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County of Los Angeles CHIEF EXECUTIVE OFFICE

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WILLIAM T FUJIOKA
Chief Executive Officer

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First District

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Second District

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Third District

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Fourth District

MICHAEL D. ANTONOVICH
Fifth District

January 3, 2013

To: Supervisor Mark Ridley-Thomas, Chairman
Supervisor Gloria Molina
Supervisor Zev Yaroslavsky
Supervisor Don Knabe
Supervisor Michael D. Antonovich

From: William T Fujioka
Chief Executive Officer

STATUS MEMO ON PREPARING FOR LIKELY EFFECTS OF CLIMATE CHANGE

On July 3, 2012, the Board of Supervisors approved a motion which instructed the Chief Executive Officer, in conjunction with the Director of Public Health; the Director of Public Works, including its division of Building and Safety and Water Resources; the Director of Beaches and Harbors; the Fire Chief; and Director of Planning, and in cooperation with applicable utilities, to provide the following information to the Board no later than six months from approval of the motion:

- Review the information provided by the recently released study of the University of California, Los Angeles' (UCLA) "Climate Change in the Los Angeles Region" project, as well as other relevant information;
- Document the steps they are taking to prepare for the projected effects of climate change; and
- Recommend any additional actions that the County should take to help the region prepare for the likely effects of climate change.

The motion was amended to also instruct the Chief Executive Officer to report back to the Board with a cost analysis associated with the items listed above.

Departments have begun their review and analysis of the first UCLA Climate Change study, which focused on temperature. UCLA will be issuing subsequent studies regarding precipitation, cloud cover, wind, hydrology, sea level rise and Sierra Nevada

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snow pack. The study on sea level rise is expected in January 2013 and the study on Santa Ana winds is expected in January or February of 2013. County departments will need to review and incorporate the findings from these studies into their climate change planning and future reports back to the Board.

Attachments A and B are preliminary responses prepared by the Departments of Public Works (DPW) and Regional Planning (DRP) to the first UCLA Climate Change study. The DPW response focuses on its review of the UCLA project and business practices it is implementing and pursuing that will lead to more sustainable infrastructure. The DRP response focuses on work DRP has done related to the Countywide General Plan Update and related efforts, including coordination with the Internal Services Department (ISD) on the preparation of the Communitywide Climate Action Plan for the unincorporated areas. DRP has also been working with the CEO Office of Emergency Management on developing an All Hazards Mitigation Plan, for which the County is seeking Federal Emergency Management Agency (FEMA) approval. In addition, DRP noted that the State Office of Planning and Research is organizing a climate change conference to be held in late January/early February in San Luis Obispo, which will also provide additional information on climate change adaptation strategies.

The Department of Public Health (DPH) indicates that it has reviewed the UCLA Climate Change study on temperature and is developing matrices of various impacts and potential initiatives to address those impacts from the public health perspective.

Beaches and Harbors will review and comment on UCLA's sea level rise study, which is due out later this month. In the interim, the Department, as a member of and through the American Shore and Beach Preservation Association (ASBPA), is reviewing various ongoing studies on the subject of climate change and the associated rise in sea level. Beaches and Harbors provided additional information about the impact of sea level rise in Attachment C.

The Fire Department (Fire) continues to monitor both the natural environment and the long range weather trends. Fire has revised its protocols on rehabilitation, dehydration and rehydration during physical exercise. Fire is working with DPH to implement a public education campaign related to temperature increases and public health and safety. Fire is also reassessing other policies, procedures and regulations related to increased temperatures, fire susceptibility and fire behavior to improve tactical training. Additional information is provided in Attachment D.

Each Supervisor
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Page 3

Attachment E is a recent informational memo prepared by ISD on the 2012 Energy Upgrade California program. This memo provides information on a regional energy efficiency improvements program which targets Los Angeles County residents and is administered by ISD.

Climate change is a major field of study which continues to evolve as researchers develop methods to predict climate change on a more localized level. We anticipate that the County's actions to prepare for the likely effects of climate change will be an ongoing effort for some time to come, as additional studies are produced and mitigation measures are identified. We recommend that there be a semi-annual report back to the Board regarding the County's climate change activities. We will continue working with the departments cited in the motion to review the upcoming studies, identify mitigation measures and to prepare cost analyses on those mitigation measures.

If you have any questions or need further information, please contact Rita Robinson at (213) 893-2477 or at rrobinson@ceo.lacounty.gov .

WTF:EFS:cg

Attachments

c: Executive Office, Board of Supervisors
 County Counsel
 Beaches and Harbors
 Fire
 Internal Services Department
 Public Health
 Public Works
 Regional Planning



COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

GAIL FARBER, Director

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ALHAMBRA, CALIFORNIA 91802-1460

December 27, 2012

IN REPLY PLEASE
REFER TO FILE: **WR-0**

TO: William T Fujioka
Chief Executive Officer

Attention Ellen Sandt

FROM: Gail Farber
Director of Public Works

A handwritten signature in cursive script that reads "Gail Farber".

**JULY 3, 2012, BOARD MOTION, AGENDA ITEM 55-A
REPORT ON THE STEPS TAKEN TO PREPARE FOR THE POTENTIAL EFFECTS
OF CLIMATE CHANGE**

On July 3, 2012, the Board approved a motion instructing the Chief Executive Officer, in conjunction with the Directors of Public Health, Public Works, Beaches and Harbors, Regional Planning, and the Fire Chief, to review the University of California, Los Angeles' "Climate Change in the Los Angeles Region" project, document the steps being taken to prepare for the projected effects of climate change, and report back to the Board with a cost analysis on the steps being taken and recommended additional actions for the County to take to help the region prepare for the likely effects of climate change.

Attached is our report of the business practices that are being implemented and pursued by Public Works to address climate change. If you have any questions, please contact me at (626) 458-4002 or your staff may contact Chris Stone at (626) 458-6100 or at cstone@dpw.lacounty.gov.

LTT:abc

P:\wrd\HYDROLOGY\BOARD LETTERS\Board Motion 55-A Draft 12 19 12 (draft 5).doc

Attach.

cc: Chief Executive Office
Executive Office
Department of Beaches and Harbors
Department of Public Health
Department of Regional Planning
Fire Department

**REPORT ON THE ACTIONS TAKEN
BY THE COUNTY OF LOS ANELES DEPARTMENT OF PUBLIC WORKS
TO ADDRESS CLIMATE CHANGE**

The University of California, Los Angeles' (UCLA) "Climate Change in the Los Angeles Region" project consists of seven parts: temperature, precipitation, cloud cover, wind, hydrology, sea level rise, and Sierra Nevada snow pack. As of December 15, 2012, only the first part of the project, *The Mid-Century Warm In The Los Angeles Region*, addressing temperature has been completed. The localized effects of climate change are still being studied by UCLA and other entities. The ability to predict climate change effects down to the localized area has only been recently available through the ground-breaking methodology developed by the authors of the UCLA study. And while using some of the world's fastest supercomputers, some of the calculations in UCLA's study took over nine months to perform. Since this is only the first of seven parts of the project, the anticipated effects of climate change will be better understood with project completion. The first part of the project can be found on the City of Los Angeles' website at www.c-change.la. Public Works is committed to implementing changes to its projects and programs to make them more sustainable when further findings from the UCLA "Climate Change in the Los Angeles Region" project or other relevant studies have been completed.

Public Works has taken the following actions to address climate change:

- On September 18, 2012, your Board approved Public Works entering into a Memorandum of Agreement with the United States Department of Interior - Bureau of Reclamation (Reclamation) to conduct the Los Angeles Basin Stormwater Conservation Study (LA Basin Study). The LA Basin Study is a long-range planning effort that has the objectives of evaluating the potential of existing Public Works facilities, other interrelated facilities, and new facilities as well as assessing operational changes to increase the capture of stormwater for water supply. Detailed scientific, engineering, and economic analyses will be conducted to help address future water supply demands and challenges as a result of climate change. The LA Basin Study is estimated to cost \$2.4 million funded under a cost-share arrangement of \$1 million of in-kind services by Reclamation and \$1.4 million funded by Public Works and other local cost-share partners. Work on the LA Basin Study will commence in January 2013 and will take two years to complete.
- Public Works has adopted and implemented a civil infrastructure sustainability rating system called *EnvlSlon™* from the Institute for Sustainable Infrastructure (ISI). *EnvlSlon™* will be used to assess its infrastructure in terms of economic, environmental, and social impacts while looking for opportunities to integrate sustainable practices. In particular, it will be used to identify the potential risks and vulnerabilities of its infrastructure from long-term climate change. Further, it will assist Public Works with proactively planning infrastructure systems to be

resilient to the consequences of long-term climate change, perform adequately, or be altered to adapt to changing climate conditions.

- Public Works will continue to identify, assess, and implement sustainable projects to reduce its carbon emission footprint. The following are examples of projects that have been recently completed or initiated:
 1. Public Works constructed a 0.75 kilowatt solar plant to provide renewable energy to operate some of its facilities and is evaluating other opportunities to use solar plants to operate groundwater pumping stations.
 2. As part of its commitment to efficiency and sustainability, Public Works obtained the Leadership in Energy and Environmental Design (LEED) Gold Certification for its 12-story headquarters building. Public Works continues to look for opportunities to implement green and sustainable solutions for the operations and maintenance of all of its buildings.
- Public Works is investigating the best technologies available for use in its diverse on-and off-road fleet of vehicles/equipment. Older diesel and gasoline-powered vehicles/equipment will be replaced with eco-friendly vehicles/equipment with the latest available technologies including electric, hybrid, and compressed natural gas. When Public Works needs to purchase off-road vehicles, we will purchase equipment with original equipment manufactured diesel particulate filters to reduce particulates emitted into the atmosphere.
- The County's Green Building Code will be revised/amended to mitigate for the effects of climate change based on new scientific information and analyses. New practices for its field staff will evolve with more scientific information and a better understanding of the effects of climate change.
- Through the County's Low-Impact Development (LID) Ordinance, Public Works requires new developments to comply with its LID standards. LID incorporates small, multifunctional, cost-effective landscape features, called Best Management Practices (BMPs), to manage storm runoff along with its quality through retention and redistribution. LID improves the quality and quantity of vegetation, which moderates the climate globally and locally by regulating greenhouse gasses and lowers heat island effects that tend to occur within urbanized areas. Similarly, LID creates healthy soils which lock up carbon, provides natural water filtration, increases groundwater supplies, and reduces the demands on flood control facilities. All of this can lower carbon emission of facilities and operations.

