000	4.4921
Total	1.3400e-003	4.4100e-003	0.0112	6.0000e-005	7.6300e-003	3.0000e-005	7.6700e-003	2.0300e-003	3.0000e-005	2.0700e-003	0.0000	5.8769	5.8769	1.3000e-004	0.0000	5.8801

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					2.5099	0.0000	2.5099	1.3540	0.0000	1.3540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1868	0.7632	1.2940	3.9600e-003		0.0270	0.0270		0.0270	0.0270	0.0000	375.6697	375.6697	0.0151	0.0000	376.0459
Total	0.1868	0.7632	1.2940	3.9600e-003	2.5099	0.0270	2.5368	1.3540	0.0270	1.3810	0.0000	375.6697	375.6697	0.0151	0.0000	376.0459

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3.3 Grading - 2034**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	1.1000e-004	3.7200e-003	1.1500e-003	1.0000e-005	6.7000e-004	0.0000	6.8000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	1.3863	1.3863	7.0000e-005	0.0000	1.3880
Worker	1.2300e-003	6.9000e-004	0.0101	5.0000e-005	0.0135	3.0000e-005	0.0135	3.4600e-003	3.0000e-005	3.4900e-003	0.0000	4.4906	4.4906	6.0000e-005	0.0000	4.4921
Total	1.3400e-003	4.4100e-003	0.0112	6.0000e-005	0.0142	3.0000e-005	0.0142	3.6400e-003	3.0000e-005	3.6800e-003	0.0000	5.8769	5.8769	1.3000e-004	0.0000	5.8801

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	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	0.4275	2.5632	5.7017	0.0297	5.8162	0.0152	5.8314	1.4983	0.0141	1.5124	0.0000	2,766.685 2	2,766.685 2	0.1089	0.0000	2,769.408 4
Unmitigated	0.4275	2.5632	5.7017	0.0297	5.8162	0.0152	5.8314	1.4983	0.0141	1.5124	0.0000	2,766.685 2	2,766.685 2	0.1089	0.0000	2,769.408 4

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	2,100.00	3,500.00	3500.00	8,278,652	8,278,652
Parking Lot	0.00	0.00	0.00		
Total	2,100.00	3,500.00	3,500.00	8,278,652	8,278,652

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
City Park	18.50	10.10	7.90	33.00	48.00	19.00	66	28	6
Parking Lot	18.50	10.10	7.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.539854	0.043743	0.210883	0.115969	0.013375	0.006440	0.022010	0.036531	0.002703	0.001629	0.005324	0.000732	0.000807
City Park	0.539854	0.043743	0.210883	0.115969	0.013375	0.006440	0.022010	0.036531	0.002703	0.001629	0.005324	0.000732	0.000807

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

[illegible]

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5.2 Energy by Land Use - NaturalGas

Unmitigated

[illegible]

Mitigated

[illegible]

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	77440	24.6740	1.0200e-003	2.1000e-004	24.7623
Total		24.6740	1.0200e-003	2.1000e-004	24.7623

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	77440	24.6740	1.0200e-003	2.1000e-004	24.7623
Total		24.6740	1.0200e-003	2.1000e-004	24.7623

6.0 Area Detail**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	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	0.0647	4.0000e-005	4.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9300e-003	8.9300e-003	2.0000e-005	0.0000	9.5100e-003
Unmitigated	0.0647	4.0000e-005	4.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9300e-003	8.9300e-003	2.0000e-005	0.0000	9.5100e-003

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	1.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0630					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.2000e-004	4.0000e-005	4.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9300e-003	8.9300e-003	2.0000e-005	0.0000	9.5100e-003
Total	0.0647	4.0000e-005	4.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9300e-003	8.9300e-003	2.0000e-005	0.0000	9.5100e-003

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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	1.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0630					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.2000e-004	4.0000e-005	4.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9300e-003	8.9300e-003	2.0000e-005	0.0000	9.5100e-003
Total	0.0647	4.0000e-005	4.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.9300e-003	8.9300e-003	2.0000e-005	0.0000	9.5100e-003

7.0 Water Detail**7.1 Mitigation Measures Water**

Santa Susana Trails Plan - Los Angeles-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,180.9576	0.0488	0.0101	1,185.1825
Unmitigated	590.4788	0.0244	5.0400e-003	592.5913

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 166.807	590.4788	0.0244	5.0400e-003	592.5913
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		590.4788	0.0244	5.0400e-003	592.5913

Santa Susana Trails Plan - Los Angeles-South Coast County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 166.807	1,180.9576	0.0488	0.0101	1,185.1825
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		1,180.9576	0.0488	0.0101	1,185.1825

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.4440	0.1444	0.0000	6.0549
Unmitigated	2.4440	0.1444	0.0000	6.0549

Santa Susana Trails Plan - Los Angeles-South Coast County, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	12.04	2.4440	0.1444	0.0000	6.0549
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		2.4440	0.1444	0.0000	6.0549

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	12.04	2.4440	0.1444	0.0000	6.0549
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		2.4440	0.1444	0.0000	6.0549

9.0 Operational Offroad

Santa Susana Trails Plan - Los Angeles-South Coast County, Annual

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Tractors/Loaders/Backhoes	1	8.00	260	97	0.37	Diesel

UnMitigated/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
Equipment Type	tons/yr										MT/yr					
Tractors/Loaders/Backhoes	0.0212	0.1252	0.3047	4.9000e-004		1.6500e-003	1.6500e-003		1.6500e-003	1.6500e-003	0.0000	42.4242	42.4242	1.7200e-003	0.0000	42.4671
Total	0.0212	0.1252	0.3047	4.9000e-004		1.6500e-003	1.6500e-003		1.6500e-003	1.6500e-003	0.0000	42.4242	42.4242	1.7200e-003	0.0000	42.4671

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
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

Santa Susana Trails Plan

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	220.00	Space	1.98	88,000.00	0
City Park	140.00	Acre	140.00	6,098,400.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2035
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

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

Project Characteristics - 2035 operational year, SCE, LA-South Coast

Land Use - 140 acres of land disturbance and 220 parking spaces - see calculations in AQTR Methods section

Construction Phase - Projects would be completed incrementally, but modeling represents total project impact assuming full build out of 71.5 miles of trails in 16 years. It assumes 12 year of site preparation and 4 years of grading.

Off-road Equipment - Grading assumptions: 2 Graders for 2 hrs/day, 4 dozers for 2 hrs/day, 1 off highway truck for 4 hrs/day

Off-road Equipment - Site prep assumptions: 2 backhoes for 2 hrs/day, 1 off highway truck for 4 hrs/day

Trips and VMT - Reduced worker trips/day to 1.25* #Equipment as per AQMD's Appendix A: Calculation Details for CalEEMod. 1 vendor trip is used for the water truck. Assume no hauling.

Demolition - no demo

Grading - 140 acres disturbed, assume balance on site

Vehicle Trips - 4 trips/mi/hr assumed to derived empirical trip rate, as taken from Santa Susana Trails Plan. 4 trips/mi/hr * 12 hours/day * 71.5 mi trails= 3432 trips for 140 acres. Assume ~25 trips/acre/day on Saturday and Sunday and ~15 trip/acre/day during the week.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Road Dust - restrict mean vehicle speed on unpaved roads to 15 mph

Consumer Products - assume no area emissions

Area Coating -

Landscape Equipment -

Energy Use - default lighting energy used for parking lots

Land Use Change -

Construction Off-road Equipment Mitigation - Water construction areas 3x/day. Reduce vehicle speed on unpaved roads to 15 mph.

Mobile Land Use Mitigation -

Area Mitigation - low VOC paint for parking

Energy Mitigation -

Operational Off-Road Equipment - Assume 1 tractor/loader/backhoe for 8 hr/day, 260 days a year for maintenance.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	310.00	1,044.00
tblConstructionPhase	NumDays	120.00	3,131.00
tblConstructionPhase	PhaseEndDate	6/1/2022	6/1/2034
tblConstructionPhase	PhaseEndDate	5/31/2019	5/31/2030
tblConstructionPhase	PhaseStartDate	6/1/2019	6/1/2030
tblGrading	AcresOfGrading	2,349.00	140.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2018	2035
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	MeanVehicleSpeed	40	15
tblRoadDust	MeanVehicleSpeed	40	15
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	15.00	4.00
tblTripsAndVMT	WorkerTripNumber	33.00	9.00

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

tblVehicleTrips	ST_TR	22.75	25.00
tblVehicleTrips	SU_TR	16.74	25.00
tblVehicleTrips	WD_TR	1.89	15.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	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					
2018	4.0528	43.3311	16.7290	0.0348	18.1338	2.0791	20.2129	9.9488	1.9128	11.8615	0.0000	3,503.606 7	3,503.606 7	1.0645	0.0000	3,530.219 3
2019	3.9066	41.1475	16.2985	0.0347	18.1338	1.9769	20.1107	9.9488	1.8188	11.7676	0.0000	3,443.247 3	3,443.247 3	1.0631	0.0000	3,469.825 5
2020	3.7035	38.3568	15.7095	0.0347	18.1338	1.8483	19.9821	9.9488	1.7005	11.6492	0.0000	3,368.793 6	3,368.793 6	1.0630	0.0000	3,395.367 3
2021	3.5622	36.6249	15.2938	0.0347	18.1338	1.7510	19.8848	9.9488	1.6109	11.5597	0.0000	3,366.598 8	3,366.598 8	1.0627	0.0000	3,393.166 3
2022	2.8826	29.3472	13.7741	0.0347	18.1338	1.3712	19.5050	9.9488	1.2615	11.2102	0.0000	3,363.634 7	3,363.634 7	1.0623	0.0000	3,390.192 1
2023	2.4043	24.0279	12.2907	0.0347	18.1338	1.0661	19.1998	9.9488	0.9808	10.9295	0.0000	3,361.053 9	3,361.053 9	1.0621	0.0000	3,387.607 0
2024	2.4272	23.8637	12.3350	0.0346	18.1338	1.0575	19.1913	9.9488	0.9729	10.9216	0.0000	3,359.450 4	3,359.450 4	1.0621	0.0000	3,386.002 2
2025	2.2696	22.0840	11.8869	0.0346	18.1338	0.9495	19.0833	9.9488	0.8735	10.8223	0.0000	3,356.905 3	3,356.905 3	1.0619	0.0000	3,383.451 6
2026	2.2688	22.0825	11.8764	0.0346	18.1338	0.9494	19.0832	9.9488	0.8735	10.8222	0.0000	3,354.918 3	3,354.918 3	1.0617	0.0000	3,381.461 7
2027	2.2680	22.0810	11.8670	0.0346	18.1338	0.9494	19.0832	9.9488	0.8735	10.8222	0.0000	3,353.157 4	3,353.157 4	1.0616	0.0000	3,379.698 0
2028	2.2672	22.0798	11.8588	0.0346	18.1338	0.9494	19.0832	9.9488	0.8734	10.8222	0.0000	3,351.602 7	3,351.602 7	1.0615	0.0000	3,378.140 9
2029	2.2663	22.0786	11.8506	0.0346	18.1338	0.9494	19.0832	9.9488	0.8734	10.8222	0.0000	3,350.214 7	3,350.214 7	1.0614	0.0000	3,376.750 6
2030	3.4585	14.0887	24.0189	0.0740	18.1338	0.4955	18.5274	9.9488	0.4955	10.3423	0.0000	7,729.189 2	7,729.189 2	0.3076	0.0000	7,736.877 8
2031	3.4563	14.0868	24.0028	0.0739	6.3071	0.4955	6.8026	3.3636	0.4954	3.8590	0.0000	7,727.060 3	7,727.060 3	0.3074	0.0000	7,734.744 9
2032	3.4542	14.0851	23.9881	0.0739	6.3071	0.4954	6.8025	3.3636	0.4954	3.8590	0.0000	7,724.961 8	7,724.961 8	0.3072	0.0000	7,732.642 6
2033	3.4525	14.0836	23.9755	0.0739	6.3071	0.4954	6.8025	3.3636	0.4953	3.8589	0.0000	7,723.124 3	7,723.124 3	0.3071	0.0000	7,730.801 9
2034	3.4511	14.0823	23.9632	0.0739	6.3071	0.4953	6.8025	3.3636	0.4953	3.8589	0.0000	7,721.510 7	7,721.510 7	0.3070	0.0000	7,729.185 2
Maximum	4.0528	43.3311	24.0189	0.0740	18.1338	2.0791	20.2129	9.9488	1.9128	11.8615	0.0000	7,729.189 2	7,729.189 2	1.0645	0.0000	7,736.877 8

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	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					
2018	4.0528	43.3311	16.7290	0.0348	14.2168	2.0791	16.2959	7.7781	1.9128	9.6909	0.0000	3,503.606 7	3,503.606 7	1.0645	0.0000	3,530.219 3
2019	3.9066	41.1475	16.2985	0.0347	14.2168	1.9769	16.1937	7.7781	1.8188	9.5970	0.0000	3,443.247 3	3,443.247 3	1.0631	0.0000	3,469.825 5
2020	3.7035	38.3568	15.7095	0.0347	14.2168	1.8483	16.0651	7.7781	1.7005	9.4786	0.0000	3,368.793 6	3,368.793 6	1.0630	0.0000	3,395.367 3
2021	3.5622	36.6249	15.2938	0.0347	14.2168	1.7510	15.9678	7.7781	1.6109	9.3890	0.0000	3,366.598 8	3,366.598 8	1.0627	0.0000	3,393.166 3
2022	2.8826	29.3472	13.7741	0.0347	14.2168	1.3712	15.5880	7.7781	1.2615	9.0396	0.0000	3,363.634 7	3,363.634 7	1.0623	0.0000	3,390.192 1
2023	2.4043	24.0279	12.2907	0.0347	14.2168	1.0661	15.2828	7.7781	0.9808	8.7589	0.0000	3,361.053 9	3,361.053 9	1.0621	0.0000	3,387.607 0
2024	2.4272	23.8637	12.3350	0.0346	14.2168	1.0575	15.2743	7.7781	0.9729	8.7510	0.0000	3,359.450 4	3,359.450 4	1.0621	0.0000	3,386.002 2
2025	2.2696	22.0840	11.8869	0.0346	14.2168	0.9495	15.1663	7.7781	0.8735	8.6516	0.0000	3,356.905 3	3,356.905 3	1.0619	0.0000	3,383.451 6
2026	2.2688	22.0825	11.8764	0.0346	14.2168	0.9494	15.1662	7.7781	0.8735	8.6516	0.0000	3,354.918 3	3,354.918 3	1.0617	0.0000	3,381.461 7
2027	2.2680	22.0810	11.8670	0.0346	14.2168	0.9494	15.1662	7.7781	0.8735	8.6516	0.0000	3,353.157 4	3,353.157 4	1.0616	0.0000	3,379.698 0
2028	2.2672	22.0798	11.8588	0.0346	14.2168	0.9494	15.1662	7.7781	0.8734	8.6516	0.0000	3,351.602 7	3,351.602 7	1.0615	0.0000	3,378.140 9
2029	2.2663	22.0786	11.8506	0.0346	14.2168	0.9494	15.1662	7.7781	0.8734	8.6515	0.0000	3,350.214 7	3,350.214 7	1.0614	0.0000	3,376.750 6
2030	3.4585	14.0887	24.0189	0.0740	14.2168	0.4955	14.6104	7.7781	0.4955	8.1717	0.0000	7,729.189 2	7,729.189 2	0.3076	0.0000	7,736.877 8
2031	3.4563	14.0868	24.0028	0.0739	5.0740	0.4955	5.5694	2.6622	0.4954	3.1576	0.0000	7,727.060 3	7,727.060 3	0.3074	0.0000	7,734.744 9
2032	3.4542	14.0851	23.9881	0.0739	5.0740	0.4954	5.5694	2.6622	0.4954	3.1576	0.0000	7,724.961 8	7,724.961 8	0.3072	0.0000	7,732.642 6
2033	3.4525	14.0836	23.9755	0.0739	5.0740	0.4954	5.5694	2.6622	0.4953	3.1575	0.0000	7,723.124 3	7,723.124 3	0.3071	0.0000	7,730.801 9
2034	3.4511	14.0823	23.9632	0.0739	5.0740	0.4953	5.5693	2.6622	0.4953	3.1575	0.0000	7,721.510 7	7,721.510 7	0.3070	0.0000	7,729.185 2
Maximum	4.0528	43.3311	24.0189	0.0740	14.2168	2.0791	16.2959	7.7781	1.9128	9.6909	0.0000	7,729.189 2	7,729.189 2	1.0645	0.0000	7,736.877 8

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	21.40	0.00	20.00	21.73	0.00	19.42	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	0.3554	3.3000e-004	0.0366	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0788	0.0788	2.0000e-004		0.0839
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	3.4576	19.2026	45.5509	0.2362	45.6914	0.1169	45.8083	11.7587	0.1086	11.8672		24,239.4565	24,239.4565	0.9235		24,262.5433
Offroad	0.1633	0.9628	2.3440	3.8000e-003		0.0127	0.0127		0.0127	0.0127		359.7283	359.7283	0.0146		360.0923
Total	3.9763	20.1658	47.9314	0.2400	45.6914	0.1297	45.8211	11.7587	0.1214	11.8800		24,599.2636	24,599.2636	0.9382	0.0000	24,622.7194

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

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	lb/day										lb/day					
Area	0.3554	3.3000e-004	0.0366	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0788	0.0788	2.0000e-004		0.0839
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	3.4576	19.2026	45.5509	0.2362	45.6914	0.1169	45.8083	11.7587	0.1086	11.8672		24,239.4565	24,239.4565	0.9235		24,262.5433
Offroad	0.1633	0.9628	2.3440	3.8000e-003		0.0127	0.0127		0.0127	0.0127		359.7283	359.7283	0.0146		360.0923
Total	3.9763	20.1658	47.9314	0.2400	45.6914	0.1297	45.8211	11.7587	0.1214	11.8800		24,599.2636	24,599.2636	0.9382	0.0000	24,622.7194

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	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	Site Preparation	Site Preparation	6/1/2018	5/31/2030	5	3131	
2	Grading	Grading	6/1/2030	6/1/2034	5	1044	

Acres of Grading (Site Preparation Phase): 0

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

Acres of Grading (Grading Phase): 140**Acres of Paving: 1.98****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Off-Highway Trucks	1	4.00	402	0.38
Grading	Off-Highway Trucks	1	4.00	402	0.38
Site Preparation	Tractors/Loaders/Backhoes	2	2.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	2.00	187	0.41
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Rubber Tired Dozers	4	2.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

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
Site Preparation	6	4.00	1.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	13	9.00	1.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2018**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	4.0199	43.1780	16.4091	0.0338		2.0776	2.0776		1.9113	1.9113		3,405.040 1	3,405.040 1	1.0600		3,431.541 0
Total	4.0199	43.1780	16.4091	0.0338	18.0663	2.0776	20.1438	9.9307	1.9113	11.8420		3,405.040 1	3,405.040 1	1.0600		3,431.541 0

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	5.0100e-003	0.1311	0.0359	2.9000e-004	7.3300e-003	9.8000e-004	8.3100e-003	2.1100e-003	9.4000e-004	3.0500e-003		31.3619	31.3619	1.9700e-003		31.4112
Worker	0.0279	0.0219	0.2840	6.8000e-004	0.0602	5.3000e-004	0.0607	0.0160	4.9000e-004	0.0165		67.2047	67.2047	2.4900e-003		67.2671
Total	0.0329	0.1531	0.3199	9.7000e-004	0.0675	1.5100e-003	0.0691	0.0181	1.4300e-003	0.0195		98.5666	98.5666	4.4600e-003		98.6783

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2018**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					14.0917	0.0000	14.0917	7.7459	0.0000	7.7459			0.0000			0.0000
Off-Road	4.0199	43.1780	16.4091	0.0338		2.0776	2.0776		1.9113	1.9113	0.0000	3,405.040 1	3,405.040 1	1.0600		3,431.541 0
Total	4.0199	43.1780	16.4091	0.0338	14.0917	2.0776	16.1692	7.7459	1.9113	9.6573	0.0000	3,405.040 1	3,405.040 1	1.0600		3,431.541 0

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	5.0100e-003	0.1311	0.0359	2.9000e-004	0.0126	9.8000e-004	0.0135	3.3900e-003	9.4000e-004	4.3300e-003		31.3619	31.3619	1.9700e-003		31.4112
Worker	0.0279	0.0219	0.2840	6.8000e-004	0.1126	5.3000e-004	0.1131	0.0288	4.9000e-004	0.0293		67.2047	67.2047	2.4900e-003		67.2671
Total	0.0329	0.1531	0.3199	9.7000e-004	0.1251	1.5100e-003	0.1266	0.0322	1.4300e-003	0.0336		98.5666	98.5666	4.4600e-003		98.6783

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2019**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	3.8769	41.0047	16.0120	0.0338		1.9756	1.9756		1.8176	1.8176		3,347.1915	3,347.1915	1.0590		3,373.6669
Total	3.8769	41.0047	16.0120	0.0338	18.0663	1.9756	20.0419	9.9307	1.8176	11.7482		3,347.1915	3,347.1915	1.0590		3,373.6669

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	4.5300e-003	0.1235	0.0329	2.9000e-004	7.3300e-003	8.4000e-004	8.1600e-003	2.1100e-003	8.0000e-004	2.9100e-003		31.0363	31.0363	1.9000e-003		31.0839
Worker	0.0252	0.0193	0.2536	6.5000e-004	0.0602	5.1000e-004	0.0607	0.0160	4.7000e-004	0.0164		65.0195	65.0195	2.2100e-003		65.0748
Total	0.0297	0.1428	0.2865	9.4000e-004	0.0675	1.3500e-003	0.0689	0.0181	1.2700e-003	0.0194		96.0558	96.0558	4.1100e-003		96.1587

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2019**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					14.0917	0.0000	14.0917	7.7459	0.0000	7.7459			0.0000			0.0000
Off-Road	3.8769	41.0047	16.0120	0.0338		1.9756	1.9756		1.8176	1.8176	0.0000	3,347.1915	3,347.1915	1.0590		3,373.6669
Total	3.8769	41.0047	16.0120	0.0338	14.0917	1.9756	16.0673	7.7459	1.8176	9.5635	0.0000	3,347.1915	3,347.1915	1.0590		3,373.6669

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	4.5300e-003	0.1235	0.0329	2.9000e-004	0.0126	8.4000e-004	0.0134	3.3900e-003	8.0000e-004	4.1900e-003		31.0363	31.0363	1.9000e-003		31.0839
Worker	0.0252	0.0193	0.2536	6.5000e-004	0.1126	5.1000e-004	0.1131	0.0288	4.7000e-004	0.0293		65.0195	65.0195	2.2100e-003		65.0748
Total	0.0297	0.1428	0.2865	9.4000e-004	0.1251	1.3500e-003	0.1265	0.0322	1.2700e-003	0.0335		96.0558	96.0558	4.1100e-003		96.1587

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2020**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	3.6764	38.2265	15.4493	0.0338		1.8473	1.8473		1.6995	1.6995		3,274.919 3	3,274.919 3	1.0592		3,301.398 7
Total	3.6764	38.2265	15.4493	0.0338	18.0663	1.8473	19.9135	9.9307	1.6995	11.6302		3,274.919 3	3,274.919 3	1.0592		3,301.398 7

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	3.8600e-003	0.1131	0.0298	2.9000e-004	7.3300e-003	5.7000e-004	7.9000e-003	2.1100e-003	5.4000e-004	2.6500e-003		30.8303	30.8303	1.8000e-003		30.8754
Worker	0.0232	0.0172	0.2304	6.3000e-004	0.0602	4.9000e-004	0.0607	0.0160	4.6000e-004	0.0164		63.0440	63.0440	1.9700e-003		63.0932
Total	0.0271	0.1303	0.2602	9.2000e-004	0.0675	1.0600e-003	0.0686	0.0181	1.0000e-003	0.0191		93.8743	93.8743	3.7700e-003		93.9686

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3.2 Site Preparation - 2020**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					14.0917	0.0000	14.0917	7.7459	0.0000	7.7459			0.0000			0.0000
Off-Road	3.6764	38.2265	15.4493	0.0338		1.8473	1.8473		1.6995	1.6995	0.0000	3,274.919 3	3,274.919 3	1.0592		3,301.398 7
Total	3.6764	38.2265	15.4493	0.0338	14.0917	1.8473	15.9389	7.7459	1.6995	9.4454	0.0000	3,274.919 3	3,274.919 3	1.0592		3,301.398 7

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	3.8600e-003	0.1131	0.0298	2.9000e-004	0.0126	5.7000e-004	0.0131	3.3900e-003	5.4000e-004	3.9400e-003		30.8303	30.8303	1.8000e-003		30.8754
Worker	0.0232	0.0172	0.2304	6.3000e-004	0.1126	4.9000e-004	0.1131	0.0288	4.6000e-004	0.0293		63.0440	63.0440	1.9700e-003		63.0932
Total	0.0271	0.1303	0.2602	9.2000e-004	0.1251	1.0600e-003	0.1262	0.0322	1.0000e-003	0.0332		93.8743	93.8743	3.7700e-003		93.9686

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 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	3.5372	36.5066	15.0546	0.0338		1.7503	1.7503		1.6102	1.6102		3,274.964 4	3,274.964 4	1.0592		3,301.444 2
Total	3.5372	36.5066	15.0546	0.0338	18.0663	1.7503	19.8165	9.9307	1.6102	11.5409		3,274.964 4	3,274.964 4	1.0592		3,301.444 2

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	3.2900e-003	0.1027	0.0271	2.9000e-004	7.3300e-003	2.2000e-004	7.5500e-003	2.1100e-003	2.1000e-004	2.3200e-003		30.5924	30.5924	1.7300e-003		30.6357
Worker	0.0217	0.0155	0.2120	6.1000e-004	0.0602	4.8000e-004	0.0607	0.0160	4.4000e-004	0.0164		61.0419	61.0419	1.7800e-003		61.0865
Total	0.0250	0.1183	0.2392	9.0000e-004	0.0675	7.0000e-004	0.0682	0.0181	6.5000e-004	0.0187		91.6344	91.6344	3.5100e-003		91.7222

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3.2 Site Preparation - 2021**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					14.0917	0.0000	14.0917	7.7459	0.0000	7.7459			0.0000			0.0000
Off-Road	3.5372	36.5066	15.0546	0.0338		1.7503	1.7503		1.6102	1.6102	0.0000	3,274.964 4	3,274.964 4	1.0592		3,301.444 2
Total	3.5372	36.5066	15.0546	0.0338	14.0917	1.7503	15.8419	7.7459	1.6102	9.3562	0.0000	3,274.964 4	3,274.964 4	1.0592		3,301.444 2

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	3.2900e-003	0.1027	0.0271	2.9000e-004	0.0126	2.2000e-004	0.0128	3.3900e-003	2.1000e-004	3.6100e-003		30.5924	30.5924	1.7300e-003		30.6357
Worker	0.0217	0.0155	0.2120	6.1000e-004	0.1126	4.8000e-004	0.1130	0.0288	4.4000e-004	0.0293		61.0419	61.0419	1.7800e-003		61.0865
Total	0.0250	0.1183	0.2392	9.0000e-004	0.1251	7.0000e-004	0.1258	0.0322	6.5000e-004	0.0329		91.6344	91.6344	3.5100e-003		91.7222