AGN. NO. ____

MOTION BY SUPERVISOR ZEV YAROSLAVSKY

July 3, 2012

Researchers from UCLA recently released the first in a series of pending reports that together will document the projected environmental shifts that climate change will bring to Los Angeles County. This first study, called "Mid-Century Warming in the Los Angeles Region," indicates that all regions in the County are likely to get warmer. The most significant impacts are expected during the summer, and in areas that are already the hottest.

As a result, over the next three decades, valleys and inland areas are expected to experience up to five times the number of extreme hot days and the frequency of extreme heat events in coastal locations and within the Los Angeles basin is projected to double or triple. Even under aggressive greenhouse gas reduction scenarios, temperatures are still likely to increase throughout the L.A. Region, although by 60% less than if greenhouse gas emissions are not dramatically reduced.

The UCLA research team's upcoming studies will detail likely changes to precipitation, winds, snowpack, and other key climate conditions that can affect wildfire patterns, water availability, and energy demand.

In short, this series of studies shows that climate change is not just a global

MOTION

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RIDLEY-THOMAS _____

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ANTONOVICH _____

YAROSLAVSKY _____

phenomenon, it is a local reality that will have important ramifications for L.A. County. The responsible step is therefore to begin preparing for those changes now, so that communities, governments, utilities, non-profits, and first responders can adapt to those changes before the impacts are fully upon us. The recently released study, and the others soon to follow in UCLA's "Climate Change in the Los Angeles Region" project, can and should help inform that effort.

I, THEREFORE, MOVE that the Board of Supervisors instruct the CEO to, in conjunction with the Department of Public Health; the Department of Public Works, including its divisions of Building & Safety and Water Resources; Beaches & Harbors; the Fire Department; and the Department of Regional Planning; and in cooperation with applicable utilities:

- 1) Review the information provided by the Climate Change in the Los Angeles Region project, as well as other relevant information;
- 2) Document the steps they are taking to prepare for the projected effects of climate change;
- 3) Recommend any additional actions that the County should take to help the region prepare for the likely effects of climate change; and,
- 4) Provide this information in a report to the Board of Supervisors no later than six months from today.

BS S:\Motions\Adaptation

VI. MISCELLANEOUS

- 55. Additions to the agenda which were posted more than 72 hours in advance of the meeting, as indicated on the supplemental agenda. (12-9995)**
- 55-A. Recommendation as submitted by Supervisor Yaroslavsky: Instruct the Chief Executive Officer, in conjunction with the Director of Public Health; the Director of Public Works, including its divisions of Building and Safety and Water Resources; the Director of Beaches and Harbors, the Fire Chief, and the Director of Planning, and in cooperation with applicable utilities, to provide the following information to the Board no later than six months from approval of this motion:**

Review the information provided by the recently released study of the in University of California, Los Angeles' "Climate Change in the Los Angeles Region" project, as well as other relevant information;

Document the steps they are taking to prepare for the projected effects of climate change; and

Recommend any additional actions that the County should take to help the region prepare for the likely effects of climate change. (12-3126)

Eric Preven addressed the Board.

Supervisor Antonovich made a suggestion to amend Supervisor Yaroslavsky's motion to instruct the Chief Executive Officer to report back to the Board with a cost analysis on the steps they are taking to prepare for the projected effects of climate change, and on additional actions recommended for the County to take to help the region prepare for the likely effects of climate change. Supervisor Yaroslavsky accepted Supervisor Antonovich's amendment.

On motion of Supervisor Yaroslavsky, seconded by Supervisor Knabe, this item was approved as amended by Supervisor Antonovich.

Ayes: 5 - Supervisor Molina, Supervisor Ridley-Thomas, Supervisor Knabe, Supervisor Antonovich and Supervisor Yaroslavsky

Attachments: [Motion by Supervisor Yaroslavsky](#)
[Report](#)
[Video 1](#)
[Audio 1](#)
[Video 2](#)
[Audio 2](#)

**REPORT ON THE ACTIONS TAKEN
BY THE DEPARTMENT OF REGIONAL PLANNING
TO ADDRESS CLIMATE CHANGE**

The Department of Regional Planning has reviewed and will continue to review the studies by the Climate Change in the Los Angeles Region project, as well as other relevant information as they become available. The Department will use the studies to inform appropriate amendments to the Countywide General Plan, which is the long-range policy guide for growth and development for the unincorporated areas. In addition, the Department will continue to coordinate with other County departments, and regional and State agencies, such as the Southern California Association of Governments (SCAG), Metro and the State Office of Planning and Research (OPR) on the development of policies and guidelines that address climate change adaptation, as well as greenhouse gas emission reduction strategies and sustainable approaches to land use and transportation.

The Department of Regional Planning has identified the following sections in the Countywide General Plan Update that can be further informed by the climate change adaptation studies:

- Draft Land Use Element

The purpose of the Land Use Element is to designate the location and extent of uses of land. The Draft Land Use Element includes strategies that discourage development in areas with hazards, environmental and resource constraints, such as Very High Fire Hazard Severity Zones, Tsunami Hazard Areas, Dam and Reservoir Inundation Areas, and Hillside Management Areas. The Hazard, Environmental and Resource Constraints Model is a tool in the Draft Land Use Element that identifies areas with constraints, and classifies them based on level of severity. The classification system is not cumulative. For example, if an area is part of a Very High Fire Hazard Severity Zone (Class I) and a Significant Ecological Area (Class II), it is mapped as Class II. The purpose of the Hazard, Environmental and Resource Constraints Model is to guide the development of land use policies for the unincorporated communities through community-based planning efforts, such as the Antelope Valley Area Plan Update. It is also a tool to raise awareness to the public of potential site constraints and regulations. As climate change adaptation is planning for changes that are expected to occur, such as increased fire and flood risk, the General Plan Update works toward reducing potential development in these high-risk areas and facilitating development in safer areas, while not constraining overall growth.

The Draft Land Use Element also encourages development in areas with existing infrastructure, access to community services, and transit opportunities.

Combined, these strategies also reduce greenhouse gas emissions by reducing vehicle miles traveled and promoting efficiency in development.

- Draft Safety Element

The purpose of the Safety Element is to reduce the potential risk of death, injuries, and economic damage resulting from natural and man-made hazards. The Draft Safety Element includes a discussion of the potential increase of flood and inundation hazards, and wildfires due to climate change impacts. The Department staff has worked with the CEO Office of Emergency Management to ensure consistency between the Draft Safety Element and the update to the County's All Hazards Mitigation Plan, and has and will continue to work with County departments, such as the Fire Department and Public Works, to ensure consistency between all safety and other climate change adaptation related efforts.

- Draft Air Quality Element/Climate Action Plan

The Draft Air Quality Element summarizes air quality issues and outlines the goals and policies in the General Plan that will improve air quality and reduce greenhouse gas emissions. The Air Quality Element includes a discussion of Global Warming Solutions Act of 2006 (AB 32), and highlights the County's Environmental and Energy Program and commitment to prepare a Communitywide Climate Action Plan.

The Department has initiated efforts to complete the Communitywide Climate Action Plan for the unincorporated areas. The effort will build off the work recently completed by ISD to develop a greenhouse gas emissions inventory and forecast, and an analysis and quantification of candidate greenhouse reduction measures for the unincorporated areas. The final phase of this effort entails the development of the Plan, stakeholder outreach on climate change issues and the amendment to the Countywide General Plan.

Other efforts in the Department related to climate change include: climate change policies in the recently adopted Santa Clarita Valley Area Plan Update (*One Valley One Vision*); proposed policies on renewable energy in the General Plan Update and Antelope Valley Area Plan Update; the Draft Renewable Energy Ordinance, which establishes regulations and permit requirements that support and facilitate the responsible utilization of the County's solar and wind resources; the approved Healthy Design Ordinance, which promotes active transportation; and ongoing coordination with the Department of Public Works on updates to the Green Building Ordinances and Technical Manual and the study and implementation of strategies within Transit Oriented Districts.

Beaches and Harbors:

Department representatives attended the American Shore and Beach Preservation Association's (ASBPA) annual conference this year and saw several presentations on sea level rise and climate change, one of which is summarized in the following video:

<http://www.youtube.com/watch?v=-gstw44DeSI&feature=youtu.be>

In that video, Professor Gary Griggs, Director of Institute of Marine Sciences and Distinguished Professor of Earth and Planetary Sciences, University of California, Santa Cruz, discusses a new report by the National Research Council on sea-level rise along the west coast. Professor Griggs explains that over the last 20 years, sea level rise has accelerated to nearly twice as fast as it has been rising over the last 100 years. Uncertainties make precise predictions difficult, but, for most of the California coastline, by 2030, the average sea-level rise values are projected to be about six inches. By 2050, 12 inches of rise are projected and 36 inches by 2100.

Importantly, Professor Griggs pointed out that many west coast communities already experience coastal erosion, flooding and inundation due to El Niño elevated sea levels, the impacts of large waves at times of high tides, and a slowly rising sea level. During these short term events, water levels reached have exceeded mean sea levels projected for 2100. Professor Griggs concludes, therefore, that, at least for the next several decades, these events are a greater hazard for the west coast than the climate-driven rise in sea level and it is very likely the impacts of such events in the future will become greater in magnitude and likely increase in frequency as sea level continues to rise. The Department will continue to attend these conferences each year to get updates and identify groups it can participate with moving forward.

Also, as a partner of the State Coastal Sediment Management Workgroup in development of the Los Angeles County Coastal Regional Sediment Management Plan, Beaches and Harbors is working on the related issue of natural sediment loss from inland sources because of development. With this irreversible narrowing of beaches through sediment loss, and if sea level rises one foot by 2050 and three feet by 2100, Los Angeles could lose significant coastal public resources, infrastructure, and invaluable recreational opportunities for millions of beachgoers.

William T Fujioka, CEO
January 2, 2013
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The Fire Department is also very aware of the effect that climate change may have on both its personnel and the public. To counter this effect, the Fire Department has revised its protocols on rehabilitation and dehydration as well as rehydration during physical exercise. The Fire Department has also newly instituted a policy regarding exposure to hot environments and thermal stressors, such as heat waves. In addition to implementing new internal policies and procedures, the Fire Department, in collaboration with the Department of Public Health, will implement a public education campaign addressing issues relating to an increase in temperatures and its effect on public health and safety. Key topics to be publically addressed will include heat exhaustion and dehydration avoidance, as well as other general safety tips on how to mitigate the hazardous conditions associated with heat waves, especially for members of the population that can be considered at risk.

To further evaluate the natural environment, the Fire Department's Forestry Division is currently engaged in a Soil Moisture Project that consists of reassessing Department policies, procedures and regulations to remain in line with climate change, specifically an increase in temperature and its effects on soil and fuel moisture levels, fire susceptibility and fire behavior. This Soil Moisture Project, once completed, will be used to advance Fire Department personnel tactical training and will also be integrated into the Department's public education campaign to provide additional public safety education on fire awareness, prevention and survivability.

In closing, the Department has and will continue to collaborate with other County agencies to obtain and implement best practices.

For any questions or concerns, please contact me at (323) 881-6180.

DLO:aat

c: Chief Executive Office
Executive Office
Department of Beaches and Harbors
Department of Public Health
Department of Regional Planning



TOM TINDALL
Director

County of Los Angeles
INTERNAL SERVICES DEPARTMENT

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"To enrich lives through effective and caring service"

December 17, 2012

To: Supervisor Zev Yaroslavsky, Chair
Supervisor Gloria Molina
Supervisor Mark Ridley-Thomas
Supervisor Don Knabe
Supervisor Michael D. Antonovich

From: Tom Tindall
Director

Subject: **ENERGY UPGRADE CALIFORNIA – LOS ANGELES COUNTY
STATUS REPORT (RESPONSE TO ITEM 15, AGENDA OF
MARCH 6, 2012)**

On March 6, 2012, your Board, on motion of Supervisor Yaroslavsky, instructed the Chief Executive Office (CEO) and the Director of the Internal Services Department (ISD) to:

1. Maintain data, which shall be updated as often as feasible but no less than once per month, showing the number of participants within each component subprogram of Energy Upgrade California – Los Angeles County (EUCLA), including data showing the number of participants who have, within each subprogram: (a) applied for participation in each of the respective sub-programs, (b) received approval of their application, (c) begun physical improvements of their home / commercial location (where applicable), (d) completed physical improvements (where applicable), and (e) received rebate checks or otherwise successfully finished their participation in the program;
2. Establish goals for the number of total participants over the life of the program for EUCLA overall and within each subprogram;
3. Establish benchmarks by month for EUCLA overall and within each subprogram by which the progress of the total program and each subprogram shall be measured;

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4. Maintain a narrative description, which shall be made available to the Board of Supervisors no less than once per month, of the steps taken to improve performance of EUCLA overall and for any subprogram in any month in which the benchmarks established in #3 are not met for EUCLA overall and for each subprogram, potentially including, as the CEO and Director of ISD deem appropriate, a reallocation of resources from underperforming subprograms to subprograms that are meeting or exceeding benchmarks.

This memorandum provides the eighth status report on the EUCLA program, updated through October 2012. Attachment I provides graphics and narratives illustrating status for the Advanced, Basic, and FlexPath subprograms of EUCLA. Additional graphics and narratives show goals and monthly benchmarks to measure progress as well as program changes, lessons learned, and program revisions to increase program participation and/or reallocate resources.

On October 9, 2012, the County announced an end date for the FlexPath program and provided procedures for submittal of projects. The budget allocated for FlexPath was intended to supply incentives to 1500 projects and the budget has since been increased to allow for a total of 1650 projects. As projects continue to complete construction, ISD will finalize a count of matching incentives and the budget to cover these projects.

As described in previous reports to your Board, ISD has been actively working with the utilities and the California Public Utilities Commission (PUC) to continue successful, ARRA-originated programs. On November 8, 2012, the PUC issued its final Decision Approving 2013-2014 Energy Efficiency Programs and Budgets. In the Decision, funding was approved for Los Angeles County to continue its role in a variety of programs including: Flex Path, EUCLA marketing and outreach, workforce development, and financing. ISD will brief your Board deputies and seek approval to accept the funds in the near future. We look forward to continuing these programs in early 2013.

This is ISD's final report on EUCLA program accomplishments. We will continue regular reporting of these programs under CPUC funding to your Board on a quarterly basis beginning in March 2013.

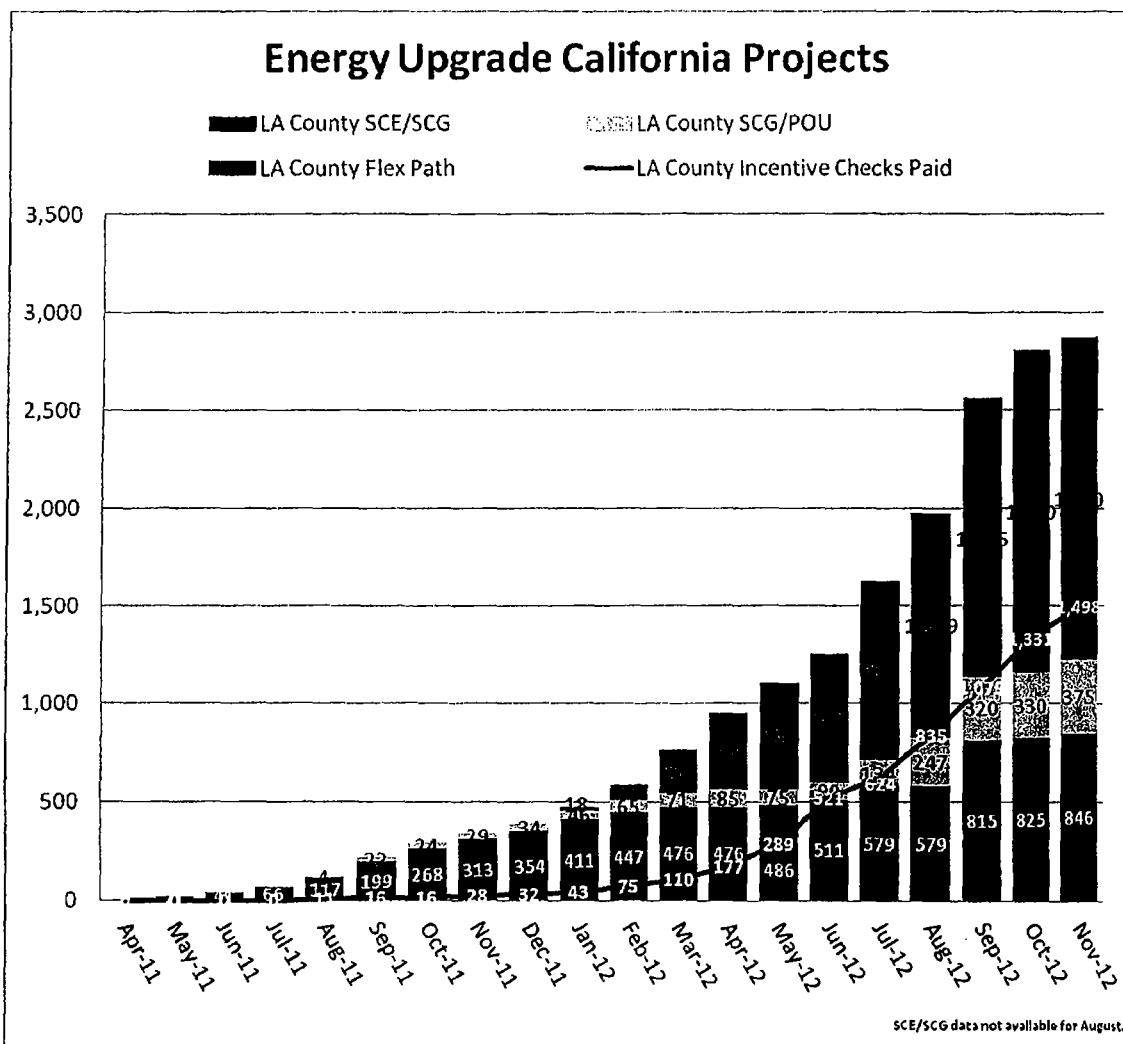
If you have any questions, please contact me at 323-267-2101.

TT:JJ:HC:LR

c: ISD Board deputies
Chief Executive Office (Fujioka, Sandt)
Executive Officer, Board of Supervisors

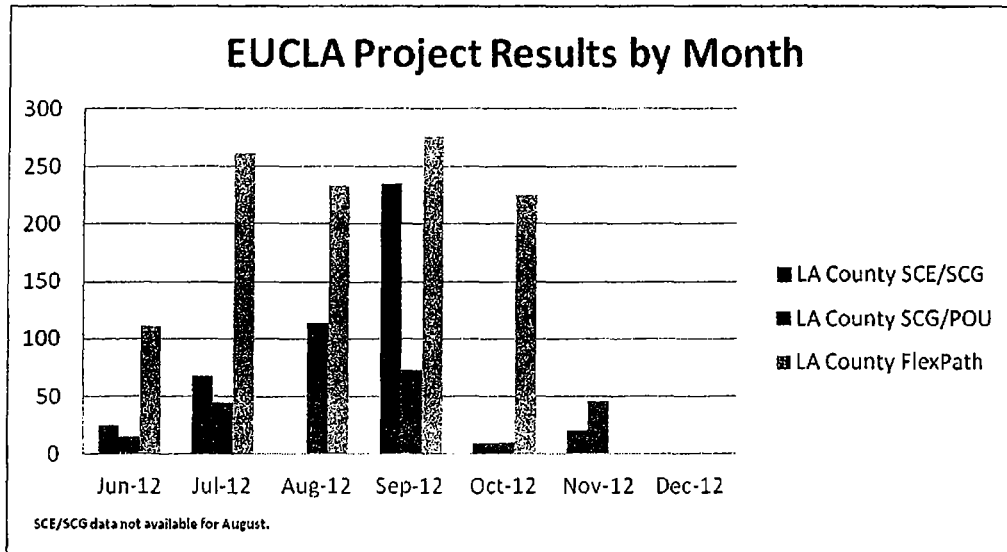
Monthly EUCLA Graphics/Narrative – Through December 1, 2012

The following are status charts and supporting narrative, summarizing significant program accomplishments for the month of November 2012 for the Energy Upgrade California in Los Angeles County (EUCLA) program and its subprograms.