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	2.8592	29.2357	13.5527	0.0338		1.3705	1.3705		1.2609	1.2609		3,274.4157	3,274.4157	1.0590		3,300.8910
Total	2.8592	29.2357	13.5527	0.0338	18.0663	1.3705	19.4368	9.9307	1.2609	11.1915		3,274.4157	3,274.4157	1.0590		3,300.8910

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	3.0900e-003	0.0975	0.0257	2.8000e-004	7.3300e-003	2.0000e-004	7.5200e-003	2.1100e-003	1.9000e-004	2.3000e-003		30.3249	30.3249	1.6700e-003		30.3668
Worker	0.0203	0.0140	0.1957	5.9000e-004	0.0602	4.6000e-004	0.0607	0.0160	4.3000e-004	0.0164		58.8941	58.8941	1.6100e-003		58.9344
Total	0.0234	0.1115	0.2214	8.7000e-004	0.0675	6.6000e-004	0.0682	0.0181	6.2000e-004	0.0187		89.2191	89.2191	3.2800e-003		89.3011

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2022**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					14.0917	0.0000	14.0917	7.7459	0.0000	7.7459			0.0000			0.0000
Off-Road	2.8592	29.2357	13.5527	0.0338		1.3705	1.3705		1.2609	1.2609	0.0000	3,274.4157	3,274.4157	1.0590		3,300.8910
Total	2.8592	29.2357	13.5527	0.0338	14.0917	1.3705	15.4622	7.7459	1.2609	9.0068	0.0000	3,274.4157	3,274.4157	1.0590		3,300.8910

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	3.0900e-003	0.0975	0.0257	2.8000e-004	0.0126	2.0000e-004	0.0128	3.3900e-003	1.9000e-004	3.5800e-003		30.3249	30.3249	1.6700e-003		30.3668
Worker	0.0203	0.0140	0.1957	5.9000e-004	0.1126	4.6000e-004	0.1130	0.0288	4.3000e-004	0.0292		58.8941	58.8941	1.6100e-003		58.9344
Total	0.0234	0.1115	0.2214	8.7000e-004	0.1251	6.6000e-004	0.1258	0.0322	6.2000e-004	0.0328		89.2191	89.2191	3.2800e-003		89.3011

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 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					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	2.3829	23.9422	12.0872	0.0338		1.0655	1.0655		0.9803	0.9803		3,274.9343	3,274.9343	1.0592		3,301.4138
Total	2.3829	23.9422	12.0872	0.0338	18.0663	1.0655	19.1318	9.9307	0.9803	10.9109		3,274.9343	3,274.9343	1.0592		3,301.4138

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	2.2800e-003	0.0731	0.0232	2.7000e-004	7.3300e-003	9.0000e-005	7.4200e-003	2.1100e-003	9.0000e-005	2.2000e-003		29.3825	29.3825	1.4900e-003		29.4198
Worker	0.0191	0.0127	0.1803	5.7000e-004	0.0602	4.5000e-004	0.0607	0.0160	4.1000e-004	0.0164		56.7371	56.7371	1.4500e-003		56.7734
Total	0.0214	0.0858	0.2035	8.4000e-004	0.0675	5.4000e-004	0.0681	0.0181	5.0000e-004	0.0186		86.1196	86.1196	2.9400e-003		86.1932

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2023**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					14.0917	0.0000	14.0917	7.7459	0.0000	7.7459			0.0000			0.0000
Off-Road	2.3829	23.9422	12.0872	0.0338		1.0655	1.0655		0.9803	0.9803	0.0000	3,274.9343	3,274.9343	1.0592		3,301.4138
Total	2.3829	23.9422	12.0872	0.0338	14.0917	1.0655	15.1572	7.7459	0.9803	8.7262	0.0000	3,274.9343	3,274.9343	1.0592		3,301.4138

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	2.2800e-003	0.0731	0.0232	2.7000e-004	0.0126	9.0000e-005	0.0126	3.3900e-003	9.0000e-005	3.4800e-003		29.3825	29.3825	1.4900e-003		29.4198
Worker	0.0191	0.0127	0.1803	5.7000e-004	0.1126	4.5000e-004	0.1130	0.0288	4.1000e-004	0.0292		56.7371	56.7371	1.4500e-003		56.7734
Total	0.0214	0.0858	0.2035	8.4000e-004	0.1251	5.4000e-004	0.1257	0.0322	5.0000e-004	0.0327		86.1196	86.1196	2.9400e-003		86.1932

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 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					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	2.4069	23.7794	12.1443	0.0338		1.0569	1.0569		0.9724	0.9724		3,275.2025	3,275.2025	1.0593		3,301.6841
Total	2.4069	23.7794	12.1443	0.0338	18.0663	1.0569	19.1232	9.9307	0.9724	10.9031		3,275.2025	3,275.2025	1.0593		3,301.6841

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	2.2300e-003	0.0728	0.0226	2.7000e-004	7.3300e-003	9.0000e-005	7.4200e-003	2.1100e-003	9.0000e-005	2.2000e-003		29.2683	29.2683	1.4700e-003		29.3052
Worker	0.0181	0.0116	0.1682	5.5000e-004	0.0602	4.4000e-004	0.0607	0.0160	4.1000e-004	0.0164		54.9796	54.9796	1.3300e-003		55.0129
Total	0.0203	0.0844	0.1907	8.2000e-004	0.0675	5.3000e-004	0.0681	0.0181	5.0000e-004	0.0186		84.2480	84.2480	2.8000e-003		84.3181

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2024**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					14.0917	0.0000	14.0917	7.7459	0.0000	7.7459			0.0000			0.0000
Off-Road	2.4069	23.7794	12.1443	0.0338		1.0569	1.0569		0.9724	0.9724	0.0000	3,275.2025	3,275.2025	1.0593		3,301.6841
Total	2.4069	23.7794	12.1443	0.0338	14.0917	1.0569	15.1486	7.7459	0.9724	8.7183	0.0000	3,275.2025	3,275.2025	1.0593		3,301.6841

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	2.2300e-003	0.0728	0.0226	2.7000e-004	0.0126	9.0000e-005	0.0126	3.3900e-003	9.0000e-005	3.4800e-003		29.2683	29.2683	1.4700e-003		29.3052
Worker	0.0181	0.0116	0.1682	5.5000e-004	0.1126	4.4000e-004	0.1130	0.0288	4.1000e-004	0.0292		54.9796	54.9796	1.3300e-003		55.0129
Total	0.0203	0.0844	0.1907	8.2000e-004	0.1251	5.3000e-004	0.1257	0.0322	5.0000e-004	0.0327		84.2480	84.2480	2.8000e-003		84.3181

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2025**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	2.2503	22.0013	11.7087	0.0338		0.9489	0.9489		0.8730	0.8730		3,274.945 2	3,274.945 2	1.0592		3,301.424 7
Total	2.2503	22.0013	11.7087	0.0338	18.0663	0.9489	19.0152	9.9307	0.8730	10.8037		3,274.945 2	3,274.945 2	1.0592		3,301.424 7

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	2.1800e-003	0.0721	0.0220	2.7000e-004	7.3300e-003	9.0000e-005	7.4200e-003	2.1100e-003	8.0000e-005	2.1900e-003		29.1112	29.1112	1.4500e-003		29.1476
Worker	0.0172	0.0106	0.1562	5.3000e-004	0.0602	4.3000e-004	0.0606	0.0160	4.0000e-004	0.0164		52.8489	52.8489	1.2200e-003		52.8793
Total	0.0194	0.0827	0.1782	8.0000e-004	0.0675	5.2000e-004	0.0681	0.0181	4.8000e-004	0.0186		81.9601	81.9601	2.6700e-003		82.0269

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2025**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					14.0917	0.0000	14.0917	7.7459	0.0000	7.7459			0.0000			0.0000
Off-Road	2.2503	22.0013	11.7087	0.0338		0.9489	0.9489		0.8730	0.8730	0.0000	3,274.945 2	3,274.945 2	1.0592		3,301.424 7
Total	2.2503	22.0013	11.7087	0.0338	14.0917	0.9489	15.0406	7.7459	0.8730	8.6189	0.0000	3,274.945 2	3,274.945 2	1.0592		3,301.424 7

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	2.1800e-003	0.0721	0.0220	2.7000e-004	0.0126	9.0000e-005	0.0126	3.3900e-003	8.0000e-005	3.4800e-003		29.1112	29.1112	1.4500e-003		29.1476
Worker	0.0172	0.0106	0.1562	5.3000e-004	0.1126	4.3000e-004	0.1130	0.0288	4.0000e-004	0.0292		52.8489	52.8489	1.2200e-003		52.8793
Total	0.0194	0.0827	0.1782	8.0000e-004	0.1251	5.2000e-004	0.1256	0.0322	4.8000e-004	0.0327		81.9601	81.9601	2.6700e-003		82.0269

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2026**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	2.2503	22.0013	11.7087	0.0338		0.9489	0.9489		0.8730	0.8730		3,274.945 2	3,274.945 2	1.0592		3,301.424 7
Total	2.2503	22.0013	11.7087	0.0338	18.0663	0.9489	19.0152	9.9307	0.8730	10.8037		3,274.945 2	3,274.945 2	1.0592		3,301.424 7

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	2.1300e-003	0.0714	0.0216	2.7000e-004	7.3300e-003	9.0000e-005	7.4100e-003	2.1100e-003	8.0000e-005	2.1900e-003		28.9605	28.9605	1.4400e-003		28.9964
Worker	0.0164	9.7700e-003	0.1461	5.1000e-004	0.0602	4.2000e-004	0.0606	0.0160	3.9000e-004	0.0164		51.0127	51.0127	1.1200e-003		51.0405
Total	0.0186	0.0812	0.1677	7.8000e-004	0.0675	5.1000e-004	0.0680	0.0181	4.7000e-004	0.0185		79.9731	79.9731	2.5600e-003		80.0369

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2026**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					14.0917	0.0000	14.0917	7.7459	0.0000	7.7459			0.0000			0.0000
Off-Road	2.2503	22.0013	11.7087	0.0338		0.9489	0.9489		0.8730	0.8730	0.0000	3,274.945 2	3,274.945 2	1.0592		3,301.424 7
Total	2.2503	22.0013	11.7087	0.0338	14.0917	0.9489	15.0406	7.7459	0.8730	8.6189	0.0000	3,274.945 2	3,274.945 2	1.0592		3,301.424 7

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	2.1300e-003	0.0714	0.0216	2.7000e-004	0.0126	9.0000e-005	0.0126	3.3900e-003	8.0000e-005	3.4700e-003		28.9605	28.9605	1.4400e-003		28.9964
Worker	0.0164	9.7700e-003	0.1461	5.1000e-004	0.1126	4.2000e-004	0.1130	0.0288	3.9000e-004	0.0292		51.0127	51.0127	1.1200e-003		51.0405
Total	0.0186	0.0812	0.1677	7.8000e-004	0.1251	5.1000e-004	0.1256	0.0322	4.7000e-004	0.0327		79.9731	79.9731	2.5600e-003		80.0369

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2027**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	2.2503	22.0013	11.7087	0.0338		0.9489	0.9489		0.8730	0.8730		3,274.945 2	3,274.945 2	1.0592		3,301.424 7
Total	2.2503	22.0013	11.7087	0.0338	18.0663	0.9489	19.0152	9.9307	0.8730	10.8037		3,274.945 2	3,274.945 2	1.0592		3,301.424 7

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	2.0900e-003	0.0708	0.0212	2.7000e-004	7.3300e-003	9.0000e-005	7.4100e-003	2.1100e-003	8.0000e-005	2.1900e-003		28.8249	28.8249	1.4200e-003		28.8603
Worker	0.0157	9.0200e-003	0.1371	5.0000e-004	0.0602	4.0000e-004	0.0606	0.0160	3.6000e-004	0.0163		49.3873	49.3873	1.0200e-003		49.4130
Total	0.0178	0.0798	0.1583	7.7000e-004	0.0675	4.9000e-004	0.0680	0.0181	4.4000e-004	0.0185		78.2123	78.2123	2.4400e-003		78.2733

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2027**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					14.0917	0.0000	14.0917	7.7459	0.0000	7.7459			0.0000			0.0000
Off-Road	2.2503	22.0013	11.7087	0.0338		0.9489	0.9489		0.8730	0.8730	0.0000	3,274.945 2	3,274.945 2	1.0592		3,301.424 7
Total	2.2503	22.0013	11.7087	0.0338	14.0917	0.9489	15.0406	7.7459	0.8730	8.6189	0.0000	3,274.945 2	3,274.945 2	1.0592		3,301.424 7

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	2.0900e-003	0.0708	0.0212	2.7000e-004	0.0126	9.0000e-005	0.0126	3.3900e-003	8.0000e-005	3.4700e-003		28.8249	28.8249	1.4200e-003		28.8603
Worker	0.0157	9.0200e-003	0.1371	5.0000e-004	0.1126	4.0000e-004	0.1130	0.0288	3.6000e-004	0.0292		49.3873	49.3873	1.0200e-003		49.4130
Total	0.0178	0.0798	0.1583	7.7000e-004	0.1251	4.9000e-004	0.1256	0.0322	4.4000e-004	0.0327		78.2123	78.2123	2.4400e-003		78.2733

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2028**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	2.2503	22.0013	11.7087	0.0338		0.9489	0.9489		0.8730	0.8730		3,274.945 2	3,274.945 2	1.0592		3,301.424 7
Total	2.2503	22.0013	11.7087	0.0338	18.0663	0.9489	19.0152	9.9307	0.8730	10.8037		3,274.945 2	3,274.945 2	1.0592		3,301.424 7

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	2.0500e-003	0.0702	0.0210	2.7000e-004	7.3300e-003	8.0000e-005	7.4100e-003	2.1100e-003	8.0000e-005	2.1900e-003		28.7092	28.7092	1.4000e-003		28.7442
Worker	0.0149	8.3400e-003	0.1292	4.8000e-004	0.0602	3.7000e-004	0.0606	0.0160	3.4000e-004	0.0163		47.9484	47.9484	9.5000e-004		47.9720
Total	0.0170	0.0785	0.1501	7.5000e-004	0.0675	4.5000e-004	0.0680	0.0181	4.2000e-004	0.0185		76.6576	76.6576	2.3500e-003		76.7162

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3.2 Site Preparation - 2028**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					14.0917	0.0000	14.0917	7.7459	0.0000	7.7459			0.0000			0.0000
Off-Road	2.2503	22.0013	11.7087	0.0338		0.9489	0.9489		0.8730	0.8730	0.0000	3,274.945 2	3,274.945 2	1.0592		3,301.424 7
Total	2.2503	22.0013	11.7087	0.0338	14.0917	0.9489	15.0406	7.7459	0.8730	8.6189	0.0000	3,274.945 2	3,274.945 2	1.0592		3,301.424 7

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	2.0500e-003	0.0702	0.0210	2.7000e-004	0.0126	8.0000e-005	0.0126	3.3900e-003	8.0000e-005	3.4700e-003		28.7092	28.7092	1.4000e-003		28.7442
Worker	0.0149	8.3400e-003	0.1292	4.8000e-004	0.1126	3.7000e-004	0.1129	0.0288	3.4000e-004	0.0292		47.9484	47.9484	9.5000e-004		47.9720
Total	0.0170	0.0785	0.1501	7.5000e-004	0.1251	4.5000e-004	0.1256	0.0322	4.2000e-004	0.0326		76.6576	76.6576	2.3500e-003		76.7162

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2029**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	2.2503	22.0013	11.7087	0.0338		0.9489	0.9489		0.8730	0.8730		3,274.945 2	3,274.945 2	1.0592		3,301.424 7
Total	2.2503	22.0013	11.7087	0.0338	18.0663	0.9489	19.0152	9.9307	0.8730	10.8037		3,274.945 2	3,274.945 2	1.0592		3,301.424 7

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	2.0200e-003	0.0696	0.0207	2.7000e-004	7.3300e-003	8.0000e-005	7.4100e-003	2.1100e-003	8.0000e-005	2.1900e-003		28.6059	28.6059	1.3800e-003		28.6405
Worker	0.0140	7.6700e-003	0.1212	4.7000e-004	0.0602	3.4000e-004	0.0606	0.0160	3.1000e-004	0.0163		46.6637	46.6637	8.7000e-004		46.6854
Total	0.0160	0.0773	0.1419	7.4000e-004	0.0675	4.2000e-004	0.0680	0.0181	3.9000e-004	0.0185		75.2696	75.2696	2.2500e-003		75.3258

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2029**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					14.0917	0.0000	14.0917	7.7459	0.0000	7.7459			0.0000			0.0000
Off-Road	2.2503	22.0013	11.7087	0.0338		0.9489	0.9489		0.8730	0.8730	0.0000	3,274.945 2	3,274.945 2	1.0592		3,301.424 7
Total	2.2503	22.0013	11.7087	0.0338	14.0917	0.9489	15.0406	7.7459	0.8730	8.6189	0.0000	3,274.945 2	3,274.945 2	1.0592		3,301.424 7

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	2.0200e-003	0.0696	0.0207	2.7000e-004	0.0126	8.0000e-005	0.0126	3.3900e-003	8.0000e-005	3.4700e-003		28.6059	28.6059	1.3800e-003		28.6405
Worker	0.0140	7.6700e-003	0.1212	4.7000e-004	0.1126	3.4000e-004	0.1129	0.0288	3.1000e-004	0.0291		46.6637	46.6637	8.7000e-004		46.6854
Total	0.0160	0.0773	0.1419	7.4000e-004	0.1251	4.2000e-004	0.1255	0.0322	3.9000e-004	0.0326		75.2696	75.2696	2.2500e-003		75.3258

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2030**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	2.1298	10.6901	9.5782	0.0400		0.3932	0.3932		0.3932	0.3932		3,920.095 2	3,920.095 2	0.1902		3,924.848 9
Total	2.1298	10.6901	9.5782	0.0400	18.0663	0.3932	18.4595	9.9307	0.3932	10.3239		3,920.095 2	3,920.095 2	0.1902		3,924.848 9

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	1.9900e-003	0.0691	0.0205	2.7000e-004	7.3300e-003	8.0000e-005	7.4100e-003	2.1100e-003	8.0000e-005	2.1900e-003		28.5123	28.5123	1.3700e-003		28.5465
Worker	0.0131	7.0300e-003	0.1138	4.6000e-004	0.0602	3.2000e-004	0.0605	0.0160	2.9000e-004	0.0163		45.5167	45.5167	8.0000e-004		45.5366
Total	0.0151	0.0761	0.1343	7.3000e-004	0.0675	4.0000e-004	0.0679	0.0181	3.7000e-004	0.0185		74.0290	74.0290	2.1700e-003		74.0831

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2030**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					14.0917	0.0000	14.0917	7.7459	0.0000	7.7459			0.0000			0.0000
Off-Road	2.1298	10.6901	9.5782	0.0400		0.3932	0.3932		0.3932	0.3932	0.0000	3,920.095 2	3,920.095 2	0.1902		3,924.848 9
Total	2.1298	10.6901	9.5782	0.0400	14.0917	0.3932	14.4849	7.7459	0.3932	8.1391	0.0000	3,920.095 2	3,920.095 2	0.1902		3,924.848 9

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	1.9900e-003	0.0691	0.0205	2.7000e-004	0.0126	8.0000e-005	0.0126	3.3900e-003	8.0000e-005	3.4700e-003		28.5123	28.5123	1.3700e-003		28.5465
Worker	0.0131	7.0300e-003	0.1138	4.6000e-004	0.1126	3.2000e-004	0.1129	0.0288	2.9000e-004	0.0291		45.5167	45.5167	8.0000e-004		45.5366
Total	0.0151	0.0761	0.1343	7.3000e-004	0.1251	4.0000e-004	0.1255	0.0322	3.7000e-004	0.0326		74.0290	74.0290	2.1700e-003		74.0831

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.3 Grading - 2030**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					6.1643	0.0000	6.1643	3.3256	0.0000	3.3256			0.0000			0.0000
Off-Road	3.4271	14.0038	23.7423	0.0727		0.4947	0.4947		0.4947	0.4947		7,598.264 4	7,598.264 4	0.3044		7,605.874 1
Total	3.4271	14.0038	23.7423	0.0727	6.1643	0.4947	6.6590	3.3256	0.4947	3.8203		7,598.264 4	7,598.264 4	0.3044		7,605.874 1

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	1.9900e-003	0.0691	0.0205	2.7000e-004	7.3300e-003	8.0000e-005	7.4100e-003	2.1100e-003	8.0000e-005	2.1900e-003		28.5123	28.5123	1.3700e-003		28.5465
Worker	0.0295	0.0158	0.2561	1.0300e-003	0.1355	7.2000e-004	0.1362	0.0359	6.6000e-004	0.0366		102.4125	102.4125	1.7900e-003		102.4573
Total	0.0314	0.0849	0.2766	1.3000e-003	0.1428	8.0000e-004	0.1436	0.0380	7.4000e-004	0.0388		130.9248	130.9248	3.1600e-003		131.0038

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.3 Grading - 2030**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					4.8082	0.0000	4.8082	2.5940	0.0000	2.5940			0.0000			0.0000
Off-Road	3.4271	14.0038	23.7423	0.0727		0.4947	0.4947		0.4947	0.4947	0.0000	7,598.264 4	7,598.264 4	0.3044		7,605.874 1
Total	3.4271	14.0038	23.7423	0.0727	4.8082	0.4947	5.3029	2.5940	0.4947	3.0887	0.0000	7,598.264 4	7,598.264 4	0.3044		7,605.874 1

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	1.9900e-003	0.0691	0.0205	2.7000e-004	0.0126	8.0000e-005	0.0126	3.3900e-003	8.0000e-005	3.4700e-003		28.5123	28.5123	1.3700e-003		28.5465
Worker	0.0295	0.0158	0.2561	1.0300e-003	0.2533	7.2000e-004	0.2540	0.0648	6.6000e-004	0.0655		102.4125	102.4125	1.7900e-003		102.4573
Total	0.0314	0.0849	0.2766	1.3000e-003	0.2658	8.0000e-004	0.2666	0.0682	7.4000e-004	0.0690		130.9248	130.9248	3.1600e-003		131.0038

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.3 Grading - 2031**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					6.1643	0.0000	6.1643	3.3256	0.0000	3.3256			0.0000			0.0000
Off-Road	3.4271	14.0038	23.7423	0.0727		0.4947	0.4947		0.4947	0.4947		7,598.264 4	7,598.264 4	0.3044		7,605.874 1
Total	3.4271	14.0038	23.7423	0.0727	6.1643	0.4947	6.6590	3.3256	0.4947	3.8203		7,598.264 4	7,598.264 4	0.3044		7,605.874 1

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	1.9800e-003	0.0687	0.0204	2.6000e-004	7.3300e-003	8.0000e-005	7.4100e-003	2.1100e-003	8.0000e-005	2.1900e-003		28.4598	28.4598	1.3600e-003		28.4937
Worker	0.0272	0.0144	0.2400	1.0100e-003	0.1355	6.7000e-004	0.1361	0.0359	6.2000e-004	0.0365		100.3362	100.3362	1.6400e-003		100.3771
Total	0.0292	0.0831	0.2604	1.2700e-003	0.1428	7.5000e-004	0.1436	0.0380	7.0000e-004	0.0387		128.7959	128.7959	3.0000e-003		128.8708

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3.3 Grading - 2031**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					4.8082	0.0000	4.8082	2.5940	0.0000	2.5940			0.0000			0.0000
Off-Road	3.4271	14.0038	23.7423	0.0727		0.4947	0.4947		0.4947	0.4947	0.0000	7,598.264 4	7,598.264 4	0.3044		7,605.874 1
Total	3.4271	14.0038	23.7423	0.0727	4.8082	0.4947	5.3029	2.5940	0.4947	3.0887	0.0000	7,598.264 4	7,598.264 4	0.3044		7,605.874 1

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	1.9800e-003	0.0687	0.0204	2.6000e-004	0.0126	8.0000e-005	0.0126	3.3900e-003	8.0000e-005	3.4700e-003		28.4598	28.4598	1.3600e-003		28.4937
Worker	0.0272	0.0144	0.2400	1.0100e-003	0.2533	6.7000e-004	0.2539	0.0648	6.2000e-004	0.0655		100.3362	100.3362	1.6400e-003		100.3771
Total	0.0292	0.0831	0.2604	1.2700e-003	0.2658	7.5000e-004	0.2666	0.0682	7.0000e-004	0.0689		128.7959	128.7959	3.0000e-003		128.8708

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3.3 Grading - 2032**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					6.1643	0.0000	6.1643	3.3256	0.0000	3.3256			0.0000			0.0000
Off-Road	3.4271	14.0038	23.7423	0.0727		0.4947	0.4947		0.4947	0.4947		7,598.264 4	7,598.264 4	0.3044		7,605.874 1
Total	3.4271	14.0038	23.7423	0.0727	6.1643	0.4947	6.6590	3.3256	0.4947	3.8203		7,598.264 4	7,598.264 4	0.3044		7,605.874 1

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	1.9600e-003	0.0682	0.0203	2.6000e-004	7.3300e-003	8.0000e-005	7.4100e-003	2.1100e-003	8.0000e-005	2.1900e-003		28.4023	28.4023	1.3500e-003		28.4361
Worker	0.0252	0.0131	0.2254	9.8000e-004	0.1355	6.3000e-004	0.1361	0.0359	5.8000e-004	0.0365		98.2950	98.2950	1.5000e-003		98.3324
Total	0.0272	0.0813	0.2457	1.2400e-003	0.1428	7.1000e-004	0.1435	0.0380	6.6000e-004	0.0387		126.6974	126.6974	2.8500e-003		126.7685

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3.3 Grading - 2032**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					4.8082	0.0000	4.8082	2.5940	0.0000	2.5940			0.0000			0.0000
Off-Road	3.4271	14.0038	23.7423	0.0727		0.4947	0.4947		0.4947	0.4947	0.0000	7,598.264 4	7,598.264 4	0.3044		7,605.874 1
Total	3.4271	14.0038	23.7423	0.0727	4.8082	0.4947	5.3029	2.5940	0.4947	3.0887	0.0000	7,598.264 4	7,598.264 4	0.3044		7,605.874 1

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	1.9600e-003	0.0682	0.0203	2.6000e-004	0.0126	8.0000e-005	0.0126	3.3900e-003	8.0000e-005	3.4700e-003		28.4023	28.4023	1.3500e-003		28.4361
Worker	0.0252	0.0131	0.2254	9.8000e-004	0.2533	6.3000e-004	0.2539	0.0648	5.8000e-004	0.0654		98.2950	98.2950	1.5000e-003		98.3324
Total	0.0272	0.0813	0.2457	1.2400e-003	0.2658	7.1000e-004	0.2665	0.0682	6.6000e-004	0.0689		126.6974	126.6974	2.8500e-003		126.7685

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.3 Grading - 2033**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					6.1643	0.0000	6.1643	3.3256	0.0000	3.3256			0.0000			0.0000
Off-Road	3.4271	14.0038	23.7423	0.0727		0.4947	0.4947		0.4947	0.4947		7,598.264 4	7,598.264 4	0.3044		7,605.874 1
Total	3.4271	14.0038	23.7423	0.0727	6.1643	0.4947	6.6590	3.3256	0.4947	3.8203		7,598.264 4	7,598.264 4	0.3044		7,605.874 1