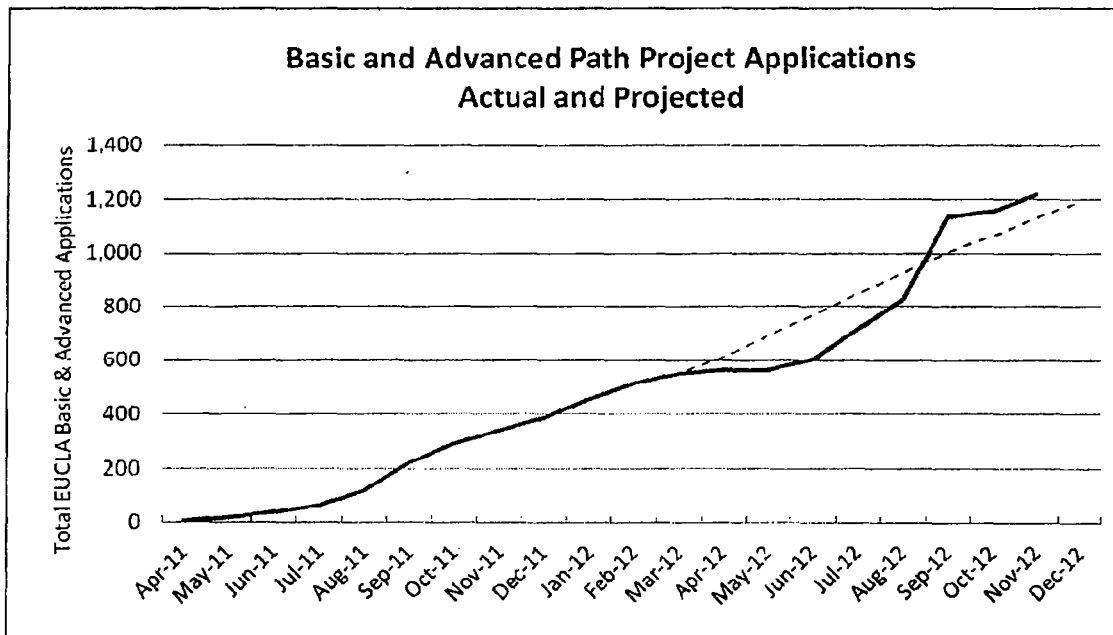


On August 29, EUCLA announced that the L.A. County matching incentive for Basic and Advanced path projects would be ending on September 28, 2012. This announcement was necessitated by the pending exhaustion of grant funds budgeted for these incentives. Notification was distributed through all possible means to inform both contractors and homeowners of this upcoming deadline for project submittals. The graphic below summarizes new projects submitted in recent months. The announcement of the ending of L.A. County matching incentives caused an increase in project submittals and resulted in a subsequent decrease after the deadline for matching incentives passed.

Monthly EUCLA Graphics/Narrative – Through December 1, 2012

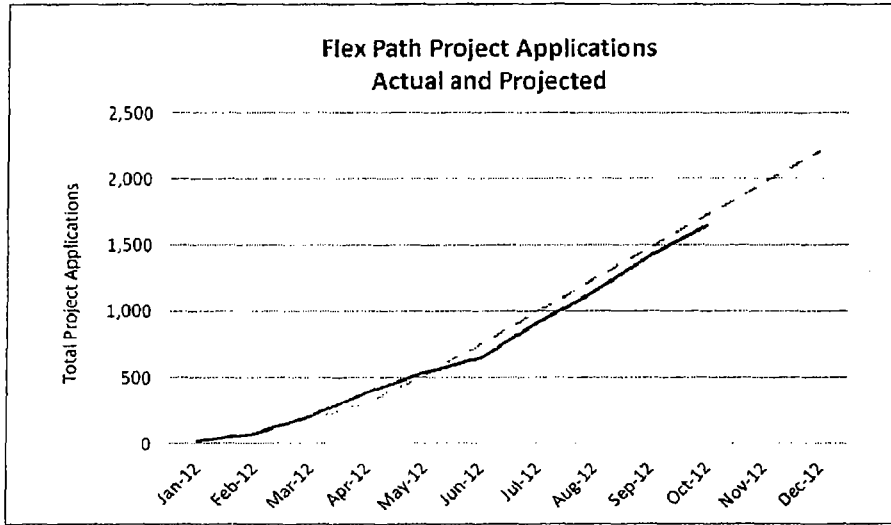


Below is the cumulative total of all Basic and Advanced path project applications that have been submitted to date (not including FlexPath).

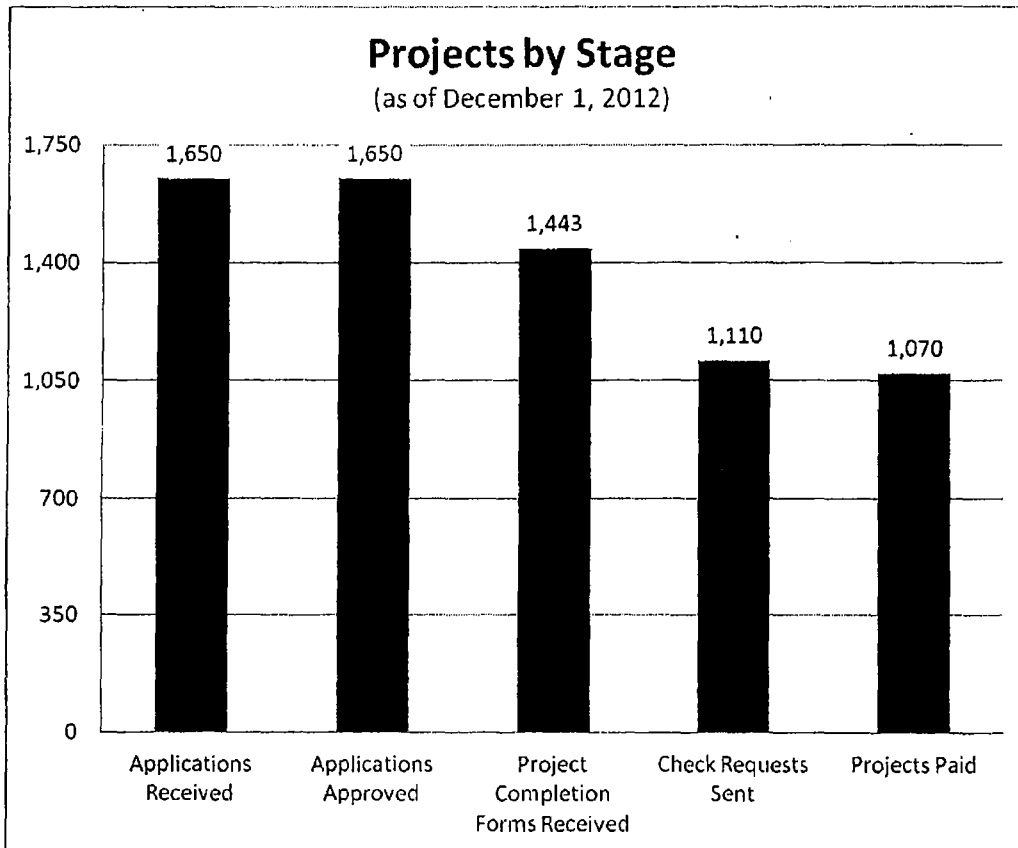


On October 9, EUCLA announced that the FlexPath program would close to new applications on October 19, 2012. The program will resume taking applications early next year utilizing PUC funding allocated for FlexPath implementation. The chart below represents cumulative FlexPath project applications submitted through the close of the program. The waitlist was closed when 1650 projects had been submitted.

Monthly EUCLA Graphics/Narrative – Through December 1, 2012

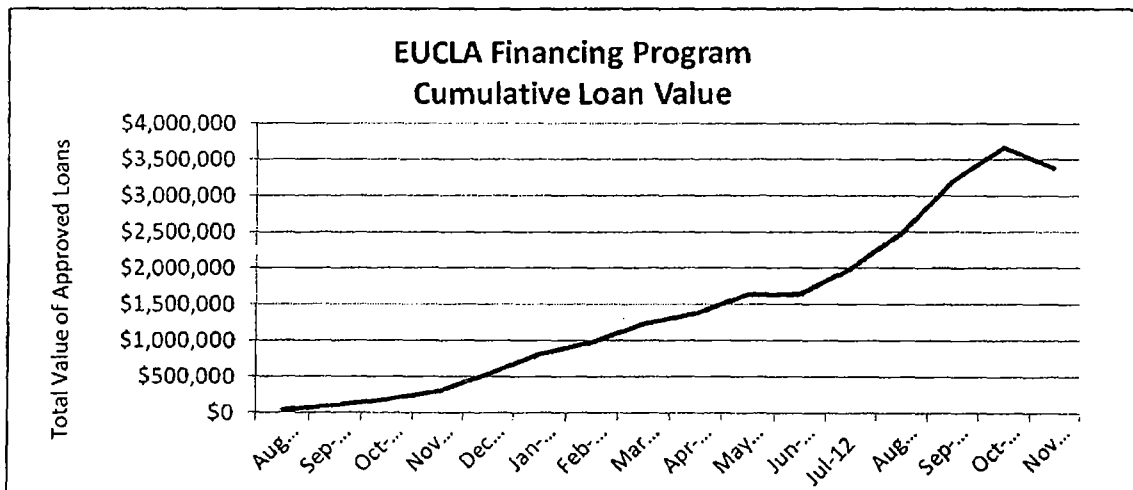
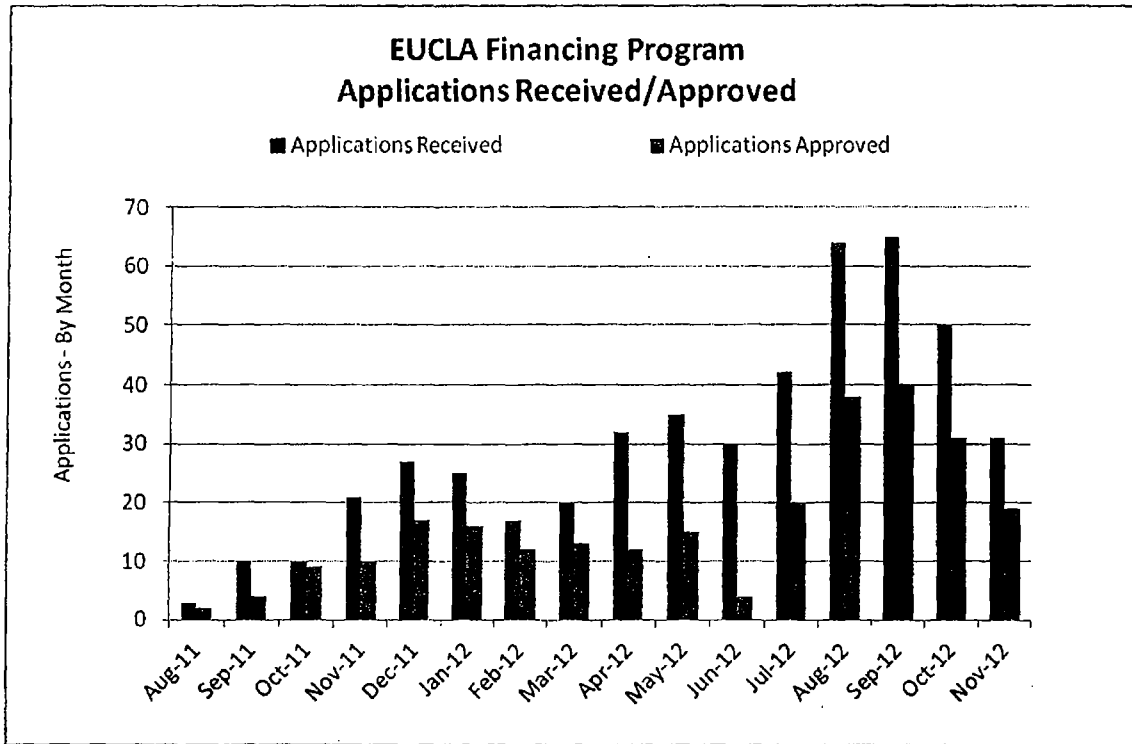


The following chart shows project numbers for specific milestones in the FlexPath project process.

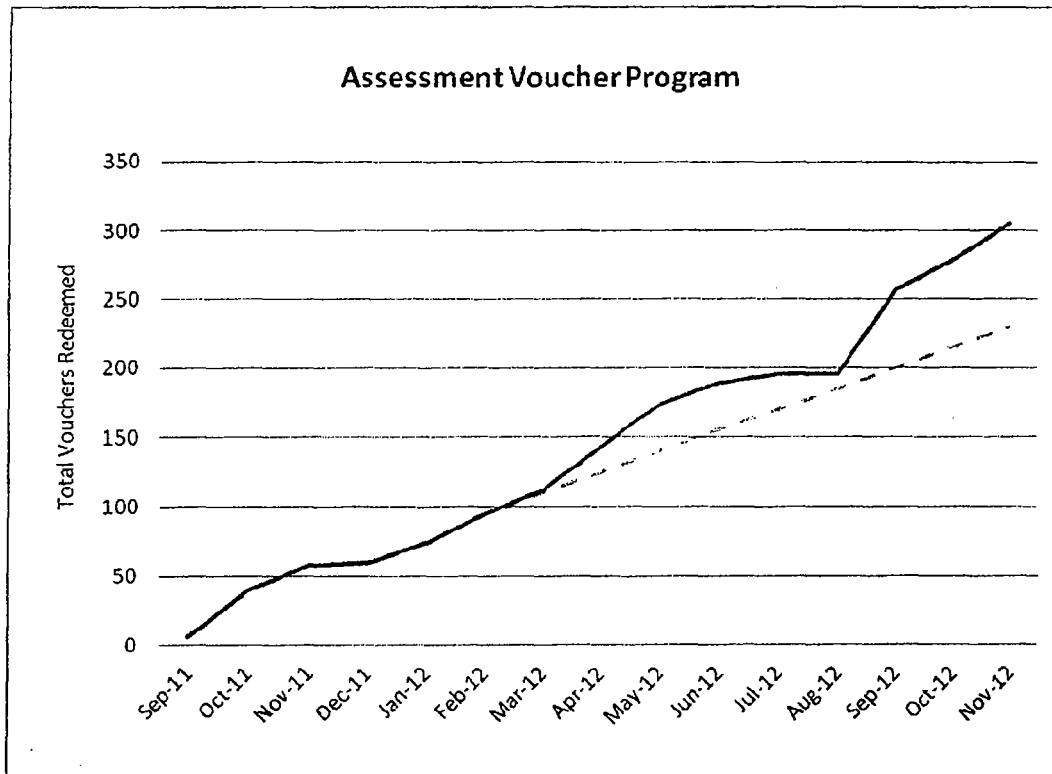


Monthly EUCLA Graphics/Narrative – Through December 1, 2012

As shown in the financing program charts below, applications for financing are still being received at a regular pace. The total program funded loan amount dipped slightly as some loans didn't close within the 90 day approval period and were in turn replaced with loans that were slightly smaller in value.

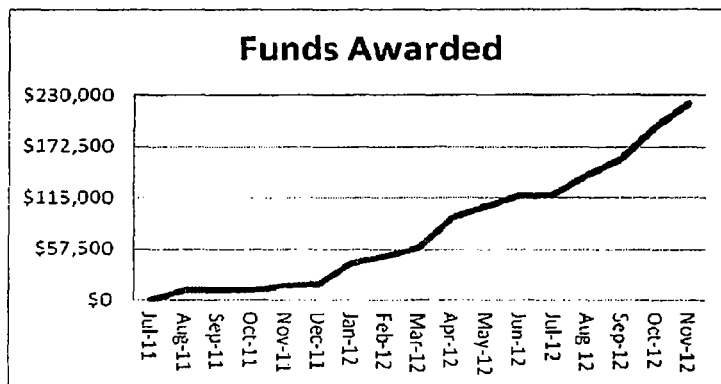


Monthly EUCLA Graphics/Narrative – Through December 1, 2012



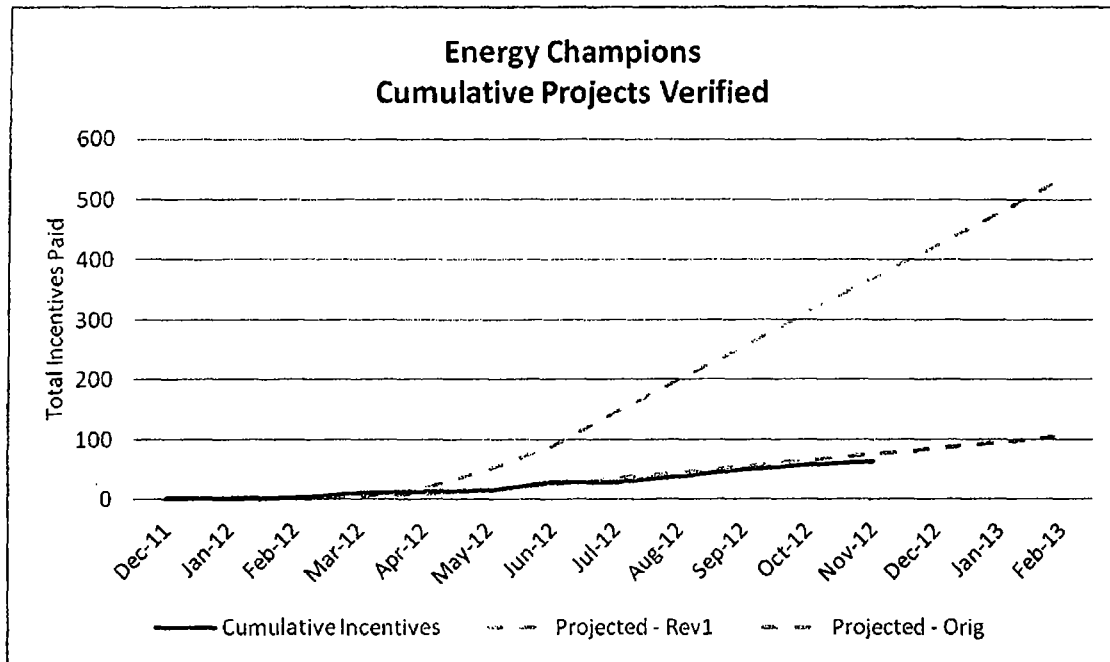
The graphic above shows a cumulative total of assessment vouchers, which have been redeemed by homeowners to mitigate the initial cost of an energy efficiency assessment. In the month of November 2012, 26 assessment vouchers were submitted.

Following the recent announcement of the end of the L.A. County matching incentives and because of the uncertainty associated with future EUCLA program design, contractors have slowed their investments in marketing and outreach materials via the Co-op Marketing Program. The following graphic represents the total matching funds awarded to date.

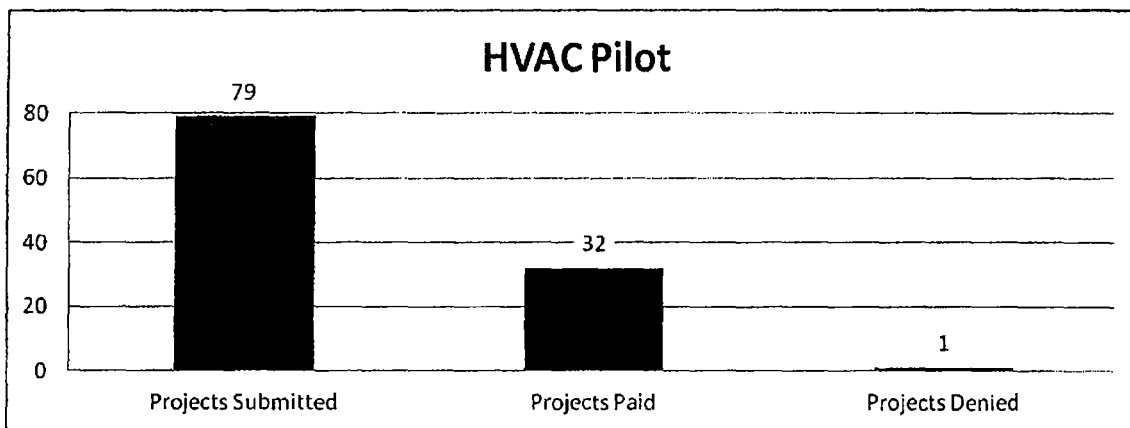


Monthly EUCLA Graphics/Narrative – Through December 1, 2012

The Energy Champions program got off to a slow start, and experienced various setbacks, but the month of November shows a continued steady trend. Energy Champions have now submitted a total of 174 project applications and 44 incentives have been paid.



(Revisions have been made to the Energy Champions program, and this chart has been revised to reflect an adjusted projection for total projects).



The Heating, Ventilation, Air Conditioning (HVAC) pilot program provides training and incentives to encourage existing HVAC contractors to expand their business to include whole-house energy efficiency retrofit work. A total of 79 projects have been submitted for approval into the HVAC pilot program, 15 in the month of November.

Monthly EUCLA Graphics/Narrative – Through December 1, 2012

Multifamily Pilot - The Multifamily program has a total of 14 active projects, consisting of more than 1100 residential units, that are now in various stages of planning/design for recommended efficiency measures, or in some cases, currently undergoing retrofits. Current projections show that roughly 92% of available incentive budget of \$950,000 will be expended for incentives to these offset the cost of these projects.