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	1.9500e-003	0.0678	0.0202	2.6000e-004	7.3300e-003	8.0000e-005	7.4100e-003	2.1100e-003	7.0000e-005	2.1800e-003		28.3562	28.3562	1.3400e-003		28.3897
Worker	0.0235	0.0121	0.2129	9.7000e-004	0.1355	5.8000e-004	0.1361	0.0359	5.4000e-004	0.0365		96.5037	96.5037	1.3800e-003		96.5381
Total	0.0254	0.0799	0.2332	1.2300e-003	0.1428	6.6000e-004	0.1435	0.0380	6.1000e-004	0.0386		124.8599	124.8599	2.7200e-003		124.9278

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.3 Grading - 2033**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					4.8082	0.0000	4.8082	2.5940	0.0000	2.5940			0.0000			0.0000
Off-Road	3.4271	14.0038	23.7423	0.0727		0.4947	0.4947		0.4947	0.4947	0.0000	7,598.264 4	7,598.264 4	0.3044		7,605.874 1
Total	3.4271	14.0038	23.7423	0.0727	4.8082	0.4947	5.3029	2.5940	0.4947	3.0887	0.0000	7,598.264 4	7,598.264 4	0.3044		7,605.874 1

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	1.9500e-003	0.0678	0.0202	2.6000e-004	0.0126	8.0000e-005	0.0126	3.3900e-003	7.0000e-005	3.4700e-003		28.3562	28.3562	1.3400e-003		28.3897
Worker	0.0235	0.0121	0.2129	9.7000e-004	0.2533	5.8000e-004	0.2539	0.0648	5.4000e-004	0.0654		96.5037	96.5037	1.3800e-003		96.5381
Total	0.0254	0.0799	0.2332	1.2300e-003	0.2658	6.6000e-004	0.2665	0.0682	6.1000e-004	0.0689		124.8599	124.8599	2.7200e-003		124.9278

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.3 Grading - 2034**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					6.1643	0.0000	6.1643	3.3256	0.0000	3.3256			0.0000			0.0000
Off-Road	3.4271	14.0038	23.7423	0.0727		0.4947	0.4947		0.4947	0.4947		7,598.264 4	7,598.264 4	0.3044		7,605.874 1
Total	3.4271	14.0038	23.7423	0.0727	6.1643	0.4947	6.6590	3.3256	0.4947	3.8203		7,598.264 4	7,598.264 4	0.3044		7,605.874 1

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	1.9400e-003	0.0674	0.0202	2.6000e-004	7.3300e-003	8.0000e-005	7.4100e-003	2.1100e-003	7.0000e-005	2.1800e-003		28.3211	28.3211	1.3300e-003		28.3544
Worker	0.0221	0.0112	0.2007	9.5000e-004	0.1355	5.5000e-004	0.1360	0.0359	5.0000e-004	0.0364		94.9252	94.9252	1.2600e-003		94.9567
Total	0.0240	0.0786	0.2209	1.2100e-003	0.1428	6.3000e-004	0.1434	0.0380	5.7000e-004	0.0386		123.2463	123.2463	2.5900e-003		123.3111

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

3.3 Grading - 2034**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					4.8082	0.0000	4.8082	2.5940	0.0000	2.5940			0.0000			0.0000
Off-Road	3.4271	14.0038	23.7423	0.0727		0.4947	0.4947		0.4947	0.4947	0.0000	7,598.264 4	7,598.264 4	0.3044		7,605.874 1
Total	3.4271	14.0038	23.7423	0.0727	4.8082	0.4947	5.3029	2.5940	0.4947	3.0887	0.0000	7,598.264 4	7,598.264 4	0.3044		7,605.874 1

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	1.9400e-003	0.0674	0.0202	2.6000e-004	0.0126	8.0000e-005	0.0126	3.3900e-003	7.0000e-005	3.4700e-003		28.3211	28.3211	1.3300e-003		28.3544
Worker	0.0221	0.0112	0.2007	9.5000e-004	0.2533	5.5000e-004	0.2538	0.0648	5.0000e-004	0.0653		94.9252	94.9252	1.2600e-003		94.9567
Total	0.0240	0.0786	0.2209	1.2100e-003	0.2658	6.3000e-004	0.2665	0.0682	5.7000e-004	0.0688		123.2463	123.2463	2.5900e-003		123.3111

4.0 Operational Detail - Mobile

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

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	3.4576	19.2026	45.5509	0.2362	45.6914	0.1169	45.8083	11.7587	0.1086	11.8672		24,239.45 65	24,239.45 65	0.9235		24,262.54 33
Unmitigated	3.4576	19.2026	45.5509	0.2362	45.6914	0.1169	45.8083	11.7587	0.1086	11.8672		24,239.45 65	24,239.45 65	0.9235		24,262.54 33

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	2,100.00	3,500.00	3500.00	8,278,652	8,278,652
Parking Lot	0.00	0.00	0.00		
Total	2,100.00	3,500.00	3,500.00	8,278,652	8,278,652

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
City Park	18.50	10.10	7.90	33.00	48.00	19.00	66	28	6
Parking Lot	18.50	10.10	7.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.539854	0.043743	0.210883	0.115969	0.013375	0.006440	0.022010	0.036531	0.002703	0.001629	0.005324	0.000732	0.000807
City Park	0.539854	0.043743	0.210883	0.115969	0.013375	0.006440	0.022010	0.036531	0.002703	0.001629	0.005324	0.000732	0.000807

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	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	0.3554	3.3000e-004	0.0366	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0788	0.0788	2.0000e-004		0.0839
Unmitigated	0.3554	3.3000e-004	0.0366	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0788	0.0788	2.0000e-004		0.0839

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	6.7000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3454					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.3400e-003	3.3000e-004	0.0366	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0788	0.0788	2.0000e-004		0.0839
Total	0.3554	3.3000e-004	0.0366	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0788	0.0788	2.0000e-004		0.0839

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

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	6.7000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3454					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.3400e-003	3.3000e-004	0.0366	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0788	0.0788	2.0000e-004		0.0839
Total	0.3554	3.3000e-004	0.0366	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0788	0.0788	2.0000e-004		0.0839

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
Tractors/Loaders/Backhoes	1	8.00	260	97	0.37	Diesel

Santa Susana Trails Plan - Los Angeles-South Coast County, Summer

UnMitigated/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
Equipment Type	lb/day										lb/day					
Tractors/Loaders/Backhoes	0.1633	0.9628	2.3440	3.8000e-003		0.0127	0.0127		0.0127	0.0127		359.7283	359.7283	0.0146		360.0923
Total	0.1633	0.9628	2.3440	3.8000e-003		0.0127	0.0127		0.0127	0.0127		359.7283	359.7283	0.0146		360.0923

10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Appendix C

Biological Resources Technical Report

SANTA SUSANA MOUNTAINS TRAILS MASTER PLAN – PHASE II

BIOLOGICAL RESOURCES TECHNICAL REPORT

PREPARED FOR:

COUNTY OF LOS ANGELES
DEPARTMENT OF PARKS AND RECREATION
510 S. VERMONT AVE.
LOS ANGELES, CA 90020

PREPARED BY:

SAPPHOS ENVIRONMENTAL, INC.
430 NORTH HALSTEAD STREET
PASADENA, CALIFORNIA 91107

NOVEMBER 2, 2017

SECTION ES

EXECUTIVE SUMMARY

This Biological Resource Technical Report addresses potential impacts to biological resources that could result from proposed work associated with the Santa Susana Mountains Trails Master Plan (Trails Master Plan), including Phase II (SSMTMP-P II), located within unincorporated Los Angeles County, California. This biological resource study is based on desktop analysis conducted for the Trails Master Plan Study Area and a pedestrian survey of the Johnson Motorway Trail Area, which is a component of Phase I of the larger Trails Master Plan Area. Impacts on biological resources were considered in relation to the seven thresholds articulated in Appendix G of the California Environmental Quality Act Guidelines (State CEQA Guidelines) and the County of Los Angeles Department of Parks and Recreation's Environmental Checklist Form.

Listed, Sensitive, and Locally Important Species

Listed, sensitive, and locally important plant and wildlife species have the potential to be present throughout the project area. The construction of trails may result in impacts to these species either directly or through habitat conservation. Implementation of Mitigation Measure BIO-1 would reduce impacts to below the level of significance.

Riparian and State Sensitive Plant Communities

State sensitive and riparian plant communities have the potential to be present throughout the project area. The construction of trails may result in impacts to these plant communities through removal or disturbance. Implementation of Mitigation Measures BIO-1 and BIO-2 would reduce impacts to below the level of significance.

Federally Protected Wetlands and Waterways

Federally and state-protected wetlands and waterways have the potential to be present throughout the project area. The construction of trails may result in impacts to these wetlands and waterways through ground disturbing and fill activities. Implementation of Mitigation Measures BIO-1 and BIO 2 would reduce impacts to below the level of significance.

Migratory Corridors and Nursery Sites

The project area is located within areas of native wildlife movement and native wildlife nursery sites have the potential to be present throughout the area. The construction of trails may result in impacts due to the disruption of wildlife movement and disturbance of nursery sites. Implementation of Mitigation Measures BIO-1, BIO-2, and BIO-3 would reduce impacts to below the level of significance.

Oak and Native Woodlands

Oak and other native woodlands have the potential to be present throughout the project area. The construction of trails and supporting facilities may result in impacts to these woodlands through removal or disturbance. Implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, and BIO-4 would reduce impacts to below the level of significance.

General Plans and Policies

The proposed project would result in no impacts to biological resources related to conflicts with any local policies or ordinances protecting biological resources. Therefore, no mitigation measures would be required.

Habitat Conservation Plans and Natural Community Conservation Plans

There are no Habitat Conservation Plans or Natural Community Conservation Plans with boundaries that intersect the project area. Therefore, the proposed project would result in no impacts related to conflicts with the provision of adopted state, regional, or local habitat conservation plans, and no mitigation measures are required.

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APPENDICES

A Record Search Results

SECTION 1.0 INTRODUCTION

This Biological Resource Technical Report (BRTR) has been prepared to support the County of Los Angeles (County) Department of Parks and Recreation (DPR) in the development of Phase II of the Santa Susana Mountains Trails Master Plan (SSMTMP), located within unincorporated Los Angeles County, California.

1.1 CEQA COMPLIANCE

DPR proposes to complete Phase II of the SSMTMP (SSMTMP-PII), ultimately to amend the Parks and Recreation Element of the Los Angeles County General Plan 2035. The SSMTMP-PII would guide public and private development of trails and thus constitutes a project pursuant to the California Environmental Quality Act (CEQA).

1.2 PURPOSE

This BRTR serves two purposes: (1) to provide information regarding biological resources to inform the planning process; and (2) to provide the substantial evidence required with respect to biological resources for consideration of the potential for environmental effects under CEQA. The BRTR provides information that supports the planning process in two ways: First, it provides information regarding sensitive biological resources that need to be safeguarded from human intrusion, such as occupied habitat for sensitive species. Second, it provides information regarding biological resources that can support the recreation user experience, or provide educational opportunities that can be integrated into the project design. The BRTR provides information in relation to the biological resource areas identified in Appendix G of the State CEQA Guidelines.

1.3 INTENDED AUDIENCE

This BRTR provides information for consideration by DPR and the design team, Alta Planning+Design, engaged in the development of the SSMTMP-PII. The substantial evidence will be available for the responsible and trustee agencies, and the public, including property owners, during circulation of the draft environmental document for public review. Ultimately, the BRTR will be used by the County Board of Supervisors to support their decision-making process related to the SSMTMP-PII. The BRTR will also inform the County and private parties in the ultimate development, operation, and maintenance of trails in the plan area.

1.4 SCOPE

In May 2015, the County adopted the first phase of the Santa Susana Mountains Trails Master Plan (SSMTMP), which involved the extension of the 35.7 miles of existing County-, City-, and Conservancy-managed trails in the Phase I and Phase II study areas by approximately 35.9 miles with 22 proposed trail segments, for a total of approximately 71.5 miles of trails within the SSMTMP Area. In 2017, the County initiated planning efforts for further development of the Phase II study area, which has been expanded to Phase II.a and II.b. This assessment is based on literature and database review to determine rare, threatened species, as well as locally important species that have the potential to be present within or adjacent to the project area, state-designated sensitive habitats, wetlands and other waters of the United States, migratory corridors, resources afforded

additional protection pursuant to the Los Angeles County 2035 General Plan, and Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP) areas.

1.5 SOURCES OF RELEVANT INFORMATION

Information used in the preparation of this BRTR was derived from the California Natural Diversity Database (CNDDB), California Native Plant Society (CNPS), National Wetlands Inventory (NWI) database, California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), Los Angeles County 2035 General Plan, and California Regional Conservation Plans. Sources of relevant information are cited in footnotes and compiled in Section 6, *References*.

1.6 WORKING DEFINITIONS

There are a number of technical terms used in the characterization of baseline conditions and assessment of the potential for the project to affect biological resources.

Federal Wetlands are defined by the U.S. Army Corps of Engineers (USACE) and the U.S. Environmental Protection Agency (EPA) as: “Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”¹

Federally Listed Species are those provided with special legal protection under the federal Endangered Species Act (ESA). A federally listed endangered species is a species that is in danger of extinction throughout all, or a significant portion, of its range. A federally threatened species is one likely to become endangered in the absence of special protection or management efforts provided by the listing. A candidate species is one that is proposed by the federal government for listing as endangered or threatened.

Habitat Conservation Plans are required by the USFWS as part of an application for an incidental “take” permit for species listed pursuant to the federal ESA. HCPs describe the anticipated effects of the proposed taking, how the impacts will be minimized and mitigated, and how the HCP is to be funded.

Natural Community Conservation Plans are defined by CDFW as plans for the conservation of natural communities that identify and provide for the regional or area-wide protection and perpetuation of plants, animals, and their habitats.

Nursery Sites are considered habitat in which native wildlife may establish nests, maternity roosts, dens, or otherwise engage in breeding and/or the rearing of offspring.

Sensitive Plant Communities are native plant communities listed on the CDFW Natural Communities List as being rare within California or threatened by human actions.

Sensitive Species are those not listed by the state government as endangered, threatened, or candidate species but categorized by the state as a species of special concern or fully protected species. A California species of special concern is defined by the CDFW as being a wildlife species

¹ U.S. Army Corps of Engineers. 1987. *Corps of Engineers Wetland Delineation Manual*. Vicksburg, MS.

that has declining population levels, a limited range, and/or continuing threats that have made it vulnerable to extinction. For the purpose of this BRTR, those plant species recognized by the CNPS are considered sensitive species (Rare Plant Rank 1A, 1B, 2A, 2B, 3, or 4) ² This designation also includes those species listed on the California Special Animals list that are not otherwise covered by other regulations.³ It also includes species afforded protection by the County General Plan, such as some native oak trees.

Special Status Species are those afforded special recognition by federal, state, and/or local resource agencies or jurisdictions, or recognized resource conservation organizations. Special status plant and wildlife species include those federally listed or state listed as endangered, threatened, or candidate species pursuant to the federal ESA, the California ESA, or other regulations enforced by a federal or state agency (such as the Bureau of Land Management [BLM] or U.S. Forest Service [USFS]); or those considered by the scientific community to be rare. For this BRTR, special status species include listed, sensitive, and locally important species.

Species of Special Concern are species, subspecies, or distinct population of an animal (bird, mammal, fish, reptile, and amphibian) native to California that currently satisfies one or more of the following criteria: (1) is extirpated from the State or, in the case of birds, in its primary seasonal or breeding role; (2) is listed as federally-, but not State-, threatened or endangered; (3) meets the State definition of threatened or endangered but has not formally been listed; (4) is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status; (5) has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.

State Wetlands/Streams are defined by the California Fish and Game Code. A *stream* is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. *Wetlands* are defined as areas having riparian vegetation, without regard to wetland vegetation, soils, or hydrology.

State-listed Species are those provided with special legal protection under the California ESA. A state-listed endangered species is a species that is in danger of extinction throughout all, or a significant portion, of its range. A state-listed threatened species is one likely to become endangered in the absence of special protection or management efforts provided by the listing. A candidate species is one that is proposed by the federal or state government for listing as endangered or threatened.

Streams as defined by Mulholland Scenic Parkway Specific Plan are defined as: "The streams protected by the Specific Plan are those water courses designated by the USGS and shown on the maps available for viewing at the Department of City Planning's Van Nuys office and the Department's web site. A stream may include a water course having a surface or subsurface flow that supports or has supported riparian vegetation."^{4,5}

² California Native Plant Society (CNPS). 2014. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. Available at: <http://www.rareplants.cnps.org>

³ California Department of Fish and Game, Biogeographic Data Branch. Accessed December 2014. Rarefind 5: A Database Application for the Use of the California Department of Fish and Game Natural Diversity Database. Sacramento, CA.

⁴ City of Los Angeles, City Planning Commission. 22 May 2003. *Mulholland Scenic Parkway Specific Plan: Design and*

Waters of the United States are defined as surface waters such as navigable waters and their tributaries, all interstate waters and their tributaries, natural lakes, all wetlands adjacent to other waters, and all impoundments of these waters. On April 21, 2014, the EPA proposed to refine the definition of waters of the United States to include all tributaries of traditional navigable waters, interstate waters, territorial seas, and impoundments of such tributaries; wetlands adjacent to the foregoing; and waters other than wetlands that are adjacent to other jurisdictional waters.⁶

Wildlife Movement Corridors are characterized as areas of habitat that are used by wildlife for the purpose of moving between locations.

Preservation Guidelines. Los Angeles, CA.

⁵ City of Los Angeles, Planning Department. 13 May 1992. *Mulholland Scenic Parkway Specific Plan*. Los Angeles, CA.

⁶ *Federal Register*. Vol. 79, No. 76, Monday April 21, 2014. Proposed Rules. Available at: <http://www.gpo.gov/fdsys/pkg/FR-2014-04-21/pdf/2014-07142.pdf>

2.1 PROJECT LOCATION

The Trails Master Plan (approximately 49 square miles) is located north and west of the San Fernando Valley in the Santa Susana Mountains, in the western portion of the unincorporated area of the County of Los Angeles (Figure 2.1-1, *Regional Vicinity Map*). The Santa Susana Mountains are centrally located in the Transverse Ranges, a group of east-west trending mountains paralleling the Pacific Ocean between Santa Barbara and San Diego Counties. The proposed designation and improvement of a portion of the Johnson Motorway Trail is an element of the first phase of the Trails Master Plan (SSMFTMP).

2.2 TRAILS MASTER PLAN STUDY AREA

Phase I Area. The northern boundary of the Trails Master Plan – Phase I is defined by the southern limits of the Newhall Ranch Specific Plan Area and the northern limits of the proposed Santa Susana Mountains / Simi Hills Significant Ecological Area (SEA). The southern boundary is defined by the northern limit of the City of Los Angeles. The eastern boundary is defined by U.S. Interstate 5 (I-5). The western boundary is defined by the corporate boundary between Los Angeles and Ventura Counties (Figure 2.2-1, *Trails Master Plan Location*). The SSMFTMP is divided into two subareas or phases (see Figure 2.2-1). Phase I is the Northwest San Fernando Valley Study Area, and Phase II is the Southwest Santa Clarita Valley Study Area. Phase I includes 16,038.1 acres (25.1 square miles); the northern boundary is defined by the northern limits of the Los Angeles County Oat Mountain Planning Area, the southern boundary is defined by the northern limit of the City of Los Angeles, the eastern boundary is defined by the I-5 freeway, and the western boundary is defined by the boundary between Los Angeles and Ventura Counties.

Phase II Area. Phase II includes 8,084.4 acres (12.6 square miles). The northern boundary is defined by the northern limits of the proposed Santa Susana Mountains / Simi Hills SEA. The southern boundary is defined by the southern limits of the proposed Santa Susana Mountains / Simi Hills SEA. The eastern boundary is defined by the I-5 freeway. The western boundary is defined by the southern and eastern boundaries of the Newhall Ranch Specific Plan area.

The Trails Master Plan – Phase II has been expanded beyond the spatial extents of Phase II in the SSMFTMP and also divided into two subareas. The Phase II.a area is an approximately 22-square-mile area located in the north-facing slopes of the Santa Susana Mountains and the Santa Clarita Valley that is bound by Henry Mayo Drive (State Route [SR] 126) to the north, the I-5 freeway to the east, Phase I of the adopted SSMFTMP Area to the south, and the Newhall Ranch Specific Plan Area to the west. The Phase II.b area is an approximately 2-square-mile area located in the foothills of the Santa Monica Mountains, including Bell Canyon, Dayton Canyon, and Woolsey Canyon, west of the San Fernando Valley, that is bound by Ventura County to the north and west and the City of Los Angeles to the east and south.

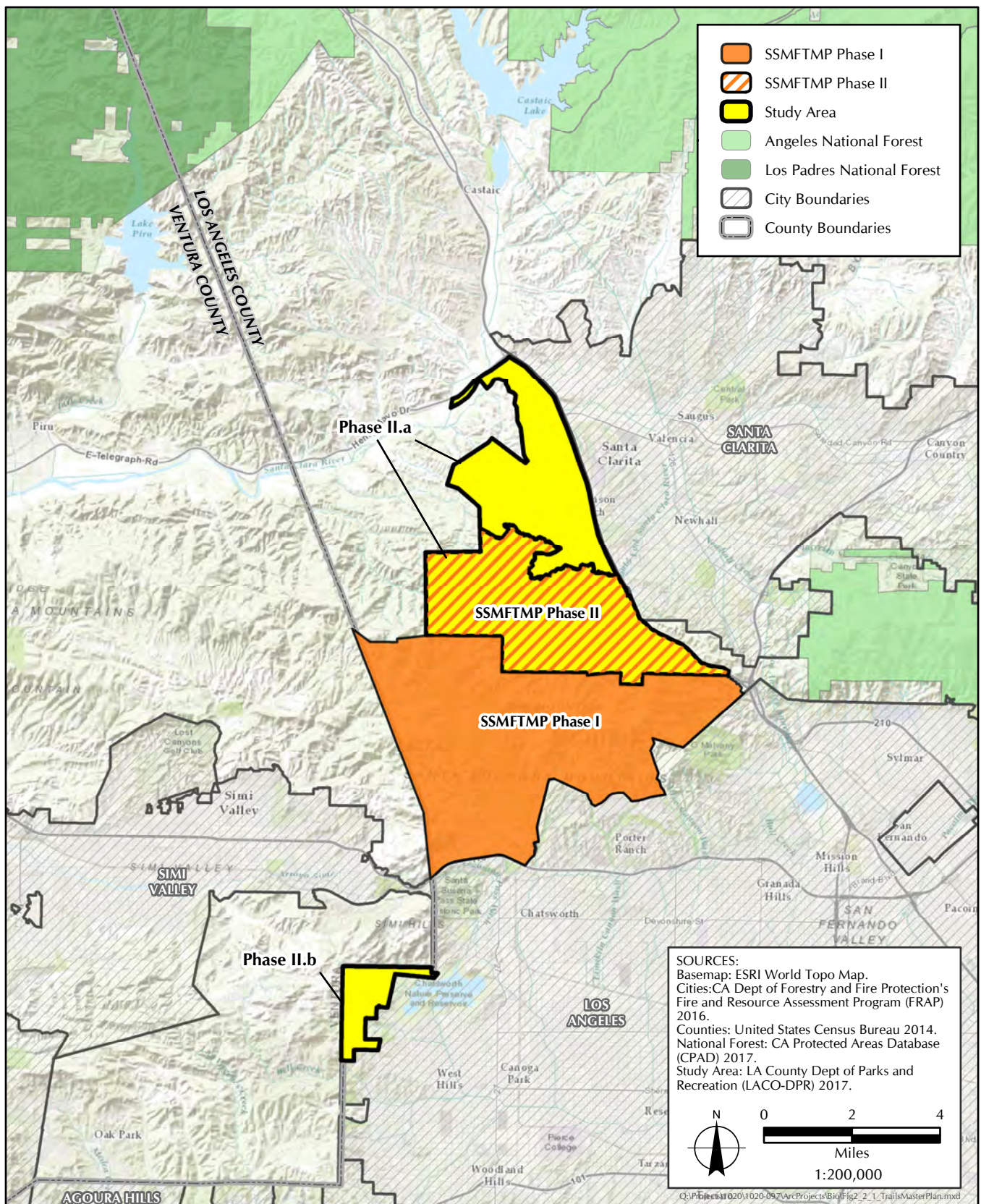


FIGURE 2.2-1
 Trails Master Plan Location

Topography. The Trails Master Plan is located in the U.S. Geological Survey (USGS) 7.5-minute series, Newhall, Oat Mountain, Simi Valley East, and Val Verde, California, topographic quadrangles^{7,8} and includes portions of Township 2 North, Range 16 West (San Bernardino Baseline and Meridian [SBB&M]); Sections 6 and 7, Township 2 North, Range 17 West (SBB&M), Sections 1, 2, 11, and 12; Township 3 North, Range 16 West (SBB&M), Sections 4–10, 13–24, and 26–34; and Township 3 North, Range 17 West (SBB&M), Sections 1, 2, 11–15, 22–27, and 34–36 (Figure 2.2-2, *Topographic Map with USGS 7.5-minute Quadrangle Index*). Phase I of the Trails Master Plan is located on the USGS 7.5-minute series Simi Valley East and Oat Mountain topographic quadrangles. Phase II of the Trails Master Plan is located on the Val Verde, Newhall, Simi Valley East (Santa Susana), Oat Mountain, and Calabasas topographic quadrangles. Situated along the southern flanks of the Santa Susana Mountains, the topography of the Trails Master Plan is characterized by a series of southwest draining canyons that are separated by steep-sloped and narrow ridge tops. The Trails Master Plan has elevations that range from 946 to 3,400 feet above mean sea level (msl). Vegetation in the area is characterized by Sage and Chaparral plant communities with scattered yucca plants. Although small areas of exposed bedrock are seen along the trail corridor, much of the proposed project area is characterized by thick vegetative coverage, which is particularly dense in the canyon bottoms and at lower elevations.

2.3 PROJECT SUMMARY

The SSMTMP-P II will guide future trail development and recommend improvements to existing trails. The Trails Master Plan will provide trail users and local populations with seamless transitions throughout the proposed study area to trails of adjacent jurisdictions and prime destinations within and adjacent to the study area. The goals of the plan are to:

1. Develop a complete multi-use trail system connecting user groups and local populations to desired recreation destinations and experiences, with seamless transitions to the trails of adjacent jurisdictions, compatibility with adjacent land uses and environmental resources, and a safe and sustainable design that is consistent with the County of Los Angeles Trails Manual.
2. Develop a recreational trail system that supports low-intensity use, including mountain biking, equestrian use, and hiking, to accommodate the population increase anticipated in the Santa Clarita Valley Planning Area and San Fernando Valley Planning Area through the 2035 planning horizon consistent with the Parks and Recreation Element of the Los Angeles County General Plan 2035.

The overall work efforts will include a trails master plan and associated CEQA documentation. Individual trail alignments would be developed at a later phase of this project, which is intended to provide a trail planning framework for the study area.

⁷ U.S. Geological Survey. 1969. *7.5-Minute Series, Oat Mountain, California, Topographic Quadrangle*. Scale 1:24,000. Reston, VA.

⁸ U.S. Geological Survey. 1969. *7.5-Minute Series, Willow Springs, California, Topographic Quadrangle*. Reston, VA.