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WILLIAM T FUJIOKA
Chief Executive Officer

July 26, 2013

To: Supervisor Mark Ridley-Thomas, Chairman
Supervisor Gloria Molina
Supervisor Zev Yaroslavsky
Supervisor Don Knabe
Supervisor Michael D. Antonovich

From: William T Fujioka
Chief Executive Officer

Board of Supervisors
GLORIA MOLINA
First District
MARK RIDLEY-THOMAS
Second District
ZEV YAROSLAVSKY
Third District
DON KNABE
Fourth District
MICHAEL D. ANTONOVICH
Fifth District

STATUS REPORT – EXTENSION REQUEST ON THE STEPS TAKEN TO PREPARE FOR THE POTENTIAL EFFECTS OF CLIMATE CHANGE (JULY 3, 2012 BOARD MOTION, AGENDA ITEM 55-A)

On July 3, 2012, the Board approved a motion instructing the Chief Executive Officer, in conjunction with the Directors of Public Health, Public Works, Beaches and Harbors, Regional Planning, and the Fire Chief, and in cooperation with applicable utilities, to provide the following information to the Board no later than six months from approval of the motion: 1) review the information provided by the recently released study of the University of California, Los Angeles (UCLA) "Climate Change in the Los Angeles Region" project, as well as other relevant information; 2) document the steps they are taking to prepare for the projected effects of climate change; 3) report back to the Board with a cost analysis on the steps they are taking to prepare for the projected effects of climate change; and 4) recommend any additional actions that the County should take to help the region prepare for the likely effects of climate change.

As previously reported in our January 3, 2013 status report, the UCLA "Climate Change in the Los Angeles Region" project is a five-part study, which consists of temperature, snowfall, sea level rise, wind, precipitation, cloud cover, hydrology, and Sierra Nevada snowpack. In June 2012, UCLA released the first part of the Climate Change study, which focused on temperature. The departments have begun their review and analysis of the first of the five-part UCLA Climate Change study, and continue to assess the study to incorporate the findings into their climate change planning efforts. Additionally, the participating departments are reviewing various studies on the subject of climate change and related adaptation strategies in effort to prepare for the projected effects of climate change.

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July 26, 2013
Page 2

In June 2013, UCLA released the second study, which focused on impacts to regional snowfall. Over the next several months, the participating departments will be reviewing the snowfall study, in addition to the remaining studies of the five-part Climate Change study, which are expected to be released by Winter 2014 (see *attachment, Climate Change Studies Timeline*).

It should be noted that the participating departments will continue to report to the Board on related environmental shifts that climate change will bring to Los Angeles County, in addition to key climate change efforts as appropriate in the departments day to day business practices. Further, we will continue to work with the participating departments to review the upcoming studies, identify mitigation measures, and prepare a cost analysis on those mitigation measures.

Upon the completion of the UCLA Climate Change studies, we will provide the Board with an update on the steps taken by the participating departments and ongoing efforts to prepare for the potential effects of climate change by Spring 2014.

If you have any questions or need additional information, please contact Rita Robinson at (213) 893-2477, or at rrobinson@ceo.lacounty.gov.

WTF:RLR
AMT:acn

Attachment

- c: Executive Office, Board of Supervisors
- County Counsel
- Beaches and Harbors
- Fire
- Internal Services
- Public Health
- Public Works
- Regional Planning

**THE UNIVERSITY OF CALIFORNIA, LOS ANGELES
CLIMATE CHANGE IN LOS ANGELES REGION PROJECT**

CLIMATE CHANGE STUDIES TIMELINE

Study Description

***Study Release Date**

- | | |
|--------------------------|-------------|
| • Temperature | June 2012 |
| • Snowfall | June 2013 |
| • Sea Level Rise | Summer 2013 |
| • Santa Ana Winds | Fall 2013 |
| • Precipitation | Fall 2013 |
| • Cloud Cover | Fall 2013 |
| • Hydrology | Fall 2013 |
| • Sierra Nevada Snowpack | Winter 2014 |



GAIL FARBER, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: **A-0**

August 13, 2014

TO: William T Fujioka
Chief Executive Officer

Attention Rita Robinson

FROM: Gail Farber
Director of Public Works

**JULY 3, 2012, BOARD MOTION, AGENDA ITEM 55-A
REPORT ON THE STEPS TAKEN TO PREPARE FOR THE POTENTIAL EFFECTS OF
CLIMATE CHANGE**

On July 3, 2012, the Board approved a motion instructing the Chief Executive Officer, in conjunction with the Directors of Public Health, Public Works, Beaches and Harbors, Regional Planning, and the Fire Chief, to review the University of California, Los Angeles' "Climate Change in the Los Angeles Region" project, document the steps being taken to prepare for the projected effects of climate change, and report back to the Board with a cost analysis on the steps being taken and recommended additional actions for the County to take to help the region prepare for the likely effects of climate change.

Attached is a report summarizing our comments on available UCLA climate change reports and practices that are being implemented and pursued by Public Works to address climate change. If you have any questions, please contact Mark Pestrella, Chief Deputy Director, at (626) 458-4001, or your staff may contact Youn Sim at (626) 458-7840 or at ysim@dpw.lacountv.gov.

YS:plg

C:MYFILES/MP/CLIMATE CHANGE

Attach.

cc: Chief Executive Office (Arena Turner)
Executive Office
Department of Beaches and Harbors
Department of Public Health
Department of Regional Planning
Fire Department

Attachment A

COMMENTS ON CLIMATE STUDIES

1. UCLA climate studies on temperature and snow pack
 - a. The UCLA study provides predictions of potential changes in temperature and snow pack for long-term periods (i.e., mid-21st century). However, it lacks information on the expected impacts during short-term periods. To make this report more useful, it is recommended that the report include projection of potential impacts in smaller time increments such as every 5 years.
 - b. Through the Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC), it would be extremely beneficial to this region's planners to establish a web portal repository for the downscaled result/output projections from the UCLA study. A "clearinghouse" of climate change information similar to the Cal-Adapt website (<http://cal-adapt.org/>) but with downscaled for the Los Angeles region, would be an invaluable resource for developing adaptation plans at a local level.
 - c. The temperature study focused on hot extreme (over 95 degrees F) but lacks the potential of cold extreme. If extreme hot and cold days are expected, such information would be critical to additional policy consideration or existing code revisions.
 - d. A report on how future reduction of snowfall will impact our overall drought condition would be of great benefit.
2. USC climate study on sea level rise
 - a. This report analyzed the effects of sea level rise along coastal areas only within the City of Los Angeles' jurisdiction excluding the majority of Los Angeles County's coastline. To make this report useful, it is recommended that the scope of the study be expanded to include the entire coastline of the County.
 - b. See No.1.a above for potential impact of sea level rise.
 - c. See No.1.b above for potential impact of sea level rise.
 - d. The report outlines general techniques to maintain or restore natural sand supply along the coast. However, there is no direct mention of utilizing sediment flushing or sluicing as techniques, and these options should be considered viable in addition to those listed. For reference, please see the Sediment Management Strategic Plan 2012-2032 developed by Public Works.

<http://dpw.lacounty.gov/lacfd/sediment/stplan.aspx>

Attachment B

UPDATE TO PREVIOUS REPORT ON THE ACTIONS TAKEN BY DEPARTMENT OF PUBLIC WORKS TO ADDRESS CLIMATE CHANGE

In its December 27, 2012, progress report, Public Works reported several actions that had been initiated to address climate change impacts. Since then, Public Works has continued implementing the reported actions and further improved them to build resiliency for continued operations and community services and to adapt to the climate impacts while reducing GHG emissions from the department operations as well as from the community.

Details of the update to previously reported actions are provided in Table 1. Note that each action is presented in conjunction with climate impact sectors that the action aims to support. A complete list of impact sectors can be found in the climate adaptation strategy matrix (Table 2).

Attachment C

REPORT ON ADDITIONAL ACTIONS IDENTIFIED BY DEPARTMENT OF PUBLIC WORKS TO ADDRESS CLIMATE CHANGE

1. Public Works Climate Adaptation Strategies Framework

According to various large-scale studies conducted by state and federal agencies, commonly predicted outcome of the climate change encompasses increased temperature accompanied by severe drought and more frequent wild fires, which along with intense storms, could lead to significant debris and mud-flow threats in the foothill areas. Rise in sea levels could affect the low-lying coastal community and infrastructure.

Climate change may have a number of short- and long-term impacts on a variety of sectors of the County community including, but not limited to, agriculture, public health, ecosystems and natural resources, energy, infrastructure, emergency management, and local economy. Therefore, it is critical to develop strategies to prepare for and to build resiliency against adverse impacts.

Development of climate adaptation strategies may be conducted sequentially starting with evaluation of threats, vulnerability and risk assessments, identification of necessary actions, and implementation and maintenance of identified actions. The strategies may also investigate short- and long-term funding mechanisms.

Public Works has proactively initiated a process of adaptation planning described above by researching various state and federal guidance manuals that are designed to assist local governments with climate adaptation strategies within agency's own operations as well as when providing support to community level efforts.

As a first step, Public Works created a framework for climate adaptation strategies by establishing a matrix that would guide and track the strategy development. See Table 2 for the matrix. Using the matrix, Public Works has applied a consistent approach across various impact sectors in examining potential threats and sensitivity of the risks and vulnerability of department operations. Results of the risk assessment will provide critical information to evaluating existing and identifying additional adaptation actions. Ultimately, adaptation actions identified for individual impact sectors will be prioritized based on the level of potential impact and existing adaptive capacity.

Public Works will make continuous efforts to explore new ideas to develop, implement, and maintain Countywide adaptation strategies to ensure the County community and public services to be resilient against climate change threats.

2. Measures to Comply with Emergency Water Conservation Regulations

In compliance with the County policy as adopted on July 22, 2014, by the Board of Supervisors and the subsequent memo dated July 23, 2014, from Chief Executive Officer Bill Fujioka instructing all County personnel to immediately implement recently adopted, statewide emergency water conservation regulations, Public Works promptly initiated actions to implement the following water conservation measures: immediately ceasing spray irrigation and preparing for drought-tolerant and stormwater quality improvements at the Headquarters campus, monitoring, repairing, and reporting water leaks and over spray at the Department's landscape and facilities, and updating the department's mobile application to add a water wasting reporting feature.

3. Sustainability implementation initiative

Public Works recognizes that sustainability is a key principle in developing strategies to mitigate climate change and adapt to the impacts. As an organizing paradigm that applies to the department mission and the entire business programs, sustainability was identified as one of the departmental values and was included in the department's five strategic focus areas. Since then, efforts have focused on institutionalizing sustainability through synchronized, enterprise-wide initiatives rather than isolated efforts.

By effectively adopting sustainability principles, Public Works has assessed opportunities across all operations and services, thereby developing strategic actions that would reduce Greenhouse Gas and air pollutant emissions and address climate change threats and infrastructure vulnerabilities.

Under the sustainability implementation initiative, various accomplishments have been made and efforts are continuing. A sustainability implementation framework has been established, which consists of an Executive Team, Sustainability Council, Sustainability Officer, and ad-hoc Work Groups. A Public Works policy on sustainability is in development, which will guide the entire initiative. A business program level planning framework has also been in development, which consists of sustainability goal areas, key sustainability indicators, performance metrics, and progress tracking.