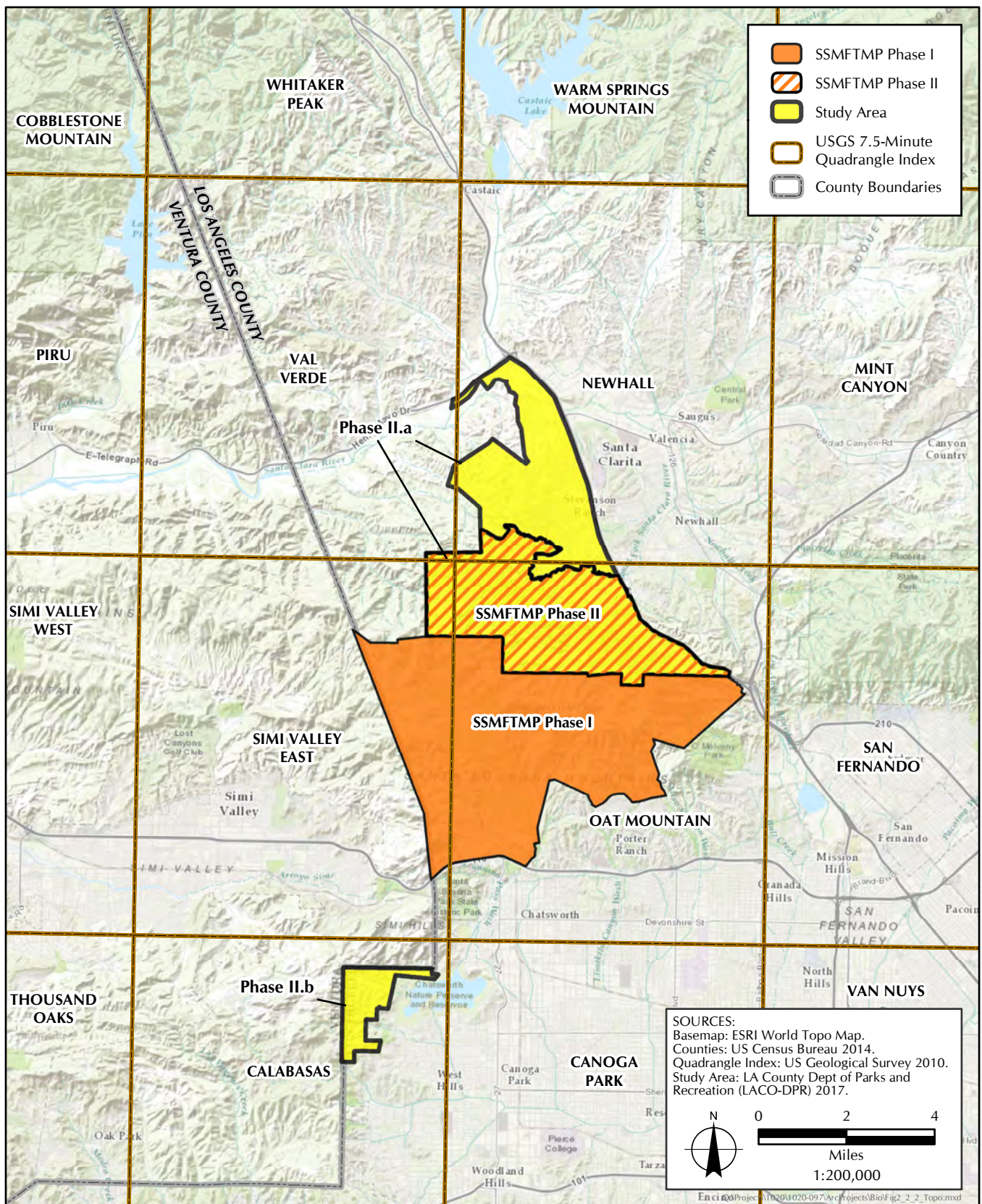


FIGURE 2.2-2

Topographic Map with USGS 7.5 Minute Quadrangle Index

Project Elements

The SSMTMP-P II involves approximately 70 miles of proposed new multi-use trails in the Santa Clarita Valley Planning Area and San Fernando Valley Planning Area. The trails would be multi-use and range from 3 to 12 feet wide based on site conditions, with adequate space for combined pedestrian, equestrian, and mountain biking use, in accordance with the County Trails Manual guidelines. The proposed trails would provide connections to the proposed Rim of the Valley Trail, trails in the City of Los Angeles, trails in the City of Santa Clarita, trails in the Newhall Ranch Specific Plan area, and trails within other jurisdictions as identified in the Trails Master Plan. The SSMTMP-P II identifies up to 20 potential locations for proposed facilities, including 4 trailheads, 2 bike skills areas, 2 equestrian parks, 8 trailhead and staging areas, and 4 additional trailheads within the City of Los Angeles that would need to be developed by the City of Los Angeles. As the recommended City of Los Angeles trailheads would not be developed under jurisdiction of the County, this Report considers the 16 proposed facilities located within the SSMTMP-P II study area.

3.1 FEDERAL

Federal Endangered Species Act

The federal ESA defines listed species as “endangered” or “threatened” and provides regulatory protection for listed species. The federal ESA provides a program for conservation and recovery of threatened and endangered species; it also ensures the conservation of designated critical habitat that the USFWS has determined is required for the survival and recovery of these listed species. Section 9 of the federal ESA prohibits the “take” of species listed by USFWS as threatened or endangered. Take is defined as follows: “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct.” In recognition that take cannot always be avoided, Section 10(a) of the federal ESA includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Section 10(a)(1)(B) permits (incidental take permits) may be issued if take is incidental and does not jeopardize the survival and recovery of the species. An HCP must accompany an application for an incidental take permit. The purpose of the HCP planning process associated with the permit is to ensure there is adequate minimizing and mitigating of the effects of the authorized incidental take. As defined in the federal ESA, individuals, organizations, states, local governments, and other nonfederal entities are affected by the designation of critical habitat only if their actions occur on federal lands; require a federal permit, license, or other authorization; or involve federal funding.

Migratory Bird Treaty Act (MBTA)

The MBTA makes it unlawful to pursue, capture, kill, or possess any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and Russia (formerly the Soviet Union). Similar to the federal ESA, the MBTA authorizes the Secretary of the Interior to issue permits for incidental take.

Bald and Golden Eagle Protection Act (BGEPA)

The purpose of the federal BGEPA (16 USC 668–668c, as amended) that is administered by the USFWS protects bald and golden eagles, their nests, eggs, and parts. The BGEPA prohibits the “take” of bald and golden eagles unless pursuant to regulations. Take is defined by the BGEPA as an action “to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb (i.e., agitate or bother to a degree that causes injury, decreased productivity, or nest abandonment).” In addition, the National Bald Eagle Management Guidelines were published by the USFWS in May 2007 in conjunction with delisting the bald eagle to provide provisions to continue to protect bald eagles from harmful actions and impacts. Under the BGEPA, a final rule was published in May 2008 in the Federal Register that proposed authorization for take of bald eagles for those with existing authorization under the federal ESA where the bald eagle is covered in an HCP or the golden eagle is covered as a non-listed species.⁹

⁹ Federal Register. 20 May 2008. Notices. 73(98): 29075–29084.

Section 404 of the Federal Clean Water Act

Section 404 of the federal Clean Water Act, which is administered by the USACE, regulates the discharge of dredged and fill material into Waters of the United States, which include surface waters such as navigable waters and their tributaries, all interstate waters and their tributaries, natural lakes, all wetlands adjacent to other waters, and all impoundments of these waters. USACE has established a series of nationwide permits that authorize certain activities in Waters of the United States, provided that a proposed activity can demonstrate compliance with standard conditions. Projects that result in the loss of less than the acreage specified by the applicable nationwide permit can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard permit conditions. If the conditions of a nationwide permit cannot be met, or the project results in more than minimal adverse environmental impact, an individual permit may be required.

3.2 STATE

California Endangered Species Act

The California ESA (CESA) prohibits the take of listed species except as otherwise provided in State law. Unlike the federal ESA, CESA applies the take prohibitions to species petitioned for listing (state candidates). State lead agencies are required to consult with CDFW to ensure that any actions undertaken by that lead agency are not likely to jeopardize the continued existence of any state-listed species or result in destruction or degradation of required habitat. CDFW is authorized to enter into memoranda of understanding with individuals, public agencies, universities, zoological gardens, and scientific or educational institutions to import, export, take, or possess listed species for scientific, educational, or management purposes.

Sections 2080 and 2081 of the State Fish and Wildlife Code

Section 2080 of the State Fish and Wildlife Code (Code) states that “no person shall import into [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the [State Fish and Wildlife Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act, or the California Desert Native Plants Act.”

Under Section 2081 of the Code, the CDFW may authorize individuals or public agencies to import, export, take, or possess, any state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or memoranda of understanding if (1) the take is incidental to an otherwise lawful activity, (2) impacts of the authorized take are minimized and fully mitigated, (3) the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and (4) the applicant ensures adequate funding to implement the measures required by CDFW. CDFW shall make this determination based on the best scientific and other information that is reasonably available and shall include consideration of the species’ capability to survive and reproduce.

Sections 3503 and 3503.5 of the State Fish and Wildlife Code

Sections 3503 and 3503.5 of the State Fish and Wildlife Code provide regulatory protection to resident and migratory birds and all birds of prey within the state. These sections prohibit take of nests and eggs unless otherwise provided for by the State Fish and Wildlife Code.

Native Plant Protection Act

The Native Plant Protection Act includes measures to preserve, protect, and enhance rare and endangered native plants. The list of native plants afforded protection pursuant to the Native Plant Protection Act includes those listed as rare and endangered under the California ESA. The Native Plant Protection Act provides limitations on take as follows: “No person will import into this State, or take, possess, or sell within this State” any rare or endangered native plant, except in compliance with provisions of the act. Individual landowners are required to notify the CDFW at least 10 days in advance of changing land uses to allow the CDFW to salvage any rare or endangered native plant material.

Section 1600 of the State Fish and Wildlife Code

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California are subject to the regulatory authority of the CDFW pursuant to Sections 1600 through 1603 of the Code and require preparation of a Streambed Alteration Agreement. Pursuant to the Code, a *stream* is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Based on this definition, a watercourse with surface or subsurface flows that support or have supported riparian vegetation is a stream and is subject to CDFW jurisdiction. Altered or artificial waterways valuable to fish and wildlife are subject to CDFW jurisdiction. The CDFW also has jurisdiction over dry washes that carry water ephemeral during storm events.

The CDFW has adopted the USFWS wetland definition as modified by the CDFW Guidance, as follows:

The Commission concurs with the Department's recommendation to use the U.S. Fish and Wildlife Service's (USFWS) definition as the basis for wetland identification. When all three wetland indicators (i.e., hydric soils, wetland vegetation, and hydrology) are present, the presumption of wetland existence shall be conclusive. Where less than three indicators are present, policy application shall be supported by the demonstrable use of wetland areas by wetland-associated fish or wildlife resources, related biological activity, and wetland habitat values.

The USFWS wetland identification system should be applied by professionals trained in its methodology. The accuracy of existing wetland inventory mapping should not necessarily be assumed. The Commission supports the Department's current practice of on-site inspections of projects which would impact wetlands and strongly encourages the Department to conduct on-site inspections of such projects and particularly whenever requested to do so by project proponents or concerned public agencies.¹⁰

¹¹ County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 9: Conservation and Natural Resources Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch9.pdf

State Senate Concurrent Resolution No. 17 – Relative to Oak Woodlands

The State Senate Concurrent Resolution No. 17, filed with the Secretary of State on September 1, 1989, states that any state agencies having land use planning duties and responsibilities shall assess the effects of their land use decisions or actions within any oak woodlands containing blue oak (*Quercus douglasii*), Engelmann oak (*Q. engelmannii*), valley oak (*Q. lobata*), or coast live oak (*Q. agrifolia*). The State Senate defines “oak woodland” as a 5-acre circular area containing five or more oak trees per acre. This resolution requires that state agencies must preserve and protect native oak woodlands to the maximum extent feasible or provide for replacement plantings where blue, Engelmann, valley, or coast live oak are removed from oak woodlands.

3.3 LOCAL

Los Angeles County General Plan 2035

The project area is located within the County of Los Angeles and subject to the provisions of the Los Angeles County General Plan 2035. The Conservation and Natural Resources Element of the General Plan 2035 has established two goals and 12 policies related to biological resources:¹¹

Goal C/NR 3: Permanent, sustainable preservation of genetically and physically diverse biological resources and ecological systems including: habitat linkages, forests, coastal zone, riparian habitats, streambeds, wetlands, woodlands, alpine habitat, chaparral, shrublands, and Significant Ecological Areas. Topic Policy

- *Policy C/NR 3.1:* Conserve and enhance the ecological function of diverse natural habitats and biological resources.
- *Policy C/NR 3.2:* Create and administer innovative County programs incentivizing the permanent dedication of SEAs and other important biological resources as open space areas.
- *Policy C/NR 3.3:* Restore upland communities and significant riparian resources, such as degraded streams, rivers, and wetlands to maintain ecological function—acknowledging the importance of incrementally restoring ecosystem values when complete restoration is not feasible.
- *Policy C/NR 3.4:* Conserve and sustainably manage forests and woodlands.
- *Policy C/NR 3.5:* Ensure compatibility of development in the National Forests in conjunction with the U.S. Forest Service Land and Resource Management Plan.
- *Policy C/NR 3.6:* Assist state and federal agencies and other agencies, as appropriate, with the preservation of special status species and their associated habitat and wildlife movement corridors through the administration of the SEAs and other programs.
- *Policy C/NR 3.7:* Participate in inter-jurisdictional collaborative strategies that protect biological resources. Site Sensitive Design
- *Policy C/NR 3.8:* Discourage development in areas with identified significant biological resources, such as SEAs.

¹¹ County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 9: Conservation and Natural Resources Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch9.pdf

- *Policy C/NR 3.9:* Consider the following in the design of a project that is located within an SEA, to the greatest extent feasible:
 - Preservation of biologically valuable habitats, species, wildlife corridors and linkages;
 - Protection of sensitive resources on the site within open space;
 - Protection of water sources from hydro-modification in order to maintain the ecological function of riparian habitats;
 - Placement of the development in the least biologically sensitive areas on the site (prioritize the preservation or avoidance of the most sensitive biological resources onsite);
 - Design required open spaces to retain contiguous undisturbed open space that preserves the most sensitive biological resources onsite and/or serves to maintain regional connectivity;
 - Maintenance of watershed connectivity by capturing, treating, retaining, and/or infiltrating storm water flows on site; and
 - Consideration of the continuity of onsite open space with adjacent open space in project design.
- *Policy C/NR 3.10:* Require environmentally superior mitigation for unavoidable impacts on biologically sensitive areas, and permanently preserve mitigation sites.
- *Policy C/NR 3.11:* Discourage development in riparian habitats, streambeds, wetlands, and other native woodlands in order to maintain and support their preservation in a natural state, unaltered by grading, fill, or diversion activities.

Goal C/NR 4: Conserved and sustainably managed woodlands.

- *Policy C/NR 4.1:* Preserve and restore oak woodlands and other native woodlands that are conserved in perpetuity with a goal of no net loss of existing woodlands.

Santa Clarita Valley Area Plan

The Trails Master Plan Study Area is located within the Santa Clarita Valley and is subject to the 2012 Santa Clarita Valley Area Plan. The Conservation and Open Space Element of the Santa Clarita Valley Area Plan has seven objectives and 34 policies that cover biological resources:

Objective CO-3.1: In review of development plans and projects, encourage conservation of existing natural areas and restoration of damaged natural vegetation to provide for habitat and biodiversity.

- *Policy CO-3.1.1:* On the Land Use Map and through the development review process, concentrate development into previously developed or urban areas to promote infill development and prevent sprawl and habitat loss, to the extent feasible.
- *Policy CO-3.1.2:* Avoid designating or approving new development that will adversely impact wetlands, floodplains, threatened or endangered species and habitat, and water bodies supporting fish or recreational uses, and establish an adequate buffer area as deemed appropriate through site specific review.
- *Policy CO-3.1.3:* On previously undeveloped sites (“greenfields”), identify biological resources and incorporate habitat preservation measures into the site plan, where appropriate.

- *Policy CO-3.1.4:* For new development on sites with degraded habitat, include habitat restoration measures as part of the project development plan, where appropriate.
- *Policy CO-3.1.5:* Promote the use of site-appropriate native or adapted plant materials, and prohibit use of invasive or noxious plant species in landscape designs.
- *Policy CO-3.1.6:* On development sites, preserve and enhance natural site elements including existing water bodies, soil conditions, ecosystems, trees, vegetation and habitat, to the extent feasible.
- *Policy CO-3.1.7:* Limit the use of turf-grass on development sites and promote the use of native or adapted plantings to promote biodiversity and natural habitat.
- *Policy CO-3.1.8:* On development sites, require tree planting to provide habitat and shade to reduce the heat island effect caused by pavement and buildings.
- *Policy CO-3.1.9:* During construction, ensure preservation of habitat and trees designated to be protected through use of fencing and other means as appropriate, so as to prevent damage by grading, soil compaction, pollution, erosion or other adverse construction impacts.
- *Policy CO-3.1.10:* To the extent feasible, encourage the use of open space to promote biodiversity.
- *Policy CO-3.1.11:* Promote use of pervious materials or porous concrete on sidewalks to allow for planted area infiltration, allow oxygen to reach tree roots (preventing sidewalk lift-up from roots seeking oxygen), and mitigate tree sidewalk conflicts, in order to maintain a healthy mature urban forest.

Objective CO-3.2: Identify and protect areas which have exceptional biological resource value due to a specific type of vegetation, habitat, ecosystem, or location.

- *Policy CO-3.2.1:* Protect wetlands from development impacts, with the goal of achieving no net loss (or functional reduction) of jurisdictional wetlands within the planning area.
- *Policy CO-3.2.2:* Ensure that development is located and designed to protect oak and other significant indigenous woodlands.
- *Policy CO-3.2.3:* Ensure protection of any endangered or threatened species or habitat, in conformance with State and federal laws.
- *Policy CO-3.2.4:* Protect biological resources in the designated Significant Ecological Areas (SEAs) through the siting and design of development which is highly compatible with the SEA resources. Specific development standards shall be identified to control the types of land use, density, building location and size, roadways and other infrastructure, landscape, drainage, and other elements to assure the protection of the critical and important plant and animal habitats of each SEA. In general, the principle shall be to minimize the intrusion and impacts of development in these areas with sufficient controls to adequately protect the resources.

Objective CO-3.3: Protect significant wildlife corridors from encroachment by development that would hinder or obstruct wildlife movement.

- *Policy CO-3.3.1:* Protect the banks and adjacent riparian habitat along the Santa Clara River and its tributaries, to provide wildlife corridors.

- *Policy CO-3.3.2:* Cooperate with other responsible agencies to protect, enhance, and extend the Rim of the Valley trail system through Elsmere and Whitney Canyons, and other areas as appropriate, to provide both recreational trails and wildlife corridors linking the Santa Susana and San Gabriel Mountains.
- *Policy CO-3.3.3:* Identify and protect one or more designated wildlife corridors linking the Los Padres and Angeles National Forests through the Santa Clarita Valley (the San Gabriel-Castaic connection).
- *Policy CO-3.3.4:* Support the maintenance of Santa Clarita Woodlands Park, a critical component of a cross-mountain range wildlife habitat corridor linking the Santa Monica Mountains to the Angeles and Los Padres National Forests.
- *Policy CO-3.3.5:* Encourage connection of natural open space areas in site design, to allow for wildlife movement.

Objective CO-3.4: Ensure that development in the Santa Clarita Valley does not adversely impact habitat within the adjacent National Forest lands.

- *Policy CO-3.4.1:* Coordinate with the United States Forest Service on discretionary development projects that may have impacts on the National Forest.
- *Policy CO-3.4.2:* Consider principles of forest management in land use decisions for projects adjacent to the National Forest, including limiting the use of invasive species, discouraging off-road vehicle use, maintaining fuel modification zones and fire access roads, and other measures as appropriate, in accordance with the goals set forth in the Angeles National Forest Land Management Plan.
- *Policy CO-3.4.3:* On the Land Use Map, maintain low density rural residential and open space uses adjacent to forest land, and protect the urban-forest interface area from overdevelopment.
- *Policy CO-3.4.4:* Participate as a stakeholder in planning efforts by the United States Forest Service for land uses within the National Forest, providing input as appropriate.

Objective CO-3.5: Maintain, enhance, and manage the urban forest throughout developed portions of the Santa Clarita Valley to provide habitat, reduce energy consumption, and create a more livable environment.

- *Policy CO-3.5.1:* Continue to plant and maintain trees on public lands and within the public right-of-way to provide shade and walkable streets, incorporating measures to ensure that roots have access to oxygen at tree maturity, such as use of porous concrete.
- *Policy CO-3.5.2:* Where appropriate, promote planting of trees that are native or climactically appropriate to the surrounding environment, emphasizing oaks, sycamores, maple, walnut, and other native species in order to enhance habitat, and discouraging the use of introduced species such as eucalyptus, pepper trees, and palms except as ornamental landscape features.
- *Policy CO-3.5.3:* Pursuant to the requirements of the Zoning Ordinance, protect heritage oak trees that, due to their size and condition, are deemed to have exceptional value to the community.

Objective CO-3.6: Minimize impacts of human activity and the built environment on natural plant and wildlife communities.

- *Policy CO-3.6.1:* Minimize light trespass, sky-glow, glare, and other adverse impacts on the nocturnal ecosystem by limiting exterior lighting to the level needed for safety and comfort; reduce unnecessary lighting for landscaping and architectural purposes, and encourage reduction of lighting levels during non-business nighttime hours.
- *Policy CO-3.6.2:* Reduce impervious surfaces and provide more natural vegetation to enhance microclimates and provide habitat. In implementing this policy, consider the following design concepts:
 - Consideration of reduced parking requirements, where supported by a parking study and/or through shared use of parking areas;
 - Increased use of vegetated areas around parking lot perimeters; such areas should be designed as bioswales or as otherwise determined appropriate to allow surface water infiltration;
 - Use of connected open space areas as drainage infiltration areas in lieu of curbed landscape islands, minimizing the separation of natural and landscaped areas into isolated “islands”; and
 - Breaking up large expanses of paving with natural landscaped areas planted with shade trees to reduce the heat island effect, along with shrubs and groundcover to provide diverse vegetation for habitat.
- *Policy CO-3.6.3:* Restrict use of unauthorized off -road vehicles within sensitive habitat areas through signage, fencing, or other means as appropriate.
- *Policy CO-3.6.4:* Provide public information and support with demonstration sites at County facilities on gardening and landscaping techniques to reduce spread of invasive species and pollution from pesticides and fertilizers that threaten natural ecosystems.
- *Policy CO-3.6.5:* Ensure revegetation of graded areas and slopes adjacent to natural open space areas with native plants (consistent with fire prevention requirements).

Objective CO-3.7: Provide public access to, and education about, natural habitats and ecosystems.

- *Policy CO-3.7.1:* Support the public education programs offered at the Placerita Canyon Nature Center and Ed Davis Park (Sonia Thompson Nature Center).
- *Policy CO-3.7.2:* Seek opportunities for partnerships with schools, non-profit organizations, and volunteers, to increase public access to and information about natural areas.

Newhall Ranch Specific Plan

A portion of the Trails Master Plan Study Area is within the Newhall Ranch area and is subject to the Newhall Ranch Specific Plan. There are five Resource Conservation Objectives within the Newhall Ranch Specific Plan that relate to biological resources:

Resource Conservation Objective 1: Protect wetland and endangered species in the Santa Clara River.

Resource Conservation Objective 2: Preserve the Santa Clara River Corridor and adjacent uplands containing significant natural resources for their resource value, *Open Area*, and recreational use.

Resource Conservation Objective 3: Retain major *Open Area* and its natural vegetation as a wildlife or ecological reserve.

Resource Conservation Objective 4: Preserve significant stands of oak trees.

Resource Conservation Objective 6: Identify and protect significant resources within the two Los Angeles County Significant Ecological Areas.

Los Angeles County Municipal Code Title 12, Chapter 12.36 – Wildflower Reserves

Title 12, Chapter 12.36 of the Los Angeles County Municipal Code states that a person, firm or corporation shall not drive, or allow the same to be driven, on or over any designated Wildflower Reserve Area during any portion of the period from February 1st to April 15th, inclusive, or May 1st to July 15th, inclusive, of any calendar year.

Los Angeles County Municipal Code Title 22, § 22.56.215 – Significant Ecological Areas

Title 22, Section 22.56.215 of the Los Angeles County Municipal Code regulates development within Significant Ecological Areas (SEAs). Conditional use permits are required prior to granting a building permit or grading permit within an SEA and must be approved to allow development within SEAs, subject to review by the Significant Ecological Areas Technical Advisory Committee (SEATAC) and a public hearing.

Los Angeles County Municipal Code Title 22, § Chapter 22.44, Part 6 – Sensitive Environmental Resource Areas

Sensitive Environmental Resource Areas (SERAs) are located within the Santa Monica Mountains Coastal Zone area only. SERAs contain biological resources that, because of their special characteristics and/or vulnerability, require greater protection, and development in a SERA requires a heightened level of review to ensure that protection. Projects in a SERA are subject to review by the Los Angeles County Department of Regional Planning Environmental Review Board.

Los Angeles County Municipal Code Sections 22.56.2050 – 22.56.2260 – Oak Tree Ordinance

The Los Angeles County Oak Tree Ordinance requires a permit prior to the cutting, removing, destroying, relocating, inflicting damage on, or encroaching into a protected zone of any tree within the oak genus. The Ordinance regulates only oak trees (genus *Quercus*) located within unincorporated areas of Los Angeles County. In addition, the circumference of an oak tree with one trunk must be 25 inches (8 inches in diameter) or more. For oak trees with multiple trunks, any two trunks must have a circumference of 38 inches (12 inches in diameter) or more. Measurements must be recorded at 4.5 feet above mean natural grade.

SECTION 4.0 METHODS

This section describes the methods employed in the characterization and evaluation of biological resource in the Trails Master Plan Study Area. The potential for SSMTMP-P11 to result in impacts to biological resources was evaluated pursuant to the seven thresholds articulated in Appendix G of the California Environmental Quality Act Guidelines (State CEQA Guidelines) and the County of Los Angeles Department of Parks and Recreation's Environmental Checklist Form.

4.1 LISTED, SENSITIVE, AND LOCALLY IMPORTANT SPECIES

Records of listed and sensitive plants and animals were reviewed to determine what federally and state-listed species and sensitive species have the potential to occur within the limits of the project area. For the purposes of this analysis, species were assumed to be present if historic records of the species occur within or in the immediate vicinity of the project area and the area has suitable habitat. Directed surveys would need to be undertaken to assess the presence or absence of sensitive species and make a determination as to whether or not permits would be required pursuant to Section 10(a)(1) of the federal ESA or Section 2081 of the California ESA.

The CNDDDB query was supplemented with information from published and unpublished literature, including program- and project-level environmental documents prepared pursuant to CEQA and the National Environmental Policy Act (NEPA) in the vicinity of the project area. A CNDDDB and CNPS Online Inventory¹² query for occurrence data within the following USGS 7.5-minute series topographic quadrangles: Valley East,¹³ Newhall,¹⁴ Val Verde,¹⁵ Oat Mountain,¹⁶ Calabasas,¹⁷ Canoga Park,¹⁸ Malibu Beach,¹⁹ Mint Canyon,²⁰ Piru,²¹ Point Dume,²² San Fernando,²³ Santa Susana,²⁴ Simi,²⁵ Thousand Oaks,²⁶ Topanga,²⁷ and Van Nuys²⁸ was conducted.

¹² California Native Plant Society. 2013. *Inventory of Rare and Endangered Plants*. Sacramento, CA.

¹³ U.S. Geologic Survey. 2017. 7.5-minute Series, Simi Valley East, California, Topographic Quadrangle. Reston, VA.

¹⁴ U.S. Geologic Survey. 2017. 7.5-minute Series, Newhall, California, Topographic Quadrangle. Reston, VA.

¹⁵ U.S. Geologic Survey. 2017. 7.5-minute Series, Val Verde, California, Topographic Quadrangle. Reston, VA.

¹⁶ U.S. Geologic Survey. 2017. 7.5-minute Series, Oat Mountain, California, Topographic Quadrangle. Reston, VA.

¹⁷ U.S. Geologic Survey. 2017. 7.5-minute Series, Calabasas, California, Topographic Quadrangle. Reston, VA.

¹⁸ U.S. Geologic Survey. 2017. 7.5-minute Series, Canoga Park, California, Topographic Quadrangle. Reston, VA.

¹⁹ U.S. Geologic Survey. 2017. 7.5-minute Series, Malibu Beach, California, Topographic Quadrangle. Reston, VA.

²⁰ U.S. Geologic Survey. 2017. 7.5-minute Series, Mint Canyon, California, Topographic Quadrangle. Reston, VA.

²¹ U.S. Geologic Survey. 2017. 7.5-minute Series, Piru, California, Topographic Quadrangle. Reston, VA.

²² U.S. Geologic Survey. 2017. 7.5-minute Series, Point Dume, California, Topographic Quadrangle. Reston, VA.

²³ U.S. Geologic Survey. 2017. 7.5-minute Series, San Fernando, California, Topographic Quadrangle. Reston, VA.

²⁴ U.S. Geologic Survey. 2017. 7.5-minute Series, Santa Susana, California, Topographic Quadrangle. Reston, VA.

²⁵ U.S. Geologic Survey. 2017. 7.5-minute Series, Simi, California, Topographic Quadrangle. Reston, VA.

²⁶ U.S. Geologic Survey. 2017. 7.5-minute Series, Thousand Oaks, California, Topographic Quadrangle. Reston, VA.

²⁷ U.S. Geologic Survey. 2017. 7.5-minute Series, Topanga, California, Topographic Quadrangle. Reston, VA.

²⁸ U.S. Geologic Survey. 2017. 7.5-minute Series, Van Nuys, California, Topographic Quadrangle. Reston, VA.

Critical habitat data, as determined by the USFWS, was searched to determine the proximity of critical habitat to the project area.²⁹ The list of species was evaluated with respect to the habitats present. *The Jepson Manual* was consulted for detailed biological, distributional, and phenological information of plants and used as a standard for nomenclature.³⁰

4.2 RIPARIAN AND STATE SENSITIVE PLANT COMMUNITIES

The evaluation of riparian and state-sensitive plant communities for the project area was undertaken using data from the Natural Heritage Division of CDFW via a query of the CNDDDB, which identifies special-status natural communities. It is important to note that there is the potential for additional state-sensitive plant communities and riparian habitat to exist within the project area. Focused plant community mapping would need to be undertaken to assess the presence or absence and extent of riparian habitat and state-sensitive plant communities.

4.3 FEDERALLY PROTECTED WETLANDS AND WATERWAYS

The purpose of evaluating federal Waters of the United States was to determine what federal wetlands and waterways are potentially present and which agency (Federal or State) may have jurisdiction. Sapphos Environmental, Inc. used the NWI database and USGS topographical maps to determine if federal wetlands may be present within the project area. For the purpose of this evaluation, all NWI wetlands are assumed to be USACE jurisdictional wetlands, but these wetlands may also fall under other jurisdictions. In addition, Sapphos Environmental, Inc. used USGS maps and blue-line drainage data to find navigable water bodies and blue-line features that may be considered federal waterways. A jurisdictional delineation would be required to be undertaken to assess the presence or absence of Waters of the United States and the potential for development of a trails system to result in dredge or fill activities within any features subject to Section 404 of the federal CWA and requiring either a pre-construction notification pursuant to a Nationwide Permit or an individual permit from USACE.

4.4 MIGRATORY CORRIDORS AND NURSERY SITES

Sapphos Environmental, Inc. used GIS to overlay the project area with topographic, plant community, and published data for migratory corridors and nursery sites for wildlife species to characterize the baseline conditions for these resources within the area. The County has established SEAs primarily with the goal of protecting plants and animals and their corridors. Sapphos Environmental, Inc. used the SEAs in the vicinity of the project area as indicators of the presence of wildlife corridors. The project area would require a directed survey to assess the presence or absence of migratory corridors or nursery sites and the potential for development of a trails system to result in impacts to such resources.

²⁹ U.S. Fish and Wildlife Service. 2015. *Critical Habitat Mapper*. Available at: <http://criticalhabitat.fws.gov/crithab/flex/crithabMapper.jsp?>

³⁰ Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. *The Jepson Manual: Vascular Plants of California*. 2nd ed. Berkeley: University of California Press.

4.5 OAK AND NATIVE WOODLANDS

The evaluation of oak and native woodlands for the project area was undertaken using data from the Natural Heritage Division of CDFW via a query of the CNDDDB, which identifies special-status natural communities. Consequently, these CNDDDB records date back only as recently as 1993. It is important to note that there is the potential for additional oak and native woodlands to exist within the project area as well as additional individual oak trees or other native trees. Focused plant community and tree mapping would need to be undertaken to assess the presence or absence and extent of oak and native woodland communities as well as individual oak and native trees.

4.6 GENERAL PLANS AND POLICIES

The Los Angeles County General Plan 2035 and Newhall Ranch Specific Plan were evaluated to determine if the project area has the potential to conflict with adopted goals, policies, and ordinances related to conservation of biological resources that are applicable to the plan. The Los Angeles County Oak Tree Ordinance, Wildflower Reserve Ordinance, Significant Ecological Area Ordinance, and Sensitive Environmental Resource Area Ordinance were also evaluated to determine its applicability to the proposed project.

4.7 HABITAT CONSERVATION PLANS AND NATURAL COMMUNITY CONSERVATION PLANS

Adopted and proposed HCPs and NCCPs within and adjacent to the project area were mapped using data obtained from the USFWS and CDFW. The boundaries of any HCP or NCCP were compared to the project area boundaries using CDFW's NCCP California Regional Conservation Plans Map, which features all NCCPs and HCPs in the State of California (see <https://www.wildlife.ca.gov/Conservation/Planning/NCCP>). All applicable HCPs and NCCPs were intensively reviewed to identify provisions for the management of biological resources that are applicable to the proposed project.

SECTION 5.0

RESULTS

This section provides the characterization and evaluation of the potential for the proposed Trails Master Plan to affect biological resources within the Trails Master Plan Study Area. The results described in this section provide the substantial evidence required to address the CEQA scope of analysis, related to biological resources.

5.1 EXISTING CONDITIONS

Listed, Sensitive, and Locally Important Species

Listed and Candidate Species and Critical Habitat

The literature review identified a total of 30 species that are listed or candidate species under protection of the federal ESA or California ESA that are known to occur within the 16-quadrangle CNDDDB search. Special consideration was given to species within a 5-mile radius of the project, including five plant species and 15 wildlife species (Figure 5.1-1, *Listed Plant and Wildlife Species Records within 5 Miles of the Project Area*). Species status, habitat, and potential to occur is summarized in Appendix A, Table A1, *Listed Plant and Wildlife Species with the Potential to Occur in the Project Area*.

Critical habitat is a designated area defined by the USFWS as being important for the survival of species listed pursuant to the federal ESA. The USFWS evaluates the collection of the environmental conditions (i.e., plant communities, range, elevation, food source, etc.) essential to the continued conservation and preservation of each species listed as federally threatened or endangered. The project area contains designated critical habitat for five species: Arroyo toad, Branton's milkvetch, coastal California gnatcatcher, least bell's vireo, and southwestern flycatcher (Figure 5.1-2, *Critical Habitat Designated within 5 Miles of the Project Area*). There are 262.9 acres of critical habitat for Arroyo toad, 152.89 acres of critical habitat for Branton's milkvetch, 2707.88 acres of critical habitat for coastal California gnatcatcher, 471.73 acres of critical habitat for least bell's vireo, and 237.54 acres of critical habitat for southwestern willow flycatcher within the boundary of the project area.

Sensitive Wildlife Species

A total of 72 wildlife species that are considered sensitive in the State of California were recorded within the 16-quadrangle CNDDDB search. Special consideration was given to the species within a 5-mile radius of the project including two invertebrates, one fish, two amphibians, six reptiles, five mammals, and five bird species (Figure 5.1-3, *Sensitive [Non-Listed] Wildlife Species Records within 5 Miles of the Project Area*). Species status, habitat, and potential to occur for sensitive wildlife species is summarized in Appendix A, Table A2, *Sensitive Wildlife Species with the Potential to Occur in the Project Area*.

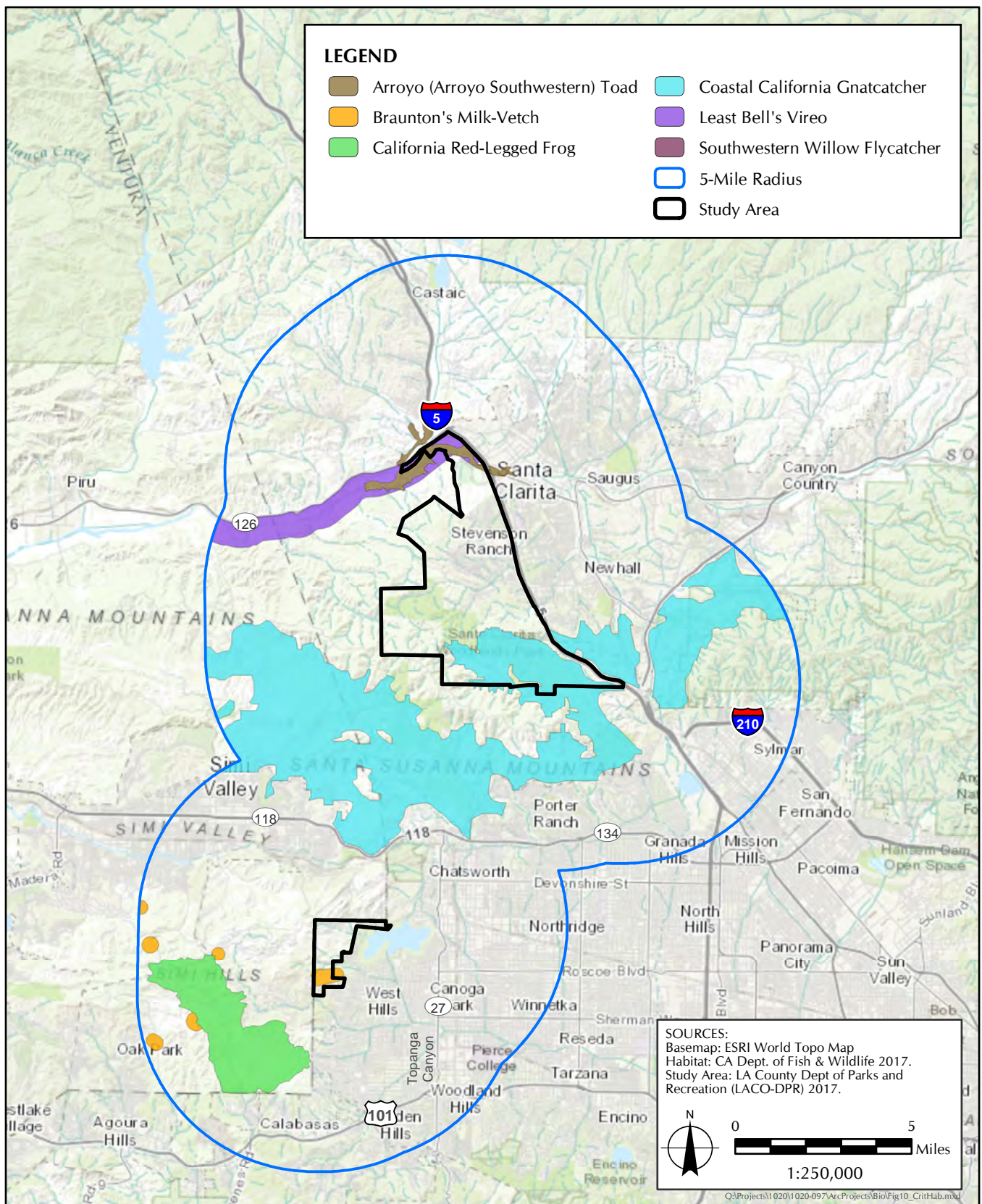


FIGURE 5.1-2

Critical Habitat Designated within 5 Miles of the Project Area

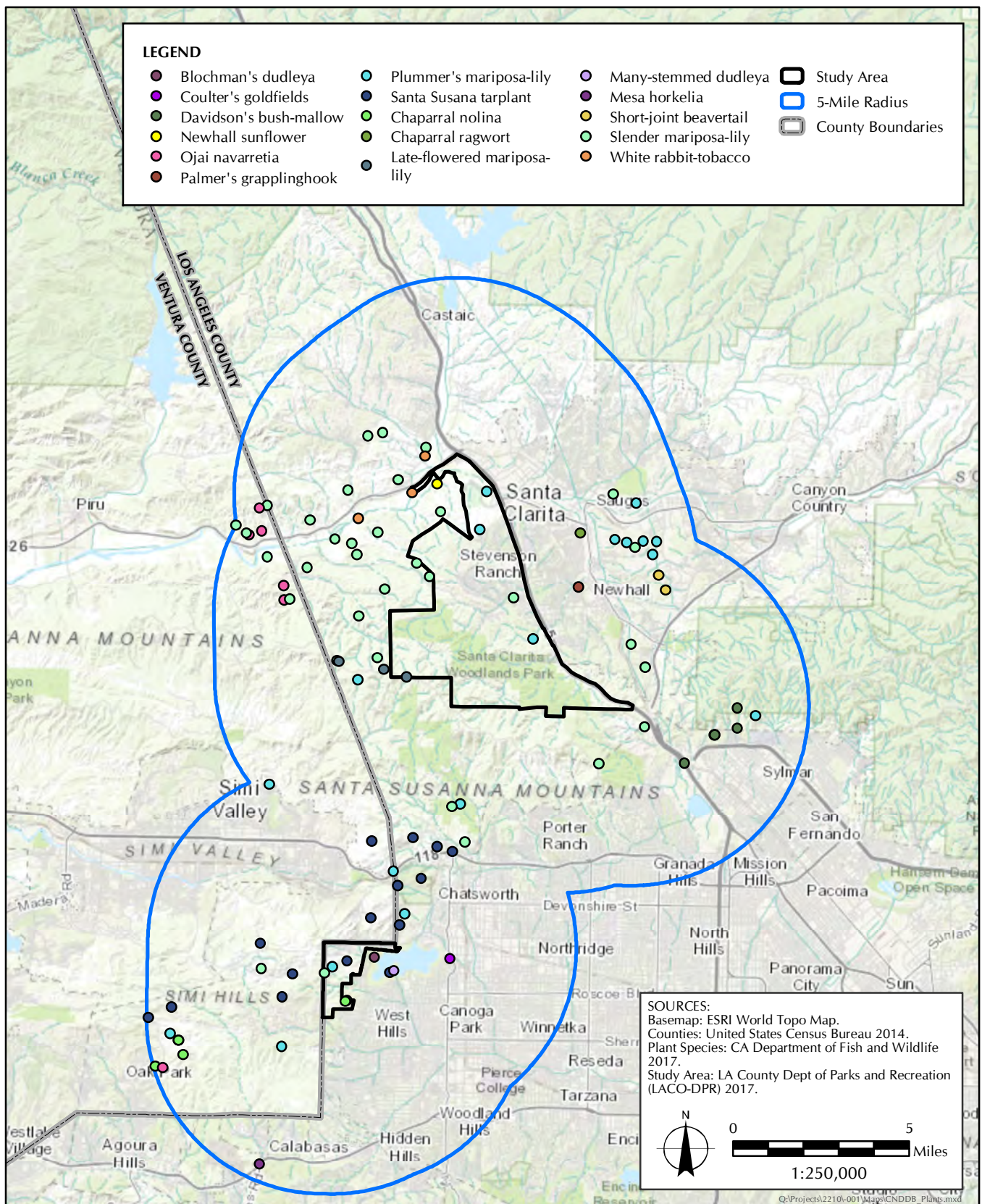


FIGURE 5.1-3

Sensitive (Non-Listed) Plant Species Records within 5 Miles of the Project Area

Rare and Locally Important Plant Species

A total of 59 plant species that are considered rare in the State of California or are locally important were recorded within the 16-quadrangle query search. Of the 59 sensitive plant species, 16 were observed within 5 miles of the project area (Figure 5.1-4, *Sensitive [Non-Listed] Plant Species Records within 5 Miles of the Project Area*). Rank, habitat, and potential to occur within the project site is summarized in Appendix A, Table A3, *Sensitive Plant Species with the Potential to Occur in the Project Area*.

Riparian and State Sensitive Plant Communities

The Natural Heritage Division of CDFW identifies special-status natural communities. A record search of the CNDDDB reported six state-sensitive or riparian natural communities within the project area (Appendix A, Table A4, *Riparian Habitat and State Sensitive Plant Communities Reported in the Project Area*). The distributions of these community records in the project area are depicted in Figure 5.1-5, *Riparian and State Sensitive Plant Communities within 5 Miles of the Project Area*. Thus, it is important to note that the likelihood of additional state-sensitive plant communities and riparian habitats to exist within the project area is high. Individualized surveys within the project area would be required to delineate State-sensitive and riparian plant communities on a project-by-project basis.

Federally Protected Wetlands and Waterways

Current NWI³¹ maps and USGS blue-line drainage data for the project area were reviewed for potential wetlands and waterways subject to protection under Section 404 of the CWA. Wetlands and waterways potentially subject to the jurisdiction of the USACE were determined to be present within the project area (Appendix A, Table A5, *Federally Protected Wetlands and Waterways Reported in the Project Area*). The distribution of federally protected wetlands and waterways in the project area are shown on Figure 5.1-6a, *Federally Protected Wetlands Reported within 5 Miles of the Project Area* and Figure 5.1-6b, *USGS Blue-Line Streams Reported Within 5 Miles of the Project Area*.

In addition to the NWI wetland features described in Table 5, there are 56.32 miles of USGS blue-line drainages reported that may be subject to USACE jurisdiction in the project area. The analysis of Federally Protected Wetlands and Waterways in this section was based on aerial imagery and satellite data. Individual projects within the project area would be required to complete a formal jurisdictional delineation pursuant to USACE requirements.

³¹ U.S. Fish and Wildlife Service. n.d. National Wetlands Inventory Map. Available at: <http://www.fws.gov/wetlands/Wetlands-Mapper.html>

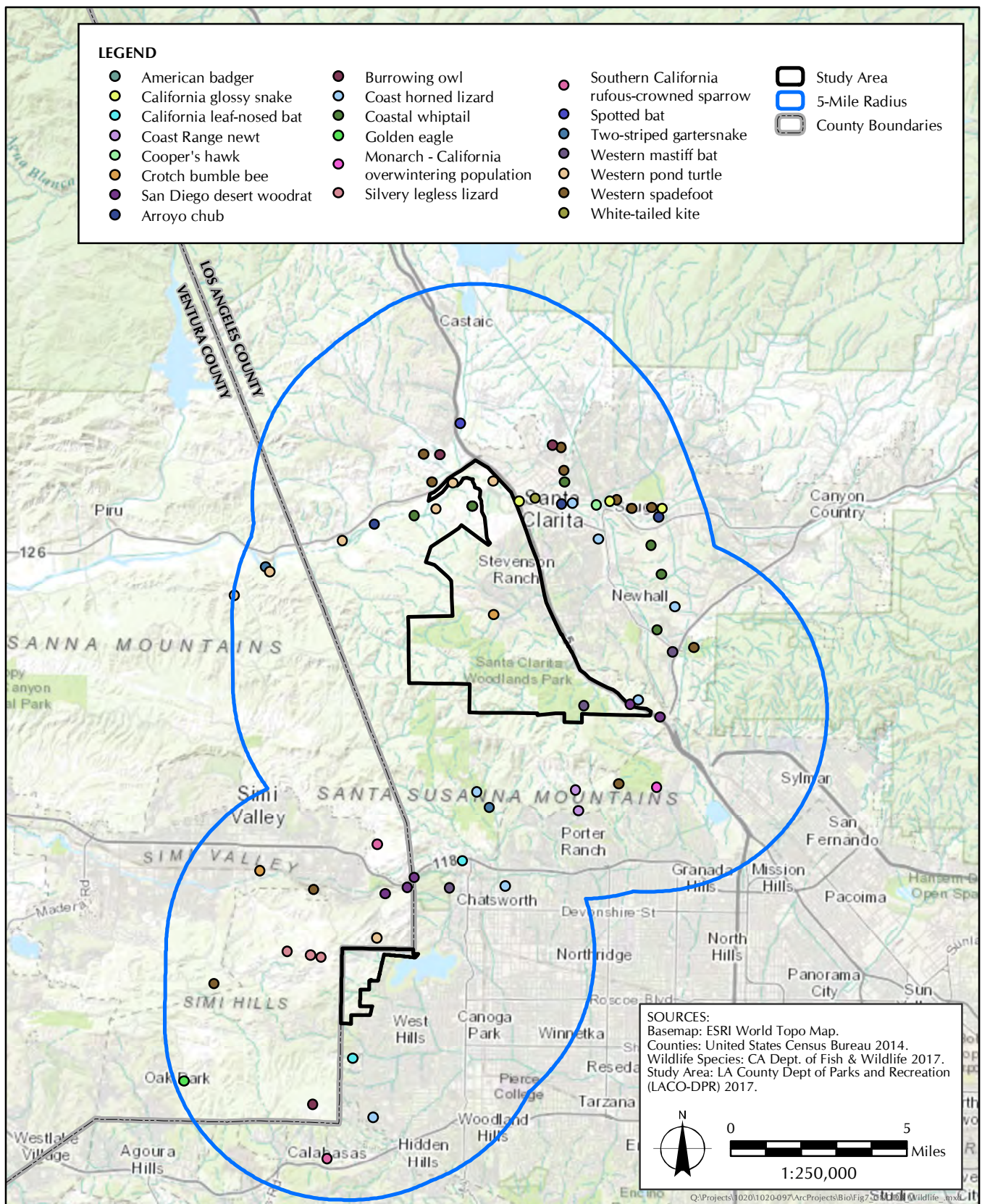


FIGURE 5.1-4
 Sensitive (Non-Listed) Wildlife Species Records within 5 Miles of the Project Area

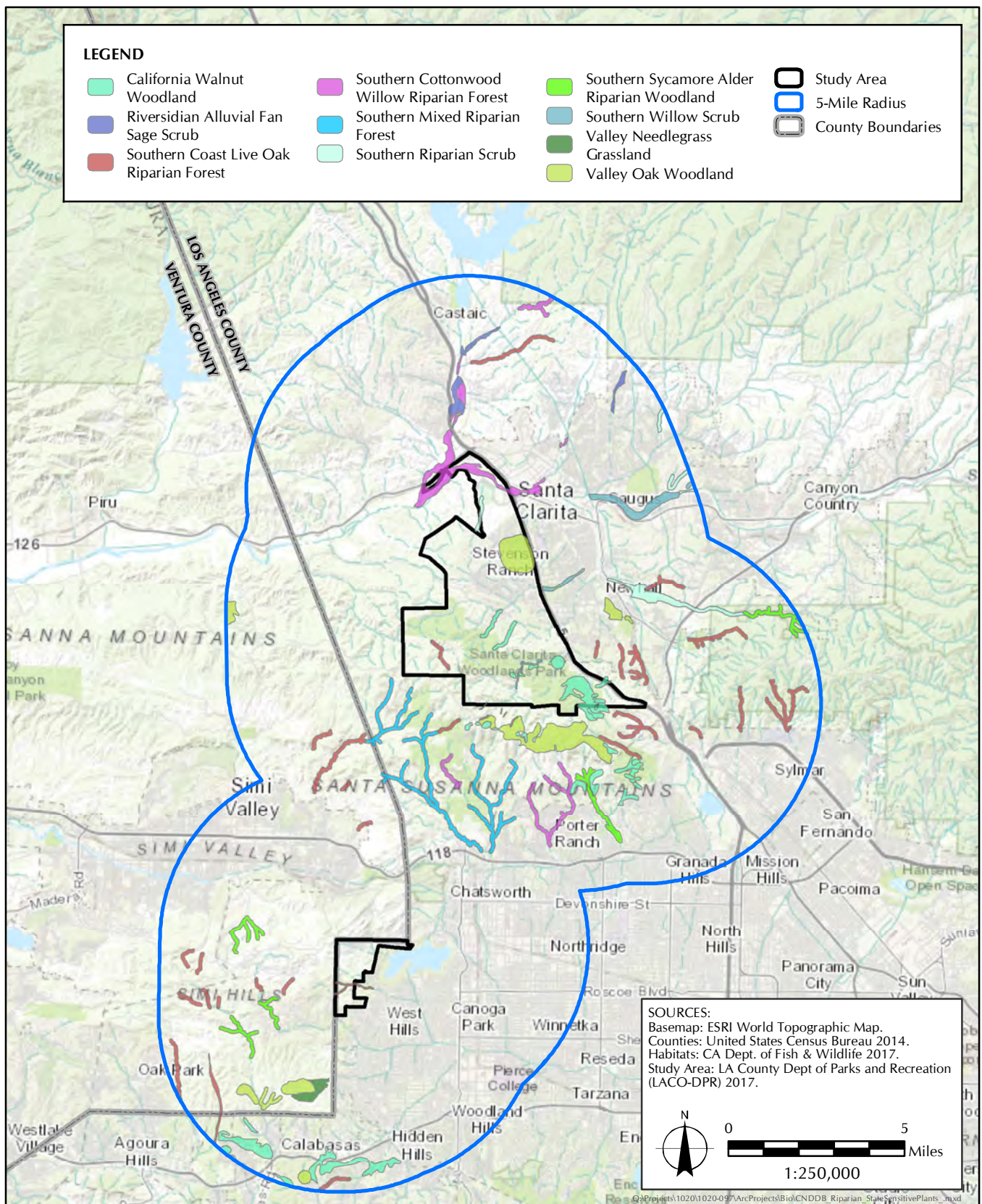


FIGURE 5.1-5

Riparian and State Sensitive Plant Communities within 5 Miles of the Project Area