Details of the latest achievements of this initiative are available in Public Works Sustainability Webpage:

<http://dpw.lacounty.gov/adm/sustainability/Default.aspx>



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WILLIAM T FUJIOKA
Chief Executive Officer

Board of Supervisors
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MARK RIDLEY-THOMAS
Second District

ZEV YAROSLAVSKY
Third District

DON KNABE
Fourth District

MICHAEL D. ANTONOVICH
Fifth District

April 24, 2014

To: Supervisor Don Knabe, Chairman
Supervisor Gloria Molina
Supervisor Mark Ridley-Thomas
Supervisor Zev Yaroslavsky
Supervisor Michael D. Antonovich

From: William T Fujioka
Chief Executive Officer

REQUEST FOR EXTENSION ON THE STEPS TAKEN TO PREPARE FOR THE POTENTIAL EFFECTS OF CLIMATE CHANGE (ITEM NO. 55-A, AGENDA OF JULY 3, 2012)

On July 3, 2012, a motion by Supervisor Yaroslavsky directed the Chief Executive Officer, in conjunction with the Directors of Public Health, Public Works, Beaches and Harbors, Regional Planning, and the Fire Chief, and in cooperation with applicable utilities, to provide to the Board no later than six months from approval of the motion:

- 1) Review the information provided by the recently released study of the University of California, Los Angeles (UCLA) "Climate Change in the Los Angeles Region" project, as well as other relevant information;
- 2) Document the steps departments are taking to prepare for the projected effects of climate change;
- 3) Report back to the Board with a cost analysis on the steps departments are taking to prepare for the projected effects of climate change; and
- 4) Recommend any additional actions that the County should take to help the region prepare for the likely effects of climate change.

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April 24, 2014
Page 2

In response to the Board's motion, on January 3, 2013, the Chief Executive Office (CEO) provided the Board with a status report that summarized preliminary efforts underway by the mentioned County departments to address the actions outlined in the Board's motion. On July 26, 2013, the CEO requested an extension to April 30, 2014; and provided the Board with a timeline for the release of the seven part UCLA "Climate Change in the Los Angeles Region" study. This is to request for an additional extension, and provide the Board with a status on the release of the remaining parts of the UCLA Climate Change study.

As previously reported, in June 2012, UCLA released the first part of the Climate Change study, which focused on temperature, and subsequently, in June 2013, UCLA released the second part of the study, which focused on the future projections of snowfall. The departments have begun their review and analysis of Parts I and II of the study, as well as other relevant climate change documents. Furthermore, the departments will continue to assess this information to incorporate the findings into their climate change planning efforts as appropriate.

It should be noted that the remaining studies, which consists of Sea Level Rise, Santa Ana Winds, Precipitation/Cloud Cover, Hydrology, and Sierra Nevada Snowpack are expected to be released by summer 2014. We will continue to monitor the release of these studies, and work with the departments on their efforts to prepare for the potential effects of climate change; in addition to review the upcoming studies, identify mitigation measures, and to prepare a cost analysis on those mitigation measures.

We respectfully request an additional extension of the due date to September 1, 2014. This extension will allow for the anticipated completion of the study from the UCLA Climate Change in the Los Angeles Region project, and analysis of the study by the mentioned County departments.

If you have any questions or need additional information, please let me know, or your staff my contact Rita Robinson at (213) 893-2477, or via email at rrboinson@ceo.lacounty.gov.

WTF:RLR
AMT:os

c: Executive Office, Board of Supervisors
County Counsel
Beaches and Harbors
Fire
Internal Services
Public Health
Public Works
Regional Planning



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WILLIAM T FUJIOKA
Chief Executive Officer

August 29, 2014

To: Supervisor Don Knabe, Chairman
Supervisor Gloria Molina
Supervisor Mark Ridley-Thomas
Supervisor Zev Yaroslavsky
Supervisor Michael D. Antonovich

From: William T Fujioka
Chief Executive Officer

Board of Supervisors
GLORIA MOLINA
First District

MARK RIDLEY-THOMAS
Second District

ZEV YAROSLAVSKY
Third District

DON KNABE
Fourth District

MICHAEL D. ANTONOVICH
Fifth District

STATUS REPORT ON THE STEPS TAKEN TO PREPARE FOR THE POTENTIAL EFFECTS OF CLIMATE CHANGE (ITEM NO. 55-A, AGENDA OF JULY 3, 2012)

This memorandum is in response to the Board's motion of July 3, 2012, directing the Chief Executive Officer, in conjunction with the Directors of Public Health, Public Works, Beaches and Harbors, Regional Planning, and the Fire Chief, and in cooperation with applicable utilities, to provide the Board no later than six months from approval of the motion:

- 1) Review the information provided by the recently released study of the University of California, Los Angeles (UCLA) "Climate Change in the Los Angeles Region" project, as well as other relevant information;
- 2) Document the steps departments are taking to prepare for the projected effects of climate change;
- 3) Report back to the Board with a cost analysis on the steps departments are taking to prepare for the projected effects of climate change; and
- 4) Recommend any additional actions that the County should take to help the region prepare for the likely effects of climate change.

On January 3, 2013, July 26, 2013, and April 24, 2014, we submitted status reports. This memorandum is an update to those reports, including summarizing the cited County Departments' efforts to address the actions noted above, and the status on the release of the remaining parts of the UCLA Climate Change in the Los Angeles Region study.

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August 29, 2014
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UCLA Climate Change Study

As previously reported, in June 2012, UCLA released the first part of the Climate Change study, which focused on temperature, and subsequently, in June 2013, UCLA released the second part of the future projections of snowfall. These studies are downloadable for your review at www.c-change.la.

It should be noted that the release of the third part of the study - Precipitation/Cloud Cover has been extended to the end of 2014. Additionally, the remaining studies, which consist of Santa Ana Winds, Wildfire, Hydrology, and Sierra Nevada Snowpack has been extended for release some time in 2015.

Therefore, this report is to provide the Board with: 1) an update on the preliminary responses prepared by the cited Departments, specifically, on the UCLA Climate Change studies related to temperature and snowpack; and 2) a summary of the Departments' progress and ongoing efforts to prepare for the likely effects of climate change.

SUMMARY OF COUNTY DEPARTMENTS RESPONSE ON CLIMATE CHANGE

Beaches and Harbors

The Department of Beaches and Harbors (DBH) has provided their comments on the available UCLA Climate Change studies, as outlined in Attachment I. In concert with this analysis the following studies were also reviewed by the Department: Sea Level Rise Vulnerability Study for the City of Los Angeles prepared by the University of Southern California (USC) Sea Grant; Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present and Future released by the National Research Council; and The Impacts of Sea Level Rise on the California Coast by California Climate Change Center.

DBH is currently working on several initiatives to prepare for the projected threats of sea level rise and winter coastal storms. More recently, the Department was awarded the Climate Ready Grant to develop a seasonal sand berm protection program. This project will include the science and engineering of sand berms to optimize protection of County beaches and facilities such as parking lots, bike paths, maintenance yards, and concession buildings for use by the public. Additionally, DBH is providing data to the United States Geological Survey and others for development of shoreline change projections and a coastal storm modeling system, which DBH will utilize to assess the County's most vulnerable beach locations in informing future sand berm and other decisions. For the long-term, DBH will continue its efforts of identifying and securing offshore sand sources for future beach nourishment needs to mitigate sea level rise.

Fire Department

As previously reported, the Fire Department (Fire) continues to monitor both the natural environment and the long range weather trends, in addition to tracking conditions associated with climate change. Fire acknowledges that warmer, drier conditions ushered in by climate change, has created ideal conditions for wildfires in Southern California. As a result, the Department is in the process of instituting strategic changes to several wildland fire prevention programs to address climate change, in addition to implementing business practices associated with this effort that will maximize workforce capacity and leverage partnerships and resources with stakeholders to prepare for the increased threats to lives and property. Additional information is provided in Attachment II.

Internal Services Department

Internal Services Department (ISD) is also an essential partner in the field of climate change, and through its Office of Sustainability, the Department continues to work collaboratively with other County Departments on these efforts, including initiatives on energy and environmental programs that are administered by ISD. More detailed information on these programs is provided in Attachment III, ISD's semiannual report to the Board on Energy and Environmental Policy, or at the County's comprehensive energy and environmental website: <http://green.lacounty.gov>

Parks and Recreation

The Department of Parks and Recreation (DPR) has been proactively working on the enhancement and transformation of County Parks for the adaptation of climate change. In June 2011, DPR released an Urban Forestry manual, and subsequently, in June 2014, the Park Design Guidelines and Standards. The Department indicates both manuals provide design professionals, County staff, and other agencies with guidance on such topics as landscaping for water conservation and drought-tolerant plants, protection, preservation, maintenance, and sustainability efforts. DPR is currently undertaking a pilot project, which seeks to redesign an 11-acre park in East Los Angeles with a focus on reducing the park's carbon footprint and promoting sustainable environmental practices in the surrounding community. In additional conservation efforts, "smart controllers" at seven County parks have yielded a 23 percent reduction in water usage over a year-long period. It should be noted that DPR continues to strive to raise public awareness of the importance for achieving sustainability through the use of renewable energy resources, in addition to addressing climate mitigation and adaptation challenges through its planning, design, construction, and renovation projects and practices. Additional information is provided in Attachment IV, Parks and Climate Change: The L.A. County Story, or UrbDeZine website (<http://losangeles.urbdezine.com/2014/07/29/parks-and-climate-change-the-l-a-county-story/>).

Public Health

The Department of Public Health (DPH), in collaboration with other County Departments, external stakeholders, local government, and community partners, has been proactively at the forefront of climate change preparation, adaptation, and mitigation activities. In August 2014, DPH released two reports on climate change and health: 1) Your Health and Climate Change in Los Angeles County, written for the general public on how the climate is expected to change in Los Angeles County and the health impacts; and 2) Framework for Addressing Climate Change in Los Angeles County, which outlines DPH's Five Point Plan to Reduce the Health Impacts of Climate Change as a model for other agencies' plans. Both reports are available on DPH's website at www.publichealth.lacounty.gov/eh.

DPH also continues to actively participate in various workgroups and implement collaborative initiatives for public awareness, education, as well as interagency collaboration on climate change.

Additionally, beginning in September 2014 through fall of 2015, DPH indicates it will launch the second phase of the Climate and Health Workshop Series. Through a series of 16 workshops, DPH is educating the workforce about significant climate change topics that engage staff in adaptation planning activities.

Additional information on DPH's climate change activities are outlined in Attachment V.