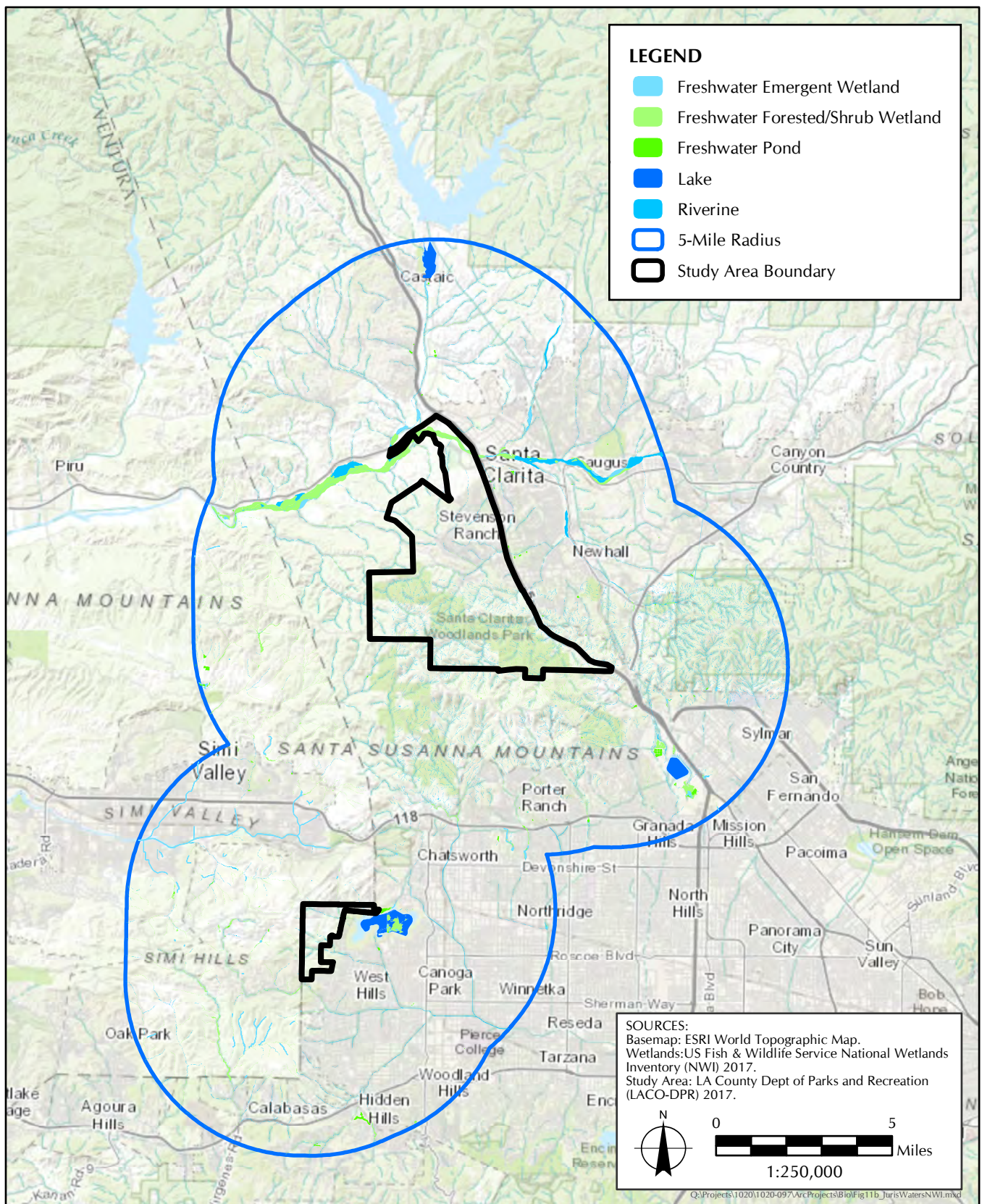


FIGURE 5.1-6a
 Federally Protected Wetlands Reported Within 5 Miles of the Project Area

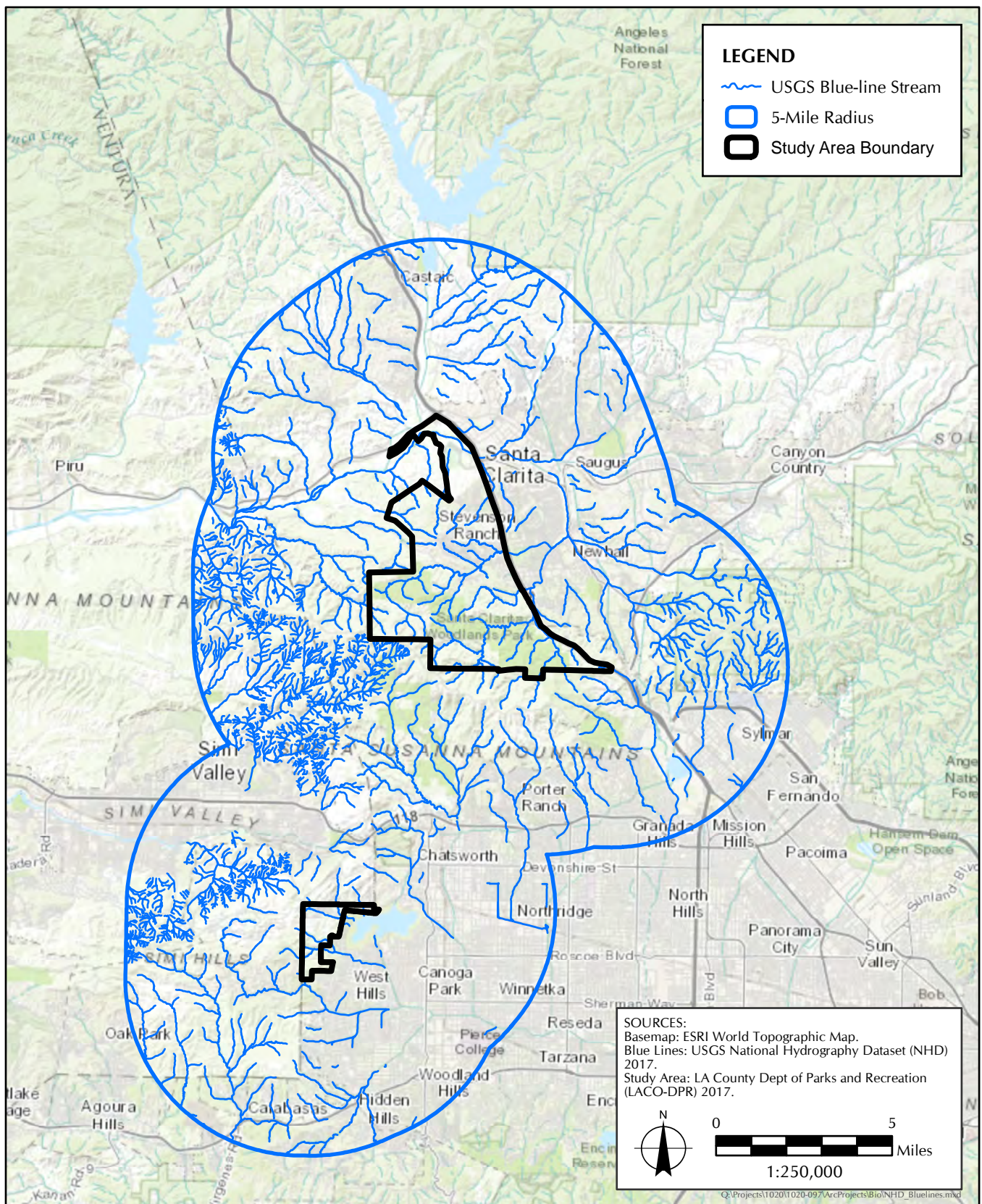


FIGURE 5.1-6b
 USGS Blue-line Streams Reported Within 5 Miles of the Project Area

Migratory Corridors and Nursery Sites

A desktop analysis, including aerial imagery habitat and land use assessments, and review of existing data indicative of the presence of wildlife movement corridors and nursery sites in the project area was conducted. SEAs are areas that have been determined by the County of Los Angeles to contain sensitive biological resources based on the criteria of sensitive plants and animals, plant communities, and corridors. Often, these SEAs can be indicators of the presence of wildlife movement corridors. There are three SEAs that include 9,037.0 acres within the project area (Appendix A, Table A6, *Significant Ecological Areas Present in the Project Area*, Figure 5.1-7, *Significant Ecological Areas in the Vicinity of the Project Area*).

The Santa Clara River is the largest natural river remaining in Southern California. Although there are no known bird rookeries in the project area, many species of birds breed within the area. Nesting birds protected under the MBTA have the potential to be present throughout the project area.

Oak and Native Woodlands

A record search of the CNDDDB reported approximately 672.38 acres of California Walnut Woodlands, 99.04 acres of Southern Coast Live Oak Riparian Forest, 226.95 acres of Southern Cottonwood Willow Riparian Forest, and 532.21 acres of Valley Oak Woodland, and (Appendix A, Table A4). In addition, there is the potential for protected oak trees as well as other native trees and woodlands to be present within the project area. Oak trees are typically found in oak woodlands and other indigenous woodlands, but may also be found in urban areas as planted trees. Individualized surveys within the project area would be required to delineate oak and other native woodland communities and to map individual oak and native trees on a project-by-project basis.

General Plans and Policies

Los Angeles County General Plan 2035

Of the two goals and 12 policies established in the Conservation and Natural Resources Element of the Los Angeles County General Plan 2035, two goals (C/NR 3 and C/NR 4) and 8 policies (C/NR 3.1, C/NR 3.3, C/NR 3.4, C/NR 3.8, C/NR 3.9, C/NR 3.10, C/NR 3.11, and C/NR 4.1) are applicable to the proposed project.

Santa Clarita Valley Area Plan

Of the seven objectives and 34 policies related to biological resources established in the Conservation and Open Space Element of the Santa Clarita Valley Area Plan, five objectives (CO-3.1, CO-3.2, CO-3.3, CO-3.5, and CO-3.6) and 20 policies (CO-3.1.2, CO-3.1.3, CO-3.1.4, CO-3.1.5, CO-3.1.6, CO-3.1.7, CO-3.1.10, CO-3.1.11, CO-3.2.1, CO-3.2.2, CO-3.2.3, CO-3.2.4, CO-3.3.1, CO-3.3.5, CO-3.5.2, CO-3.5.3, CO-3.6.1, CO-3.6.2, CO-3.6.3, and CO-3.6.5) are applicable to the proposed project.

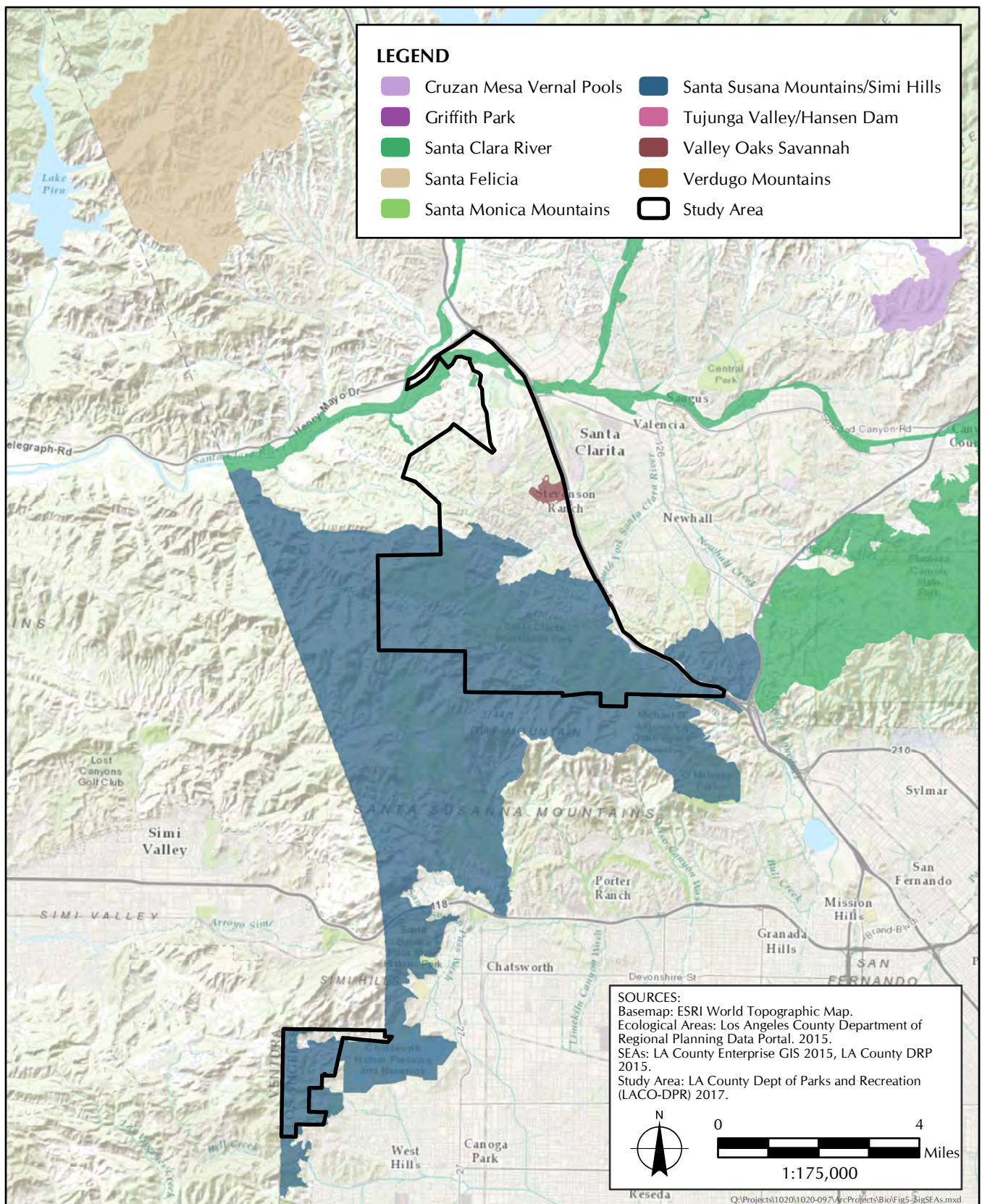


FIGURE 5.1-7

Significant Ecological Areas in the Vicinity of the Project Area

Los Angeles County Municipal Code Title 12, Chapter 12.36 – Wildflower Reserves

The project area does not contain any designated Wildflower Reserve Areas. Therefore, this ordinance is not applicable to the proposed project.

Los Angeles County Municipal Code Title 22, § 22.56.215 – Significant Ecological Areas

There are three SEAs that include 9,297.69 acres within the project area, the Santa Clara River SEA, Santa Susana Mountains/Simi Hills SEA, and Valley Oaks Savannah SEA (see Table A6 and Figure 5.1-7). Therefore, this ordinance is applicable to the proposed project.

Los Angeles County Municipal Code Title 22, § Chapter 22.44, Part 6 – Sensitive Environmental Resource Areas

The project area is not located within the Santa Monica Mountains Coastal Zone area and does not contain any Sensitive Environmental Resource Areas. Therefore, this ordinance is not applicable to the proposed project.

Newhall Ranch Specific Plan

All five Resource Conservation Objectives within the Newhall Ranch Specific Plan related to biological resources are relevant to the proposed project.

Municipal Code Sections 22.56.2050–22.56.2260

There is the potential for protected oak trees to be present on or within the vicinity of the project area. Oak trees are typically found in oak woodlands and other indigenous woodlands, but may also be found in urban areas as planted trees. Therefore, this ordinance is relevant to the evaluation of conflicts of the proposed project with local general plans, policies, and ordinances.

Habitat Conservation Plans and Natural Community Conservation Plans

HCPs and NCCPs were evaluated to determine applicability of any adopted or proposed HCPs or NCCPs in the project area. The boundaries of all HCPs/NCCPs were reviewed and compared to the project area boundary to determine their relevance. There are no HCPs or NCCPs with boundaries that intersect the project area. Therefore, the proposed project would result in no impacts related to conflicts with the provision of adopted state, regional, or local habitat conservation plans, and no mitigation would be required (Figure 5.1-8, *Habitat Conservation Plans [HCPs] and Natural Community Conservation Plans [NCCPs] Located in the Vicinity of the Project Area*).

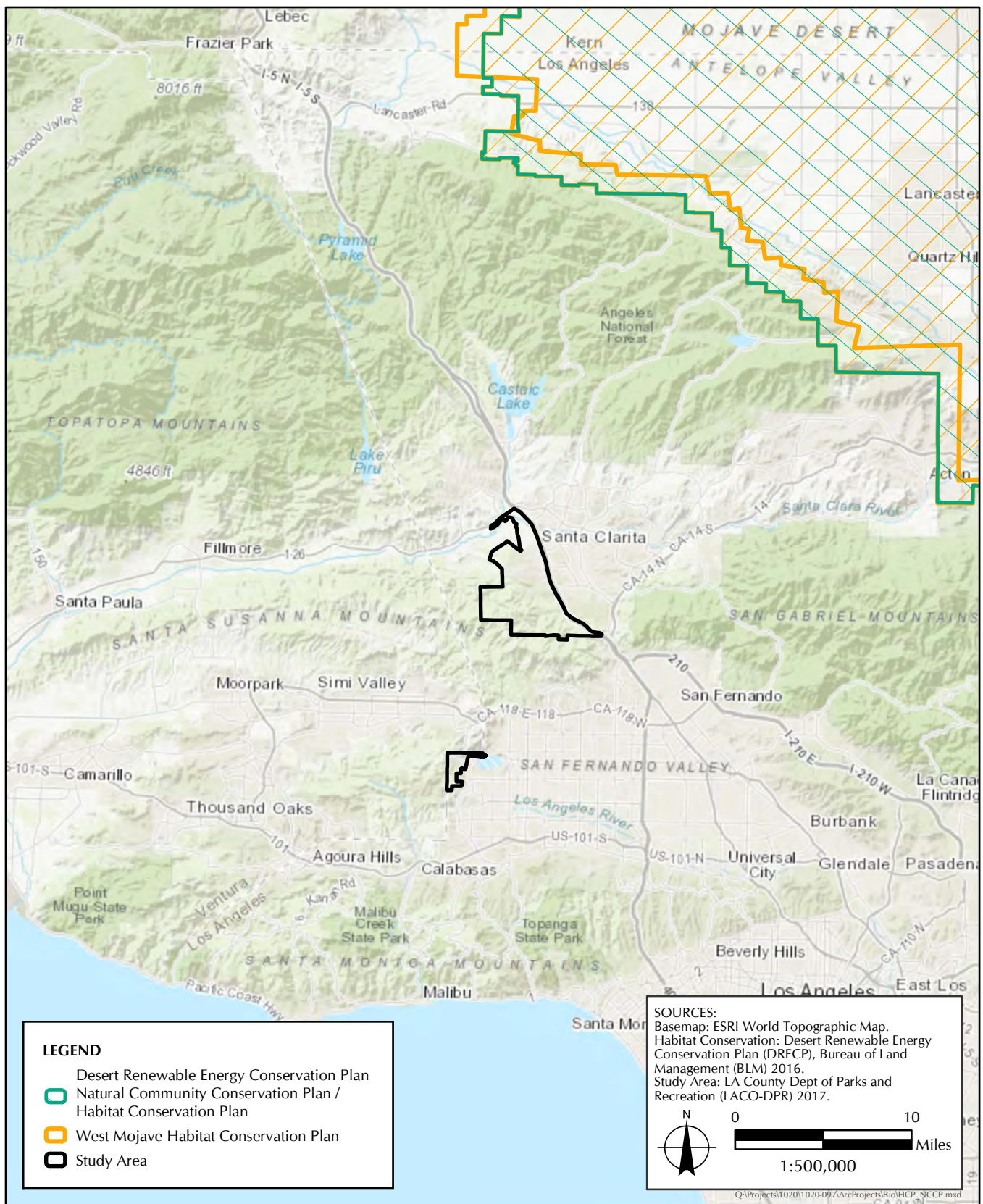


FIGURE 5.1-8
 Habitat Conservation Plans (HCPs) and
 Natural Community Conservation Plans (NCCPs) located in the Vicinity of the Project Area

5.2 IMPACT ANALYSIS

Proposed trail width within the proposed project varies between 3 and 12 feet. Therefore, spatial impact analysis for biological resources was based on a worst-case analysis using a maximum width of 12 feet and incorporating a 250-foot buffer to account for construction disturbances beyond the trail footprint.

The potential for the proposed project to result in impacts related to biological resources was analyzed in relation to the questions in Appendix G of the State CEQA Guidelines,³² as modified for the County. Would the project:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?
- Have a substantial adverse effect on any 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 effect on federally or state protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, and drainages) or waters of the United States, as defined by § 404 of the federal Clean Water Act or California Fish & Game code § 1600, et seq. through direct removal, filling, hydrological interruption, or other means?
- Interfere substantially with the movement of any 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?
- Convert oak woodlands (as defined by the state, oak woodlands are oak stands with greater than 10% canopy cover with oaks at least 5 inches in diameter measured at 4.5 feet above mean natural grade) or otherwise contain oak or other unique native trees (junipers, Joshuas, southern California black walnut, etc.)?
- Conflict with any local policies or ordinances protecting biological resources, including Wildflower Reserve Areas (L.A. County Code, Title 12, Ch. 12.36), the Los Angeles County Oak Tree Ordinance (L.A. County Code, Title 22, Ch. 22.56, Part 16), the SEAs (L.A. County Code, Title 22, § 22.56.215), and SERAs (L.A. County Code, Title 22, Ch. 22.44, Part 6)?
- Conflict with the provisions of an adopted state, regional, or local habitat conservation plan?

³² *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

Listed, Sensitive, and Locally Important Species

Approximately 3,832.93 acres of critical habitat for listed species (262.90 acres for arroyo toad, 152.89 for Braunton's milk-vetch, 2,707.88 for coastal California gnatcatcher, 471.73 for least bell's vireo, and 237.54 acres for southwestern willow flycatcher) would potentially be converted to trails and other recreation amenities or would be disturbed through associated construction activities as a result of the proposed project. Furthermore, there are CNDDDB records and suitable habitat for the federally and state-listed endangered unarmored threespine stickleback and San Fernando Valley spineflower, the CNPS rare plant slender mariposa lily, Plummer's mariposa lily, Newhall sunflower, Santa Susana tarplant, and sensitive wildlife species including western pond turtle, crotch bumble bee, western mastiff bat, coastal whiptail, and California glossy snake within 5 miles of the planned trail activities that may be disturbed through trail development and associated construction activities. Construction activities associated with trail development would include excavation, grading, and construction of trails and small structures at trailheads and trail staging areas. These construction activities have the potential to occur within areas of potentially suitable and occupied habitat for listed and special-status species. Direct impacts would occur during trail construction and would include direct loss of sensitive plant and/or wildlife species resulting from injury, death, or disturbance of these species. Additionally, direct impacts may occur through the direct habitat loss and fragmentation during construction of the trails and associated structures; introduction of non-native plants; and introduction of lighting, dust, and noise during construction. Further, indirect impacts resulting from the development of trails projects in the proposed project could occur as a result of increased human interaction with sensitive plants and wildlife.

This analysis of impacts of trails projects included in the proposed project to sensitive plant and wildlife species and their habitats and designated critical habitat is programmatic, and conservatively assumes that all species with critical habitat and/or CNDDDB records in the project area are present. The level of impact of subsequent projects would be subject to verification at the project level of environmental review pursuant to CEQA. Trail development projects would be subject to the provisions of the federal and state ESA, as well as Sections 1900–1913, 3511, 4150, 4700, 5050, and 5515 of the State Fish and Game Code and Sections 80071–80075 of the State Food and Agriculture Code.

Therefore, the proposed project would result in significant impacts to biological resources in regard to having a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. The consideration of mitigation measures would be required.

Riparian and State Sensitive Plant Communities

Approximately 1,606.49 acres of state designated sensitive plant communities (including 367.14 acres of riparian communities) would potentially be converted to trails and other recreation amenities or would be disturbed through associated construction activities as a result of the Trails Master Plan. Construction activities associated with trail development would include excavation, grading, and construction of trails and small structures at trailheads and trail staging areas. These construction activities have the potential to occur within sensitive natural communities on-site. Impacts associated with the disturbance of sensitive and riparian habitats would include direct loss and fragmentation of sensitive communities and riparian habitats as trails projects are developed

and the introduction of non-native plants that would degrade existing communities. Further, indirect impacts resulting from the development of trails projects in the proposed project could occur as a result of increased public access to sensitive plant communities.

This analysis of impacts of trails projects included in the proposed project to sensitive plant communities and riparian habitats is programmatic, and conservatively assumes that sensitive plant communities have the potential to exist throughout the project area and that all waterways have the potential to contain riparian habitat. The level of impact of subsequent projects would be subject to verification at the project level of environmental review pursuant to CEQA. Trail development projects would be subject to the provisions of Section 1600 of the State Fish and Game Code in which a Streambed Alteration Agreement would need to be obtained prior to the alteration of a state jurisdictional area.

Therefore, the proposed project would result in significant impacts to biological resources in regard to having a substantial adverse effect on any sensitive natural communities identified in local or regional plans, policies, regulations, or by CDFW or USFWS. The consideration of mitigation measures would be required.

Federally Protected Wetlands and Waterways

Approximately 367.19 acres of riparian communities that may be under CDFW jurisdiction, 458.30 acres of federally protected wetlands, and 56.32 miles of blueline drainages that may include waters of the United States would potentially be converted to trails and other recreation amenities or would be disturbed through associated construction activities as a result of the proposed project. Construction activities associated with trail development would include excavation, grading, and construction of trails and small structures at trailheads and trail staging areas. These construction activities have the potential to occur within and adjacent to state and federal wetlands and or waters of the United States on-site. Impacts would include disruption of streams and wetlands as new trails are developed and dredge and fill activities associated with trail development. Trail development projects would be subject to the provisions of Section 404 of the federal CWA. Dredge or fill in waters of the United States is subject to the regulatory authority of the USACE pursuant to Section 404 of the federal Clean Water Act. Trail development projects would also be subject to the provisions of Section 1600 of the State Fish and Game Code in which a Streambed Alteration Agreement would need to be obtained prior to the alteration of a state jurisdictional area.

Therefore, the proposed project would result in significant impacts to biological resources in regard to having a substantial adverse effect on federally or state protected wetlands or waters of the United States. The consideration of mitigation measures would be required.

Migratory Corridors and Nursery Sites

The project area is considered an important wildlife corridor as determined by the County General Plan. Within the County General Plan, the Santa Clara River and Santa Susana Mountains are identified as important corridors for wildlife movement, linking the Santa Monica Mountains, the San Gabriel Mountains, and Piru Lake in Ventura County. Trails and passive recreation use are an allowable use within SEAs. Although trail use would not conflict with the goals of the SEA program, new trail construction within an SEA would require consultation with the County of Los Angeles Department of Regional Planning and a Biological Technical Report prepared for SEATAC

review. Furthermore, nesting birds protected under the MBTA have the potential to be present throughout the project area.

Construction activities associated with trail development would include excavation, grading, and construction of trails and small structures at trailheads and trail staging areas. These construction activities have the potential to occur within areas used for native wildlife movement and within and adjacent to suitable nesting locations for native and migratory birds on-site. Impacts would include direct habitat removal that would disrupt nesting birds as new trails projects are developed, and introduction of lighting and noise during construction and operation that may interrupt wildlife movement and disturb nursery sites. Additionally, an increase in wildlife-human interactions as a result of the development of new trails projects may increase wildlife injury.

This analysis of impacts of trails projects included in the proposed project to wildlife corridors and nursery sites is programmatic, and conservatively assumes that wildlife movement areas and nesting birds may occur throughout the project area. The level of impact of subsequent projects would be subject to verification at the project level of environmental review pursuant to CEQA. Trail development projects would be subject to the provisions of the MBTA.

Therefore, the proposed project would result in significant impacts to biological resources in regard to interfering substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impeding the use of native wildlife nursery sites. The consideration of mitigation measures would be required.

Oak and Native Woodlands

Approximately 99.04 acres of state designated Southern Coast Live Oak Riparian Forest, 672.84 acres of California Walnut Woodland, 532.21 acres of Valley Oak Woodland and 226.95 acres of Southern Cottonwood Willow Riparian Forest would potentially be converted to trails or would be disturbed through associated construction activities as a result of the proposed project. Construction activities associated with trail development would include excavation, grading, and construction of trails and small structures at trailheads and trail staging areas. These construction activities have the potential to occur within oak and other native woodlands on-site or within the dripline of individual oak or other native trees. Impacts associated with the disturbance of oak and other native woodlands would include direct loss and fragmentation of woodlands as trails projects are developed, and the introduction of non-native plants that would degrade existing woodlands.

Therefore, the proposed project would result in significant impacts to biological resources in regard to converting oak woodlands or woodlands otherwise containing oak or other unique native trees. The consideration of mitigation measures would be required.

General Plans and Policies

The project area is not located within any Wildflower Reserve Areas or SERAs; therefore, it would not conflict with these policies. The Northlake Specific Plan does not contain any policies related to biological resources; therefore, the proposed project would not conflict with the policies of this plan. The proposed project would not result in significant impacts to biological resources related to conflicts with the County General Plan, Santa Clarita Valley Area Plan, or Newhall Ranch Specific Plan because trails and other recreation facilities are required to be designed consistent with the

County Trails Manual, which requires no net loss of habitat functions and values.³³ The application of the County Trails Manual to the individual trails projects within the proposed project would accomplish the objectives within these plans of minimizing impacts to the natural environment. Furthermore, the implementation of the proposed project would be beneficial to biological resources because it would direct visitors to the project area to designated areas for use rather than permit disorganized use of the land without acknowledgement and protection of environmentally sensitive areas.

The proposed project would not conflict with Los Angeles County Municipal Code Title 22, § 22.56.215 – Significant Ecological Areas because trails and recreation facilities are an allowed use in SEAs, and any trails project under the proposed project would be required to comply with the SEATAC CUP application process. The proposed project would not conflict with Municipal Code Sections 22.56.2050–22.56.2260 – Oak Tree Ordinance because trails and recreation facilities would be designed to avoid the removal or disturbance of any protected oak tree, and any trails project under the proposed project would be required to comply with the Los Angeles County Oak Tree Removal Permit application process should tree removal be necessary. Therefore, the proposed project would result in no impacts in regard to conflicts with local policies or ordinances protecting biological resources, and no mitigation would be required.

Habitat Conservation Plans and Natural Community Conservation Plans

The proposed project would result in no impacts to biological resources in regard to conflicting with the provisions of an adopted state, regional, or local habitat conservation plan. There are no HCPs or NCCPs with boundaries that intersect the project area. Therefore, the proposed project would result in no impacts related to conflicts with the provision of adopted state, regional, or local habitat conservation plans, and no mitigation would be required.

5.3 MITIGATION RECOMMENDATIONS

The following mitigation measures are recommended, as applicable, for ground-disturbing activities associated with trail construction and/or improvements within proposed project area. These measures, with proper implementation, would serve to avoid, minimize, or substantially reduce impacts to biological resources.

Mitigation Measure BIO-1

To mitigate potential impacts on listed, sensitive, and locally important species and their habitats, the County shall require that a habitat assessment by a qualified biologist take place using approved U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) protocols to identify suitable habitat for any listed, sensitive, and locally important species on-site. Where suitable and/or occupied habitat is determined to be present, mitigation shall be implemented such that there is no net loss of habitat functions or values. Opportunities for

³³ County of Los Angeles Department of Parks and Recreation. Adopted by the Board of Supervisors on May 17, 2011. Revised June 2013. County of Los Angeles Trails Manual. Available at: <https://trails.lacounty.gov/Files/Documents/69/LA%20County%20Trails%20Manual%20%28Revised%2006-2013%29.compressed.pdf>

achieving this performance standard, consistent with the provisions of the federal and state Endangered Species Acts (ESAs), may include:

- Demonstration that trail segment projects have been and will be designed, constructed, and maintained to avoid disturbance of any occupied habitat, potentially suitable habitat, and designated critical habitat for any listed, sensitive, or locally important species and to minimize impacts to native plant communities, wherever practicable and feasible.
- Consultation with USFWS and CDFW with regard to trail building activities within critical habitat and suitable habitat.
- Implementation of pre-construction habitat surveys to delineate occupied or suitable sensitive species' habitat to facilitate avoidance.
- Formal consultation with the USFWS will be required if a species afforded protection pursuant to the federal ESA is determined to be present as a result of focused protocol surveys. Formal consultation with the CDFW will be required if a species afforded protection pursuant to the state ESA is determined to be present as a result of focused protocol surveys.
- Altering the timing of construction to avoid seasons when sensitive species may be present (i.e., nesting bird season).
- Worker Education and Awareness Program to inform all construction workers of their responsibilities in regard to avoiding and minimizing impacts on sensitive biological resources.
- Designation of suitable habitat as off-limits during construction on all construction drawings and diagrams.
- Use of fencing and/or flagging to delineate environmentally sensitive areas as off-limits during trail construction.
- Use of on-site monitors for periods when trail construction will be undertaken within 250 feet of environmentally sensitive areas.
- Where temporary impacts to critical habitat may occur, the development and implementation of a habitat restoration plan shall be required.

Where permanent impacts to critical habitat may occur, compensatory mitigation such as purchasing credits at a mitigation bank, purchasing off-site lands, or similar shall be required.

Mitigation Measure BIO-2

To mitigate potential impacts on riparian, state-sensitive plant communities, state protected wetlands, and federally protected wetlands and waters of the United States, the County shall require that plant community mapping be conducted by a qualified biologist with experience classifying plant communities in Southern California and/or a formal jurisdictional delineation be conducted by a certified wetland delineator to identify any state or federally protected wetlands, riparian areas, and state-sensitive plant communities on-site. Where state designated sensitive plant communities, riparian habitat, state or federally protected wetlands, or waters of the United States are determined to be present, mitigation measures shall be implemented such that there is no net loss of habitat functions or values. Opportunities for achieving this performance standard, consistent with the provisions of Section 1600 of the State Fish and Game Code and Section 404 of the Federal Clean Water Act, may include:

- Demonstration that trail segment projects have been and will be designed, constructed, and maintained to avoid disturbance of any state-sensitive plant communities or riparian habitat, or any state or federally protected wetlands or waters of the United States wherever practicable and feasible.
- Pre-construction habitat surveys to delineate sensitive plant communities and riparian habitats to facilitate avoidance.
- Consultation with CDFW with regard to trail building activities within state-sensitive plant communities.
- Use of on-site monitors for periods when trail construction will be undertaken within 250 feet of oak woodlands, native woodlands, and 100 feet of the dripline of native trees.
- Where temporary impacts may occur to sensitive plant communities, the development and implementation of a habitat enhancement and restoration plan shall be required.
- Where permanent impacts may occur to sensitive plant communities, compensatory mitigation such as purchasing credits at mitigation bank, purchasing off-site lands, or similar shall be required.
- Where impacts are located in areas subject to the jurisdiction of the CDFW pursuant to Section 1600 of the State Fish and Game Code, obtain a Streambed Alteration Agreement prior to commencing ground-disturbing activities or any other alternation of a lake or stream.
- Where impacts are located in areas subject to the jurisdiction of the U.S. Army Corps of Engineers pursuant to Section 404 of the Federal Clean Water Act, obtain authorization to complete the required work pursuant to a Nationwide or individual permit.
- Where impacts are subject to the jurisdiction of the Regional Water Quality Control Board, obtain a Waiver of Water Quality Certification or Notice of Applicability of Waste Discharge Requirement permit.

Mitigation Measure BIO-3

To avoid impacts to nesting birds protected under the Migratory Bird Treaty Act (MBTA), trail construction should take place outside of the nesting bird season, which generally occurs between February 15 and September 1. If trail construction activities cannot avoid the nesting bird season, pre-construction nesting bird surveys shall be conducted by a qualified biologist a maximum of three days prior to the start of construction. Should nesting birds be discovered within or adjacent to the construction footprint during these surveys, a non-disturbance buffer shall be placed on the active nest as determined by the biologist to prevent impacts to nesting birds. Construction shall be halted within the non-disturbance buffer of 250 feet of songbirds and 500 feet for raptors until the biologist has determined that the young have fledged and are flying well enough to avoid the proposed construction activities.

Mitigation Measure BIO-4

To mitigate potential impacts on oak and other native woodlands, the County shall require that for every protected tree that must be removed, the same species shall be replaced at a minimum of a 1:1 ratio. Compensatory mitigation for protected trees in the jurisdiction of the County may include replacement at a 3:1 ratio for trees with a diameter at breast height (DBH) of 8 inches or more at an

appropriate mitigation site, and replacement at a 10:1 ratio for heritage oaks. Monitoring for at least one year would be required to meet success criteria.

Level of Significance after Mitigation

Implementation of mitigation measures BIO-1 through BIO-4 would reduce impacts to biological resources related to an substantial adverse effect on listed, sensitive, and locally important species, riparian and state sensitive plant communities, federally protected wetlands and waterways, migratory corridors and nursery sites, and oak and native woodlands to below the level of significance.

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TABLE A1
LISTED PLANT AND WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Common Name	Scientific Name	Status	Habitat	Potential to Occur within the Project Area
Plants				
beach spectaclepod	<i>Dithyrea maritima</i>	ST, CRPR:1B.1	Seashores, coastal sand dunes; Elevation: < 50 meters (m).	Low. No suitable habitat within or in the near vicinity of the project area.
Braunton's milk-vetch*	<i>Astragalus brauntonii</i>	FE, CRPR: 1B.1	Chaparral, closed-cone coniferous forest, coastal scrub, limestone, valley and foothill grassland; often in recent burned or disturbed areas; usually in sandstone soil with carbonate layers; occurs between 4 and 640 meters (m) above mean sea level (MSL).	Very high. Several CNDDDB records for this species exist within and in the immediate vicinity of the project area. Project also within critical habitat
California Orcutt grass*	<i>Orcuttia californica</i>	FE, SE, CRPR: 1B.1	Vernal pool, wetland; occurs 49–2,165 feet (ft) above MSL.	Moderate. CNDDDB records for this species exist within five miles of the project area, which may contain suitable habitat.
coastal dunes milk-vetch	<i>Astragalus tener</i> var. <i>titi</i>	FE, SE, CRPR: 1B.1	Moist sandy depressions (vernal pool) near coast, coastal bluffs, dunes; Elevation: < 20 m.	Low. No suitable habitat within or in the near vicinity of the project area.
Lyon's pentachaeta	<i>Pentachaeta lyonii</i>	FE, SE, 1B.1	Coastal scrub, grassland, chaparral openings; Elevation: < 400 m.	Low. CNDDDB records for this species were not observed within 5 miles of the project area.
Nevin's barberry*	<i>Berberis nevinii</i>	FE, SE, CRPR: 1B.1	Chaparral, cismontane woodland, coastal scrub, riparian scrub, in sandy or gravelly soils; occurs 274–825 m above MSL.	Moderate. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
salt marsh bird's-beak	<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	FE, SE, CRPR: 1B.2	Coastal salt marsh; Elevation: < 10 m.	Low. The project area is outside of the elevation range for this species.
San Fernando Valley spineflower*	<i>Chorizanthe parryi</i> var. <i>Fernandina</i>	FC, SE, CRPR: 1B.1	Coastal scrub in sandy soil, valley and foothill grassland; occurs 150–1,220 m above MSL.	Very high. Several CNDDDB records for this species exist within and in the immediate vicinity of the project area.
slender-horned spineflower*	<i>Dodecahema leptoceras</i>	FE, SE, CRPR: 1B.1	Chaparral, cismontane woodland, coastal scrub (alluvial fan); often in sandy soil; occurs 200–760 m above MSL.	Low. The project area is outside of the elevation range for this species.
Ventura Marsh milk-vetch	<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	FE, SE , CRPR: 1B.1	Disturbed areas, open, sand to gravel; Elevation: < 100 m.	Low. The project area is outside of the elevation range for this species.
Invertebrates				
quino checkerspot butterfly	<i>Euphydryas editha quino</i>	SE	Scrubland	Low. CNDDDB records for this species were not observed within 5 miles of the project area.
Riverside fairy shrimp	<i>Streptocephalus woottoni</i>	SE	Endemic to Western Riverside, Orange and San Diego Counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season.	Low. CNDDDB records for this species were not observed within 5 miles of the project area.
vernal pool fairy shrimp*	<i>Branchinecta lynchi</i>	FT	Vernal pools from the Transverse Range north into southern Oregon.	Moderate. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
Fish				
Santa Ana sucker*	<i>Catostomus santaanae</i>	ST	Endemic to Los Angeles Basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae.	Moderate. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
steelhead - southern California DPS	<i>Oncorhynchus mykiss irideus</i>	SE	From Santa Maria River south to southern extent of range (San Mateo Creek in San Diego Co.). Southern steelhead likely have greater physiological tolerances to warmer water & more variable conditions.	Low. CNDDDB records for this species were not observed within 5 miles of the project area. Project area does not contain suitable waters.
tidewater goby	<i>Eucyclogobius newberryi</i>	SE	Brackish water habitats along the Calif coast from Agua Hedionda Lagoon, San Diego Co. to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water & high oxygen levels.	Low. CNDDDB records for this species were not observed within 5 miles of the project area.
unarmored threespine stickleback*	<i>Gasterosteus aculeatus williamsoni</i>	FE, SE	Clear water systems Los Angeles and Santa Barbara Counties with a low current.	Very high. CNDDDB records for this species exist within the Castaic project area.
Reptiles				
southern rubber boa	<i>Charina umbratica</i>	ST	Woodlands, forest clearings, patchy chaparral, meadows, and grassy savannas, generally not far from water; also riparian zones in arid canyons and sagebrush in some areas.	Moderate. CNDDDB records for this species were not observed; however, suitable habitat is present.

TABLE A1
LISTED PLANT AND WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Common Name	Scientific Name	Status	Habitat	Potential to Occur within the Project Area
Amphibians				
arroyo toad*	<i>Anaxyrus californicus</i>	FE	Desert wash, riparian scrub, riparian woodland, south coast flowing waters, south coast standing waters; mating and egg-laying at shallow stream margins from March to July; adults require overflow pools adjacent to the inflow channel of third- to greater-order streams that are free of predatory fishes in which to breed; occurs between 0–900 m above MSL.	Very high. Critical habitat for this species exists within the project area.
California red-legged frog*	<i>Rana draytonii</i>	FT	Humid forests, woodlands, grasslands, coastal scrub, and streamsides with plant cover, especially in lowlands and foothills.	High. CNDDDB records for this species exist near tributaries to the Santa Clara River, which flows through the area.
Birds				
bald eagle	<i>Haliaeetus leucocephalus</i>	SE	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Low. CNDDDB records for this species were not observed within 5miles of the project area. Suitable habitat is limited for nest.
bank swallow*	<i>Riparia riparia</i>	ST	Riparian scrub, riparian woodland; nests in steep sand, dirt, or gravel banks, in burrows dug near the top of the bank, along the edge of inland water, along coast, in gravel pits, or road embankments; diet primarily flying insects.	Moderate. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
California condor	<i>Gymnogyps californianus</i>	FE, SE	Large range of habitat from pacific beaches to mountains forest and meadows. Will nest in caves along cliff faces.	Moderate. CNDDDB records for this species were not observed; however suitable habitat is present.
coastal California gnatcatcher*	<i>Polioptila californica californica</i>	FT	Coastal bluff scrub, coastal scrub; dry coastal slopes, washes, and mesas; cone-shaped nests built in shrubs; areas of low plant growth (about 1 m high); strongly associated with sage scrub; generally avoids crossing unsuitable habitat.	Very high. CNDDDB records and critical habitat for this species exist within the project area.
least Bell’s vireo*	<i>Vireo bellii pusillus</i>	FE, SE	Riparian forest, riparian scrub, riparian woodland; forages exclusively in riparian habitats primarily on insects; dense riparian understory shrubbery required for nesting; nests usually 1 m off ground.	Very high. CNDDDB records and critical habitat for this species exist within the project area.
Swainson’s hawk*	<i>Buteo swainsoni</i>	ST	Riparian, cropland/hedgerow, desert, grassland/herbaceous, savanna, mixed woodland; may be found in grasslands and other open habitats in winter and migration.	Moderate. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
tricolored blackbird*	<i>Agelaius tricolor</i>	SCT	Cattail or tule marshes; forages in fields, farms. Breeds in large freshwater marshes, in dense stands of cattails or bulrushes. Forages in open habitats such as farm fields, pastures, cattle pens, large lawns.	High. CNDDDB records and suitable habitat for this species exist within 5 miles of the project area.
western snowy plover	<i>Charadrius lexandrinus nivosus</i>	ST	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Low. No suitable habitat within or in the near vicinity of the project area.
western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	FT, SE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, lower story of blackberry, nettles, or wild grape.	Moderate. CNDDDB records for this species were not observed, however suitable habitat is present.
Mammals				
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	FE, ST	Grassland, oak savanna and arid scrubland in the southern Sacramento Valley, Salinas Valley, San Joaquin Valley and adjacent foothills, south to the Mojave Desert. Associated with fine-textured, sandy, friable soils.	Low. No suitable habitat within or in the near vicinity of the project area.

NOTE: * Denotes species observed within a 5 mile buffer of Project boundaries.

KEY: FD = federal delisted species; FC = federal candidate; FE = federal endangered; FT = federal threatened; SCT = State candidate threatened; SE = State endangered; SR = State Rare; ST = State threatened; California Native Plant Society (CRPR) 1A=Plants Presumed Extinct in California; CRPR: 1B= Plants Rare, Threatened, or Endangered in California and Elsewhere; 2= Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere; 3=Plants About Which we Need More Information; 4=Plants of Limited Distribution.

THREAT RANK: 0.1: Seriously endangered in California 0.2; Fairly endangered in California. 0.3: Note very endangered in California.

TABLE A2
SENSITIVE WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Common Name	Scientific Name	Status	Habitat	Potential to Occur within the Project Area
Arachnids				
Gertsch's socalchemmis spider	<i>Socalchemmis gertschi</i>	CSA	Known from only two localities in Los Angeles County: Brentwood (type locality) and Topanga Canyon. Coastal scrub.	Low. CNDDDB records for this species were not observed within 5 miles of the project area. No suitable habitat present.
Invertebrates				
Crotch bumble bee*	<i>Bombus crotchii</i>	CSA	Warm and dry sites, including the inner Coast Range of California and margins of the Mojave Desert.	Moderate. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
globose dune beetle	<i>Coelus globosus</i>	CSA	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico. Inhabits foredunes and sand hummocks; it burrows beneath the sand surface and is most common beneath dune vegetation.	Low. CNDDDB records for this species were not observed within 5 miles of the project area. No suitable habitat present.
monarch butterfly - California overwintering population*	<i>Danaus plexippus pop. 1</i>	CSA	Grassland/herbaceous, old field, sand/dune, shrubland/chaparral, suburban/orchard, woodland-hardwood, woodland-mixed, coastal California conifer or eucalyptus groves. Adults rely on coastal non-native woodlands (especially Eucalyptus) for winter roosting aggregations, larval (caterpillar) stage forages exclusively on milkweed (<i>Asclepias</i> spp.), which occurs in grassland, wetland and riparian areas.	Moderate. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
sandy beach tiger beetle	<i>Cicindela hirticollis grvida</i>	CSA	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico. Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action.	Low. CNDDDB records for this species were not observed within 5 miles of the project area. No suitable habitat present.
Santa Monica grasshopper	<i>Trimerotropis occidentiloides</i>	CSA	Known only from the Santa Monica Mountains; Found on bare hillsides and along dirt trails in chaparral.	Low. Species limited to Santa Monica Mountains.
Fish				
arroyo chub*	<i>Gila orcuttii</i>	CSC	Aquatic, south coast flowing waters; freshwater; benthic; headwaters, creeks, intermittent streams, small to medium rivers; spawns in stream pools; diet primarily aquatic invertebrates.	High. CNDDDB records for this species exist near tributaries to the Santa Clara River, which flows through the area.
Santa Ana speckled dace	<i>Rhinichthys osculus ssp. 3</i>	CSC	Headwaters of the Santa Ana and San Gabriel rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temperatures of 17-20 degrees C. Usually inhabits shallow cobble and gravel riffles.	Low. CNDDDB records for this species were not observed within 5 miles of the project area. No suitable habitat present.
Amphibians				
Coast Range newt*	<i>Taricha torosa</i>	CSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats and will migrate over 1 kilometer (km) to breed in ponds, reservoirs and slow moving streams.	High. CNDDDB records for this species were observed within 5 miles of project area. Suitable habitat present.
foothill yellow-legged frog	<i>Rana boylei</i>	CSC	Rocky streams, rivers with rocky substrate; found in forests, chaparral, and woodlands.	High. CNDDDB records for this species exist near tributaries to the Santa Clara River, which flows through the area.
San Gabriel slender salamander	<i>Batrachoseps gabrieli</i>	CSA	Known only from the San Gabriel Mountains. Found under rocks, wood, fern fronds and on soil at the base of talus slopes. Most active on the surface in winter and early spring.	Low. CNDDDB records for this species were not observed within 5 miles of the project area.
western spadefoot*	<i>Spea hammondi</i>	CSC	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pool, wetland; benthic, burrowing in or using soil; it prefers shortgrass plains, sandy or gravelly soil (e.g., alkali flats, washes, alluvial fans). It is fossorial and breeds in temporary rain pools and slow-moving streams.	Very high. Several CNDDDB records for this species exist within the project area.
Reptiles				
California glossy snake*	<i>Arizona elegans occidentalis</i>	CSC	Inhabits arid scrub, rocky washes, grasslands, chaparral.	Very high. Several CNDDDB records for this species exist within the project area.
California mountain kingsnake (San Bernardino population)	<i>Lampropeltis zonata (parvirubra)</i>	WL	Restricted to the San Gabriel and San Jacinto Mountains of Southern California. Inhabits a variety of habitats, including valley-foothill hardwood, coniferous, chaparral, riparian, and wet meadows.	Low. CNDDDB records for this species were not observed within 5 miles of project area. Suitable habitat is present.

TABLE A2
SENSITIVE WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Common Name	Scientific Name	Status	Habitat	Potential to Occur within the Project Area
coast horned lizard*	<i>Phrynosoma blainvillii</i>	CSC	Found in a variety of vegetation types, including coastal scrub, coastal bluff scrub, valley and foothill grassland, chaparral, cismontane woodland, pinyon and juniper woodlands, riparian scrub, riparian woodland and desert wash; in inland areas, this species is restricted to areas with pockets of open microhabitat, created by disturbance.	Very high. Several CNDDDB records for this species exist within the project area.
coastal whiptail*	<i>Aspidoscelis tigris stejnegeri</i>	CSA	Occurs in habitats that are primarily hot and dry open areas with sparse foliage. Found in chaparral, woodland, and riparian areas.	High. Several CNDDDB records for this species exist within the immediate vicinity of the project area.
rosy boa	<i>Charina trivirgata</i>	CSA	Inhabits rocky outcrops and rocky shrublands in the southwestern U.S. and Mexico. Habitats are diverse and include desert, arid scrub, brushland, sandy plains, rocky slopes, and chaparral-covered foothills, particularly where moisture is available, as around springs, streams, and canyon floors.	Moderate. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
silvery legless lizard*	<i>Anniella pulchra pulchra</i>	CSC	Chaparral, coastal dunes, coastal scrub; burrows in loose soil, especially in semi-stabilized sand dunes and also in other areas with sandy soil, in areas vegetated with oak or pine-oak woodland, or chaparral; also wooded stream edges, and occasionally desert-scrub; bush lupine often is an indicator of suitable conditions; often found in leaf litter, under rocks, logs, and driftwood.	Moderate. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
south coast gartersnake	<i>Thamnophis sirtalis ssp.</i>	CSC	Mixed woodland, grassland, coniferous forest, dunes, brushland, generally in the vicinity of ponds or flowing water.	Moderate. CNDDDB records were not observed within 5 miles of the project; however, suitable habitat is present.
two-striped garter snake*	<i>Thamnophis hammondi</i>	CSC	Marsh and swamp, riparian scrub, riparian woodland, wetland; generally found in or near permanent fresh water, often along streams with rocky beds bordered by willows and other riparian vegetation, including mountain slopes and desert oases; requires dense riparian vegetation; burrowing in or using soil.	High. Several CNDDDB records for this species exist within the immediate vicinity of the project area.
western pond turtle*	<i>Emys marmorata</i>	CSC	Aquatic, artificial flowing waters, marsh and swamp, south coast flowing waters, south coast standing waters, wetland; habitat includes permanent and intermittent waters of rivers, creeks, small lakes and ponds, man-made stock ponds and sewage-treatment ponds; nesting sites on sandy banks and bars, in fields, or sunny spots up to a few hundred feet from water.	High. Several CNDDDB records for this species exist within the immediate vicinity of the project area.
Birds				
American white pelican	<i>Pelecanus erythrorhynchos</i>	CSC	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	Low. CNDDDB records and suitable habitat were not observed within 5 miles of the project.
black-crowned night heron	<i>Nycticorax nycticorax</i>	CSA	Found in wetland habitats including estuaries, marshes, lakes, streams, and reservoirs.	Moderate. CNDDDB records were not observed within 5 miles of the project, however suitable habitat is present.
Brewer's sparrow	<i>Spizella breweri</i>	CSA	Arid sagebrush.	Moderate. CNDDDB records were not observed within 5 miles of the project, however suitable habitat is present.
burrowing owl*	<i>Athene cunicularia</i>	CSC	Found in open grasslands, agricultural and range lands, and desert habitats and often are associated with burrowing animals, specifically the California ground squirrel; can also inhabit grass, forbs, and shrub stages of pinyon and ponderosa pine habitats.	Very high. Several CNDDDB records for this species exist within the project area.
California gull	<i>Larus californicus</i>	WL	Breed on sparsely vegetated islands and levees and lakes and rivers. Forage in open areas, scrublands, pastures, orchards, meadows, and farms. Will forage along the Pacific Coast during winter.	Low. CNDDDB records and suitable habitat were not observed within 5 miles of the project.
California horned lark	<i>Eremophila alpestris actia</i>	CSA	Grassland/herbaceous; open areas with sparse low herbaceous vegetation or scattered low shrubs; agricultural fields; nests in hollow on ground next to grass tuft, manure, or clod of soil.	Very high. CNDDDB records for this species exist within the project area.
California spotted owl	<i>Strix occidentalis occidentalis</i>	CSC	Found in closed-canopy, uneven-aged, late succession and old-growth forest.	Low. CNDDDB records and suitable habitat were not observed within 5 miles of the project.

TABLE A2
SENSITIVE WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Common Name	Scientific Name	Status	Habitat	Potential to Occur within the Project Area
Caspian tern	<i>Hydroprogne caspia</i>	CSA	Found on both fresh and salt water including large lakes, coastal waters, beaches, lagoons, rivers, and bays.	Low. CNDDDB records and suitable habitat were not observed within 5 miles of the project.
Clark's marsh wren	<i>Cistothorus palustris clarkae</i>	CSC	Restricted to freshwater and brackish marshes dominated by bulrushes or cattails.	Moderate. CNDDDB records were not observed within 5 miles of the project; however, suitable habitat is present.
Cooper's hawk*	<i>Accipiter cooperii</i>	CSA	Cismontane woodland, riparian forest, riparian woodland, upper montane coniferous forest, urban areas; nests in tall trees; usually builds new nest on horizontal limb near trunk or in crotch, 20–59 ft above ground; may use virtually all habitats for foraging.	High. Several CNDDDB records for this species exist within the immediate vicinity of the project area.
Costa's hummingbird	<i>Calypte costae</i>	CSA	Occurs in desert scrub in the Sonoran and Mojave Deserts, chaparral, and sage scrub areas in coastal California.	Low. CNDDDB records and suitable habitat were not observed within 5 miles of the project.
double-crested cormorant	<i>Phalacrocorax auritus</i>	WL	Freshwater. Will breed in coast and large inland lakes.	Low. CNDDDB records and suitable habitat were not observed within 5 miles of the project.
ferruginous hawk	<i>Buteo regalis</i>	WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	Moderate. CNDDDB records were not observed within 5 miles of the project, however suitable habitat is present.
golden eagle*	<i>Aquila chrysaetos</i>	FP;WL	Mountain hills and cliffs. Habitats ranging from arctic to desert including tundra, shrublands, grasslands, coniferous forests, farmlands and along rivers and streams.	High. CNDDDB records and suitable habitat were observed within 5 miles of the project area.
gray vireo	<i>Vireo vicinior</i>	CSC	Brushy mountain slopes, mesas, open chaparral, scrub oak and junipers.	Moderate. CNDDDB records for this species were not observed; however, suitable habitat is present
Lawrence's goldfinch	<i>Spinus lawrencei</i>	CSA	Oak-pine woods and chaparral. Breeds locally in a variety of habitats.	Moderate. CNDDDB records for this species were not observed; however, suitable habitat is present
loggerhead shrike	<i>Lanius ludovicianus</i>	CSC	Cropland/hedgerow, desert, grassland/herbaceous, old field, savanna, shrubland/chaparral. Nests in shrubs or small trees.	Moderate. CNDDDB records for this species were not observed; however, suitable habitat is present
merlin	<i>Falco columbarius</i>	WL	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches. Clumps of trees or windbreaks are required for roosting in open country.	Low. CNDDDB records and suitable habitat were not observed within 5 miles of the project.
mountain plover	<i>Charadrius montanus</i>	CSC	Chenopod scrub, valley and foothill grassland. Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Short vegetation, bare ground and flat topography. Prefers grazed areas and areas that support burrowing rodents.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area, which may contain suitable habitat.
northern cardinal	<i>Cardinalis cardinalis</i>	WL	Extremely rare resident along the Colorado River. Dense brushy river bottom thickets, well-vegetated dry washes & dense desert scrub.	Low. CNDDDB records and suitable habitat were not observed within 5 miles of the project.
northern harrier	<i>Circus cyaneus</i>	CSC	Marshes, fields, and prairies.	Low. CNDDDB records did not record this species within 5 miles of the project area.
oak titmouse	<i>Baeolophus inornatus</i>	CSA	Oak woods, pinyon-juniper, locally river woods, and shade trees	Low. CNDDDB records and suitable habitat were not observed within 5 miles of the project.
olive-sided flycatcher	<i>Contopus cooperi</i>	CSC	Conifer forest, burns, clearings.	Low. CNDDDB records did not record this species within 5 miles of the project area.
osprey	<i>Pandion haliaetus</i>	WL	Ocean shore, bays, fresh-water lakes, and larger streams. Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	Low. CNDDDB records did not record this species within 5 miles of the project area. No suitable habitat present
prairie falcon	<i>Falco mexicanus</i>	CSA	Grasslands, shrub-steppe, deserts, open areas below 3,048 meters (m) in elevation.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area, which may contain suitable habitat.
rufous hummingbird	<i>Selasphorus rufus</i>	CSA	Forest edges, streamsides, and mountain meadows.	Low. CNDDDB records for this species were not observed within 5 miles of the project area
snowy egret	<i>Egretta thula</i>	CSA	Marshes, swamps, ponds, and shores. Widespread in many types of aquatic habitats including fresh and salt water.	Low. CNDDDB records for this species were not observed within 5 miles of the project area.
southern California rufous-crowned sparrow*	<i>Aimophila ruficeps canescens</i>	CSC	Shrubland/chaparral, coastal sage dominated by sagebrush, coastal bluff scrub. Nests on the ground or low in the branches of trees or shrubs.	Moderate. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
Vaux's swift	<i>Chaetura vauxi</i>	CSC	Open sky over forest, lakes, and rivers. Will feed low over water. Nests in coniferous and mixed forest.	Low. CNDDDB records for this species were not observed within 5 miles of the project area.

TABLE A2
SENSITIVE WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Common Name	Scientific Name	Status	Habitat	Potential to Occur within the Project Area
white-faced ibis	<i>Plegadis chihi</i>	WL	Fresh marshes, irrigated land, and tules. Will forage in shallow water.	Low. CNDDDB records for this species were not observed within 5 miles of the project area.
white-tailed kite*	<i>Elanus leucurus</i>	CFP	Cropland/hedgerow, grassland/herbaceous, savanna, hardwood woodland. Nests in trees.	High. Several CNDDDB records for this species exist within the immediate vicinity of the project area.
yellow warbler	<i>Setophaga petechial</i>	CSC	Riparian woodland. Commonly in open to medium-density woodlands and forests with a heavy brush understory in breeding season. Nests often placed in deciduous saplings or shrubs 2-16 ft above ground. Territory includes tall trees for foraging and dense understory for nesting.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area, however may contain suitable habitat.
yellow-billed magpie	<i>Pica nuttalli</i>	CSA	Stream groves, scattered oaks, ranches, and farms.	Low. CNDDDB records for this species were not observed within 5 miles of the project area. No suitable habitat present.
yellow-breasted chat	<i>Icteria virens</i>	CSC	Riparian forest, riparian scrub, riparian woodland; nests in bushes, brier tangles, vines, and low trees, generally in dense vegetation less than 7 ft above ground.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area, however, may contain suitable habitat.
Mammals				
American badger*	<i>Taxidea taxus</i>	CSC	Found in arid, open habitats, particularly grasslands, savannahs, mountain meadows, and desert scrub openings; needs friable soils for digging and open, uncultivated ground; occurs at low to moderate slopes; has been associated with Joshua tree woodland and pinyon-juniper habitats.	Moderate. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
California leaf-nosed bat*	<i>Macrotus californicus</i>	CSC	Desert riparian, desert wash, desert scrub, desert succulent shrub, alkali desert scrub, palm oasis; day roosts in mine tunnels or caves, occasionally buildings and bridges.	Moderate. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
cave myotis	<i>Myotis velifer</i>	CSC	Evergreen or pine-oak forest and pine forest. Also found at lower elevations in riparian habitats near desert scrub.	Low. CNDDDB records for this species were not observed within 5 miles of the project area. No suitable habitat present.
hoary bat	<i>Lasiurus cinereus</i>	CSA	Forages over a wide range of habitats, but prefers open habitats with access to trees for roosting, and water. Primarily roosts in trees and foliage. Ranges throughout most of California.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area, however may contain suitable habitat.
lodgepole chipmunk	<i>Neotamias speciosus speciosus</i>	CSA	Chaparral, upper montane coniferous forest; usually found in open-canopy forests. Southern California elevation range 16,398 to 9,688 ft above MSL.	Low. The project area is outside of the elevation range for this species.
Los Angeles pocket mouse	<i>Perognathus longimembris brevinasus</i>	CSC	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Open ground with fine sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.	Low. CNDDDB records for this species were not observed within 5 miles of the project area. No suitable habitat present.
pallid bat	<i>Antrozous pallidus</i>	CSC	Occurs throughout the American west; chaparral, coastal scrub, desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, valley and foothill grassland; roosts in rock crevices, caves, mineshafts, under bridges, in buildings, and within hollow trees; consumes insects and other invertebrates; roosts in small colonies of 10 to 100 and emerges late at night to forage on the ground.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area; however, suitable habitat may be present.
San Diego black-tailed jackrabbit	<i>Lepus californicus bennettii</i>	CSC	Coastal scrub; open country with scattered thickets or patches of shrubs. Rests by day in shallow depression.	Moderate. CNDDDB records for this were not observed within 5 miles of the project area; however, suitable habitat may be present.
San Diego desert woodrat*	<i>Neotoma lepida intermedia</i>	CSC	Coastal scrub; sagebrush scrub; chaparral; often associated with large cactus patches; also found in rocky outcroppings and boulder hillsides within chaparral and oak woodland habitats.	Moderate. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
silver-haired bat	<i>Lasionycteris noctivagans</i>	CSA	Primarily a coastal and montane forest dweller feeding over streams, ponds and open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes and rarely under rocks. Needs drinking water.	Moderate. CNDDDB records for this were not observed within 5 miles of the project area; however, suitable habitat may be present.
southern grasshopper mouse	<i>Onychomys torridus ramona</i>	CSC	Chenopod scrub; consumes soft-bodied insects including cutworms and grasshoppers; lives in arid habitats but requires no open water sources; the species forages under and within shrubs and crosses open areas.	Moderate. CNDDDB records for this were not observed within 5 miles of the project area; however, suitable habitat may be present.

TABLE A2
SENSITIVE WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Common Name	Scientific Name	Status	Habitat	Potential to Occur within the Project Area
spotted bat*	<i>Euderma maculatum</i>	CSC	Occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests. Feeds over water and along washes. Feeds almost entirely on moths. Prefers rock crevices in cliffs or caves for roosting.	Very high. CNDDDB records for this species and suitable habitat exist within the project area.
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	CSC	In a variety of locations that range from coniferous forest and woodlands, deciduous riparian woodland, semi-desert and montane shrublands.	Moderate. CNDDDB records for this were not observed within 5 miles of the project area; however, suitable habitat may be present.
western mastiff bat*	<i>Eumops perotis californicus</i>	CSC	Found in the southwestern United States, generally away from human development; this species can utilize a variety of habitat types including chaparral, oak woodland, pine forests, agricultural areas, and desert washes; roosts primarily in vertical rock crevices on cliffs; common in open habitats when foraging.	High. Several CNDDDB records for this species and suitable habitat exist within the immediate vicinity of the project area.
western red bat	<i>Lasiurus blossevillii</i>	CSC	Found in cities and forest. Will roosts primarily in the foliage of trees and bushes.	Moderate. CNDDDB records for this were not observed within 5 miles of the project area; however, suitable habitat may be present.
western small-footed myotis	<i>Myotis ciliolabrum</i>	CSA	Found in open grasslands and foothills.	Low. CNDDDB records for this species were not observed; however, suitable habitat may be present
Yuma myotis	<i>Myotis yumanensis</i>	CSA	Inhabits juniper and riparian woodlands to desert regions in proximity to open water. Roosts in caves, attics, buildings, mines, and bridges.	Moderate. CNDDDB records were not observed within 5 miles of the project; however, suitable habitat is present.

KEY: CSC = California Species of Special Concern; CSA = California Special Animal; FP = Fully Protected; WL = CDFW watchlist
NOTE: *denotes species observed within 5 miles of Project Area. California Special Animal (CSA) is a general term that refers to all of the taxa the CNDDDB is interested in tracking, regardless of their legal or protection status. The Department of Fish and Wildlife considers the taxa on this list to be those of greatest conservation need. For those species with statuses identified by USFWS and/or CDFW, the status is noted. Those species included on the list due to identification by other governmental agencies and/or non-governmental conservation organizations are listed as CSA.
SOURCE: California Department of Fish and Wildlife. 2015. Rarefind 5: A Database Application for the Use of the California Department of Fish and Game Natural Diversity Data Base. Sacramento, CA.

TABLE A3
SENSITIVE PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Common Name	Scientific Name	Status	Habitat	Potential to Occur within the Project Area
Blochman's dudleya*	<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	CRPR: 1B.1	Open, rocky slopes, often serpentine or clay-dominated; Elevation: < 450 meters (m).	Moderate. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
Brewer's calandrinia	<i>Calandrinia breweri</i>	CRPR: 4.2	Sandy to loamy soil, disturbed sites, burns; Elevation: < 1,200 m.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
California androsace	<i>Androsace elongata</i> ssp. <i>acuta</i>	CRPR: 4.2	Chaparral, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, valley and foothill grassland; occurs between 150–1,200 m above mean sea level (MSL).	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
California screw moss	<i>Tortula californica</i>	CRPR: 1B.2	Chenopod scrub, valley and foothill grassland, moss growing on sandy soil; Elevation: 10–1,460 m.	Low. CNDDDB records for this species do not exist within 5 miles of the project area. Suitable habitat is not expected.
Catalina mariposa lily	<i>Calochortus catalinae</i>	CRPR: 4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; occurs between 15 and 700 m above MSL.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
chaparral nolina*	<i>Nolina cismontana</i>	CRPR: 1B.2	Dry chaparral of coastal mountains; Elevation: 200–1,300 m.	High. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
chaparral ragwort*	<i>Senecio aphanactis</i>	CRPR: 2B.2	Chaparral, cismontane woodland, coastal scrub; sometimes alkaline soils; occurs between 15 and 800 m above MSL.	High. CNDDDB records for this species exist within the immediate vicinity of the project area.
Clokey's cryptantha	<i>Cryptantha clokeyi</i>	CRPR: 1B.2	Mojavean desert scrub; occurs between 725–1,365 m above MSL.	Low. The project area does not contain Mojavean desert scrub habitat.
club-haired mariposa lily	<i>Calochortus clavatus</i> var. <i>clavatus</i>	CRPR: 4.3	Usually in serpentinite, clay, rocky soils. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; occurs 75–1,300 m above MSL.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
conejo buckwheat	<i>Eriogonum crocatum</i>	CRPR: 1B.2	Chaparral, coastal scrub, valley and foothill grassland; Conejo volcanic outcrops and rocky sites; Elevation 90–580 m.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
Coulter's goldfields*	<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	CRPR: 1B.1	Saline places, vernal pools; Elevation: < 1,000 m.	Moderate. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
Coulter's matilija poppy	<i>Romneya coulteri</i>	CRPR: 4.2	Dry washes, canyons; Elevation: < 1,200 m.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
Coulter's saltbush	<i>Atriplex coulteri</i>	CRPR: 1B.2	Alkaline or clay soils, open sites, scrub, coastal bluff scrub; Elevation: < 500 m.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
Davidson's bush-mallow*	<i>Malacothamnus davidsonii</i>	CRPR: 1B.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland; occurs 185 to 855 m above MSL.	High. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
Davidson's saltscale	<i>Atriplex serenana</i> var. <i>davidsonii</i>	CRPR: 1B.2	Bluffs; Elevation: < 200 m.	Low. CNDDDB records for this species do not exist within 5 miles of the project area. Suitable habitat is not expected.
decumbent goldenbush	<i>Isocoma menziesii</i> var. <i>decumbens</i>	CRPR: 1B.2	Sandy soil, chaparral, coastal scrub, landward side of dunes, hillsides, arroyos; Elevation: < 200 m.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
dune larkspur	<i>Delphinium parryi</i> ssp. <i>blochmaniae</i>	CRPR: 1B.2	Chaparral, coastal dunes (maritime), and on rocky areas; Elevation 18–30 m.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
fragrant pitcher sage	<i>Lepechinia fragrans</i>	CRPR: 4.2	Chaparral; occurs 20–1,310 m above MSL.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
Greata's aster	<i>Symphyotrichum greatae</i>	CRPR: 1B.3	Occurs in chaparral, broadleaf upland forest, cismontane woodland, lower montane coniferous forest, and riparian woodland on mesic soils; occurs 300 to 2,010 m above MSL.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
Hubby's phacelia	<i>Phacelia hubbyi</i>	CRPR: 4.2	Chaparral, coastal scrub, valley and foothill grassland in gravelly, rocky, and talus soils; occurs between 0 and 1,000 m above MSL.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
Humboldt lily	<i>Lilium humboldtii</i> ssp. <i>humboldtii</i>	CRPR: 4.2	Chaparral, cismontane woodlands, lower montane coniferous forest.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
island mountain-mahogany	<i>Cercocarpus betuloides</i> var. <i>blancheae</i>	CRPR: 4.3	Closed-cone coniferous forest, chaparral; occurs 30–600 m above MSL.	Low. CNDDDB records for this species do not exist within 5 miles of the project area. Suitable habitat is not expected.
Late-flowered mariposa-lily*	<i>Calochortus fimbriatus</i>	CRPR: 1B.3	Chaparral, foothill woodlands.	High. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.

TABLE A3
SENSITIVE PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Common Name	Scientific Name	Status	Habitat	Potential to Occur within the Project Area
Lewis' evening-primrose	<i>Camissoniopsis lewisii</i>	CRPR: 3	Grassland, sandy or clay soils, coastal; Elevation: < 300 m.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
Malibu baccharis	<i>Baccharis malibuensis</i>	CRPR: 1B.1	Chaparral, grassy openings; Elevation: 50-300 m.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
many-stemmed dudleya*	<i>Dudleya multicaulis</i>	CRPR: 1B.2	Chaparral, Valley Grassland, Coastal Sage Scrub.	High. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
mesa horkelia*	<i>Horkelia cuneata</i> var. <i>puberula</i>	CRPR: 1B.1	Chaparral, cismontane woodland, coastal shrub; occurs between 70 and 810 m above MSL.	High. CNDDDB records for this species exist within 5 miles of the project area, which may contain suitable habitat.
Mojave phacelia	<i>Phacelia mohavensis</i>	CRPR: 4.3	Sandy or gravelly soil. Cismontane woodland, lower montane coniferous forest, meadows and seeps, pinyon and juniper woodland; occurs 1,400–2,500 m above MSL.	Low. CNDDDB records for this species do not exist within 5 miles of the project area. Suitable habitat is not expected.
Mt. Pinos larkspur	<i>Delphinium parryi</i> ssp. <i>purpureum</i>	CRPR: 4.3	Chaparral, Mojavean desert scrub, pinyon and juniper woodland; occurs between 1,000 and 2,600 m above MSL.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However suitable habitat may be present.
Newhall sunflower*	<i>Helianthus inexpectatus</i>	CRPR: 1B.1	Marsh and swamp, meadow and seep, wetland, riparian woodland. Occurs around 305 m above MSL.	Moderate. CNDDDB records for this species exist within 5 miles of the project area. Suitable habitat is expected within the vicinity for the project area.
ocellated Humboldt lily	<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	CRPR: 4.2	Found in openings; chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland; occurs between 30 and 1,800 m above MSL.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
Ojai navarretia*	<i>Navarretia ojaiensis</i>	CRPR: 1B.1	Chaparral, coastal scrub, valley and foothill grassland. Openings in shrublands or grasslands. Occurs between 275 and 620 m above MSL.	Moderate. CNDDDB records for this species exist within 5 miles of the project area. Suitable habitat is expected within the vicinity for the project area.
Palmer's grapplinghook*	<i>Harregonella palmeri</i>	CRPR: 4.2	Clay soils, open grassy areas within shrubland; chaparral, coastal scrub, valley and foothill grassland; occurs between 20 and 955 m above MSL.	High. CNDDDB records for this species exist within the immediate vicinity of the project area.
paniculate tarplant	<i>Deinandra paniculata</i>	CRPR: 4.2	Usually found in mesic soils, sometimes sandy soils; coastal scrub, valley and foothill grassland, vernal pools; occurs between 25 and 940 m above MSL.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
Parish's brittlescale	<i>Atriplex parishii</i>	CRPR: 1B.1	Chenopod scrub, playas, vernal pools.	Low. CNDDDB records for this species do not exist within 5 miles of the project area. Suitable habitat is not expected.
Parry's spineflower	<i>Chorizanthe parryi</i> var. <i>parryi</i>	CRPR: 1B.1	Sandy or rocky openings, chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; occurs 902–4,003 feet (ft) above MSL.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
Peirson's morning-glory	<i>Calystegia peirsonii</i>	CRPR: 4.2	Chaparral, chenopod scrub, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland; occurs 30 to 1,500 m above MSL.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
Piute Mountains navarretia	<i>Navarretia setiloba</i>	CRPR: 1B.1	Cismontane woodland, pinyon and juniper woodlands, valley and foothill grassland. Red clay soils, other clay soils, or on gravelly loam. Occurs between 285 and 2100 m above MSL.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
Plummer's baccharis	<i>Baccharis plummerae</i> ssp. <i>plummerae</i>	CRPR: 4.3	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
Plummer's mariposa-lily*	<i>Calochortus plummerae</i>	CRPR: 4.2	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland, in granitic rocky soil; occurs 100 to 1,700 m above MSL.	High. CNDDDB records for this species exist within the immediate vicinity of the project area.
Robinson's pepper-grass	<i>Lepidium virginicum</i> var. <i>robinsonii</i>	CRPR: 4.3	Chaparral and coastal scrub habitat. Occurs between 1 and 885 m above MSL.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
Ross' pitcher sage	<i>Lepechinia rossii</i>	CRPR: 1B.2	Chaparral habitats; occurs between 305 and 790 m above MSL.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
round-leaved filaree	<i>California macrophylla</i>	CRPR: 1B.1	Cismontane woodland, valley and foothill grassland; clay soils; occurs 49–3,937 ft above MSL.	Low. CNDDDB records for this species do not exist within 5 miles of the project area.
Salt Spring checkerbloom	<i>Sidalcea neomexicana</i>	CRPR: 2B.2	Chaparral, coastal scrub, lower montane coniferous forest, Mohavean desert scrub, playas.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
Santa Susana tarplant*	<i>Hemizonia minthornii</i>	CRPR: 1B	Chaparral, Coastal sage scrub.	High. CNDDDB records for this species exist within the immediate vicinity of the project area.

TABLE A3
SENSITIVE PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Common Name	Scientific Name	Status	Habitat	Potential to Occur within the Project Area
short-joint beavertail*	<i>Opuntia basilaris</i> var. <i>brachyclada</i>	CRPR: 1B.2	Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodlands, riparian woodland; occurs 425 to 1,800 m above MSL.	High. CNDDDB records for this species exist within the immediate vicinity of the project area.
slender clarkia	<i>Clarkia exilis</i>	CRPR: 4.3	Cismontane woodland; occurs between 120 and 1,000 m above MSL.	Low. CNDDDB records for this species do not exist within 5 miles of the project area.
slender mariposa-lily*	<i>Calochortus clavatus</i> var. <i>gracilis</i>	CRPR: 1B.2	Chaparral, coastal scrub, valley and foothill grassland; occurs 320 to 1,000 m above MSL.	Very High. Several CNDDDB records for this species exist in and within the immediate vicinity of the project area.
small-flowered morning-glory	<i>Convolvulus simulans</i>	CRPR: 4.2	Clay soils and serpentinite seeps; chaparral (openings), coastal scrub, valley and foothill grassland; occurs between 30 and 700 m above MSL.	Low. CNDDDB records for this species do not exist within 5 miles of the project area.
Sonoran maiden fern	<i>Thelypteris puberula</i> var. <i>sonorensis</i>	CRPR: 2B.2	Meadows and seeps.	Low. CNDDDB records for this species do not exist within five mile of the project area.
south coast saltscale	<i>Atriplex pacifica</i>	CRPR: 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, and playas.	Low. CNDDDB records for this species do not exist within 5 miles of the project area. No suitable habitat is present.
Southern California black walnut	<i>Juglans californica</i>	CRPR: 4.2	Chaparral, coastal dunes, coastal scrub, marshes and swamps (coastal salt), found in sandy sometimes rocky soils; occurs between 5 and 300 m above MSL.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
southwestern spiny rush	<i>Juncus acutus</i> ssp. <i>leopoldii</i>	CRPR: 4.2	Moist saline places, salt marshes, alkaline seeps; Elevation: generally < 300 m.	Low. CNDDDB records for this species do not exist within 5 miles of the project area.
western bristly scaleseed	<i>Spermolepis lateriflora</i>	CRPR: 2A	Rocky or sandy desert scrub. Elevation: 365-670 m.	Low. CNDDDB records for this species do not exist within 5 miles of the project area.
western dichondra	<i>Dichondra occidentalis</i>	CRPR: 4.2	Among rocks, shrubs, in coastal scrub, chaparral, oak woodland; Elevation: < 520 m.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.
western spleenwort	<i>Asplenium vespertinum</i>	CRPR: 4.2	Base of overhanging boulders; Elevation: 200-1,000 m.	Low. CNDDDB records for this species do not exist within 5 miles of the project area.
white pygmy-poppy	<i>Canbya candida</i>	CRPR: 4.2	Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodlands. Sandy places. Occurs between 600 and 1,460 m.	Low. CNDDDB records for this species do not exist within 5 miles of the project area.
white rabbit-tobacco*	<i>Pseudognaphalium leucocephalum</i>	CRPR: 2B.2	Coastal Sage Scrub, Chaparral.	Moderate. CNDDDB records for this species exist within 5 miles of the project area. Suitable habitat is expected within the vicinity for the project area.
white-veined monardella	<i>Monardella hypoleuca</i> ssp. <i>hypoleuca</i>	CRPR: 1B.3	Oak woodland, chaparral; Elevation: < 1,500 m.	Moderate. CNDDDB records for this species do not exist within 5 miles of the project area. However, suitable habitat may be present.

NOTE: * Denotes species observed within 5 miles of the project boundaries.

KEY: California Native Plant Society (CRPR) 1A=Plants Presumed Extinct in California; CRPR: 1B= Plants Rare, Threatened, or Endangered in California and Elsewhere; 2= Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere; 3=Plants About Which we Need More Information; 4=Plants of Limited Distribution.

SOURCE: California Department of Fish and Wildlife. 2015. Rarefind 5: A Database Application for the Use of the California Department of Fish and Game Natural Diversity Data Base. Sacramento, CA. & Califoria Native Plant Society Inventory.

TABLE A4
RIPARIAN HABITAT AND STATE SENSITIVE PLANT COMMUNITIES
REPORTED IN THE PROJECT AREA

Community Name	State Sensitivity Rank	Acres Reported in the Area
California Walnut Woodland	S2.1	672.84
Southern Riparian Scrub	S1.1	41.15
Southern Willow Scrub	S2.1	34.31
Southern Coast Live Oak Riparian Forest	S4	99.04
Southern Cottonwood Willow Riparian Forest	S3	227
Valley Oak Woodland	S2.1	532.21
Total		1,606

TABLE A5
FEDERALLY PROTECTED WETLANDS AND WATERWAYS
REPORTED IN THE PROJECT AREA

Wetland Type	National Wetlands Inventory (Acres)
Freshwater Emergent Wetland	5.11
Freshwater Forested/Shrub Wetland	209.98
Freshwater Pond	0.49
Riverine	242.73
Total	458.30

TABLE A6
SIGNIFICANT ECOLOGICAL AREAS PRESENT IN THE PROJECT AREA

Significant Ecological Area Name	Acres
Santa Clara River	256.92
Santa Susana Mountains/Simi Hills	8,878.72
Valley Oaks Savannah	162.05
Total	9,037.00