Public Works

The Department of Public Works (DPW) analysis of the UCLA and USC Climate Change studies and summary of the Department's practices to address climate change are provided in Attachment VI. Since the Department's progress report to the CEO in December 2012, DPW has initiated several actions to address climate change impacts, additionally, the Department has created a framework for climate adaptation strategies by establishing a matrix that would guide and track the strategy development (Attachment VI-Table 2). Key categories of this matrix include:

- Impact Sectors (socio-economic, water supply, civil infrastructure, adaptation funding, and emergency management);
- Vulnerability and risk assessment of potential impact; and
- Adaptive capacity and needs (i.e. policies, plans, guidelines, programs, and practices).

DPW has also established a sustainability initiative to include strategic actions that would reduce Greenhouse Gas and air pollutant emissions and address climate change threats and infrastructure vulnerabilities. DPW continues to explore new ideas to develop, implement, and maintain Countywide adaptation strategies to ensure the County community and public services will be resilient against climate change threats. Details of the latest achievements of sustainability initiative are available on DPW's website at <http://dpw.lacounty.gov/adm/sustainability/Default.aspx>.

Regional Planning

The Department of Regional Planning (DRP) indicates it has reviewed the first two UCLA Climate Change studies on temperature and snowfall. Additionally, DRP comments highlights major planning and sustainability initiatives that are currently underway by the Department to address climate change through adaptation and mitigation strategies in the unincorporated areas. These efforts include: Antelope Valley Area Plan Update; Marina del Rey Visioning Effort; East Los Angeles 3rd Street Plan; West Carson Transit Oriented District Specific Plan; Willowbrook Transit Oriented District Specific Plan; Healthy Neighborhood Design Guidelines; and the Small Lot Subdivision Ordinance. Additional information on these initiatives, collaborations with other County Departments and community partners, as well as the Countywide General Plan Update and related efforts, including the Community Climate Action Plan (CCAP) for the unincorporated areas are provided in Attachment VII. The draft CCAP is also available on the DRP's website at www.planning.lacounty.gov/ccap.

OTHER

On June 27, 2014, a motion was introduced by Los Angeles City (LA City) Councilman Paul Koretz, to increase LA City's efforts and community outreach on climate change in the Los Angeles Region. The motion also invited neighboring sister cities to adopt equally-aggressive or stronger greenhouse gas emission reduction policies and targets, and to partner with the 96 neighborhood councils of Los Angeles to assist in those efforts. It should be noted that LA City's motion outlines several actions that are parallel to the Board's motion approved on July 3, 2012. Additionally, the cited County Departments continue to work closely with neighboring cities, agencies, and local partners in several climate change initiatives and community outreach opportunities, as well as participating in or leading various stakeholder groups and discussions to broaden the regional dialogue on climate change in Los Angeles County.

On August 5, 2014, this Office met with a representative from the Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC), who is leading this effort through a partnership with UCLA and the City of Los Angeles, as well as collaboration with USC on the research and development of various climate change studies. In addition to the noted studies prepared by UCLA, LARC partnered with USC Sea Grant Program to prepare the Sea Level Rise Vulnerability Study. As mentioned, the study is a summary of initial

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Page 6

research on the potential impacts of sea level rise and associated flooding from storms for coastal communities in the City of Los Angeles. Additionally, the study concentrates on the City's three coastal regions: Pacific Palisades from Malibu to Santa Monica; Venice and Playa del Rey; and San Pedro, Wilmington and the Port of Los Angeles. This study was also made available to Departments for their review and analysis.

We are encouraged to continue our discussions and networking with LARC, and in concert with County Departments, on the framework for a regional initiative that will help mitigate the causes and adaptation of climate change, in addition to increase the public's awareness within Los Angeles County.

NEXT STEPS

As highlighted in this report, the cited County Departments continue to be strategic in their approach to address climate change, as this will be an ongoing effort for some time to come. Therefore, we will continue to keep the Board informed of the Departments' progress, in addition to the action items noted in this report. We anticipate our next status will be provided to the Board by June 30, 2015.

If you have any questions or need additional information, please let me know, or your staff may contact Rita Robinson at (213) 893-2477, or via email at rrboinson@ceo.lacounty.gov.

WTF:RLR
AMT:os

Attachments (7)

- c: Executive Office, Board of Supervisors
- County Counsel
- Beaches and Harbors
- Fire
- Internal Services
- Parks and Recreation
- Public Health
- Public Works
- Regional Planning

ATTACHMENT I

DEPARTMENT OF BEACHES AND HARBORS

**ACTIONS TAKEN BY BEACHES AND HARBORS TO PREPARE FOR
CLIMATE CHANGE AND SEA LEVEL RISE**

Similar to our January 3, 2013 report, the Department of Beaches and Harbors (DBH) continues to research and prepare for climate change and sea level rise in coastal regions by not only monitoring and reviewing national and local reports/studies, but also attending the annual American Shore and Beach Preservation Association (ASBPA) conference and the California Marine Affairs and Navigation Conference (CMANC), which often have leading experts on sea level rise and climate change.

Key findings of the studies reviewed by DBH are listed in the table below. Collectively, the results indicate that over the next century, sea level in Southern California could potentially rise by up to five feet, the impacts of which will be most severe during major storm events. Potential impacts include coastal flooding and shoreline retreat, which can result in damage to infrastructure, property, and communities in coastal regions.

Organization(s)	Study Title and Release Date	Key Findings
UCLA Climate Change Studies: UCLA Institute of the Environment, the City of Los Angeles, and Los Angeles Regional Collaborative for Climate Action and Sustainability (includes municipal governments, agencies and universities)	Temperature Study: "Mid-Century Warming in the Los Angeles Region" Released 2012	1) By mid-century, average annual temperatures will rise by 4-5 degrees Fahrenheit. 2) Coastal locations will have 2-3 times the number of extremely hot days. 3) High elevations and inland areas will have 3-5 times the number of extremely hot days.
	Mid- and End-of-the-Century Snowfall in the Los Angeles Region (Produced by UCLA Department of Atmospheric and Oceanic Sciences) Released June 2013	1) By mid-century, Los Angeles region's mountains may see a reduction in snowfall of up to 42% if greenhouse gas emissions continue to increase. 2) Reduced snowfall could potentially alter important hydrological and ecosystem processes in Los Angeles, affecting water resources and plant and animal habitat.
	Seal Level Rise Vulnerability Study for the City of Los Angeles (Produced by University of Southern California (USC) Sea Grant, City of Los Angeles, and ICLEI – Local Governments for Sustainability) Released January 2014	1) Sea level rise in Los Angeles is expected to increase 0.3 - 2.0 feet 2000-2050 and 1.3 - 5.6 feet by 2100. 2) As sea level rise accelerates, additional steps will need to be taken to expand, stabilize and safeguard beaches, including sand and dune replenishment and the construction of groins, jetties, and breakwaters. 3) Minimal impacts are identified in the 50-year sea level rise (SLR) scenario. Identified as the most vulnerable areas during severe storms in the 100-year SLR scenario are Will Rogers State Beach at Temescal Canyon; areas of Venice Beach and the Venice Canals, Marina del Rey, Playa del Rey and Dockweiler Beach; Ballona Creek; Cabrillo Beach; and areas around the Port of Los Angeles.

Organization(s)	Study Title and Release Date	Key Findings
<p>National Research Council</p>	<p>Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present and Future</p> <p>Released June 2012</p>	<ol style="list-style-type: none"> 1) The Intergovernmental Panel on Climate Change (IPCC) projects that sea level will rise by as much as nine inches by 2030, 1½ feet by 2050, and four feet by 2100 (in comparison to 2000 levels). 2) For Southern California, sea level will rise by as much as one foot by 2030, two feet by 2050, and five feet by 2100 (in comparison to 2000 levels). 3) As most coastal damage occurs during storms, sea level rise will magnify these impacts, particularly when there is a confluence of large waves, storm surges, and high astronomical tides. 4) Together, storms and sea-level rise will result in coastline retreat, ranging from less than a few inches per year for cliffs to several feet for beaches and dunes.
<p>California Climate Change Center (established by the California Energy Commission's Public Interest Energy Research (PIER) Program)</p>	<p>The Impacts of Sea-Level Rise on the California Coast</p> <p>Released May 2009</p>	<ol style="list-style-type: none"> 1) Sea level along the California coast is projected to rise by as much as 4½ feet by 2100. 2) A 4½-foot rise in sea level would put 480,000 people at risk from coastal flooding and result in a potential loss of \$100 billion in property and of 41 square miles of coast due to accelerated coastline erosion. 3) Coastal armoring is one potential adaptation strategy, at a cost of an estimated \$14 billion to build the needed 1,100 miles of new or modified coastal protection structures.

One recent step taken by DBH in preparation for sea level rise was its application for and award of a Climate Ready grant from the California State Coastal Conservancy to develop a seasonal sand berm protection document with science and engineering behind it. For over 30 years, DBH has built seasonal sand berms at various beaches to protect public facilities (i.e., parking lots, bike path, maintenance yards, and concession buildings). However, they have been built based on empirical observation and may not be built at optimum height, width, and location. With the threat of sea level rise and a predicted increase in winter coastal storms with high tides, a seasonal sand berm program based on science and engineering will optimize protection of public facilities and allow maximum use by the public.

Additionally, DBH will also be exchanging information and data with the United States Geological Survey (USGS), USC Sea Grant, and AdaptLA as they embark on a collaborative study that will look at shoreline change projections and develop a Coastal Storm Modeling System for Southern California. The data, model, and results (to come out by the end of 2015) will be utilized to assess vulnerable beach locations and optimize the Department's seasonal sand berm program. Otherwise, we continue in efforts to identify and secure offshore sand sources for future beach nourishment needs.

ATTACHMENT II

FIRE DEPARTMENT



COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

DARYL L. OSBY
FIRE CHIEF
FORESTER & FIRE WARDEN

August 15, 2014

TO: RITA L. ROBINSON, DEPUTY CEO
COMMUNITY SERVICES CLUSTER

FROM: DARYL L. OSBY, FIRE CHIEF *ms For DLO*

JULY 3, 2012 BOARD MOTION, AGENDA ITEM 55-A SECOND STATUS REPORT ON STEPS TAKEN TO PREPARE FOR THE POTENTIAL EFFECTS OF CLIMATE CHANGE

On July 3, 2012, the Board approved a motion requesting the Department's progress on the items outlined in the University of California, Los Angeles "Climate Change in the Los Angeles Region" project. This memorandum serves as a second Board status report and highlights progress on initiatives outlined in the Fire Department's January 2, 2013 status report, including additional strategic efforts currently underway to address the projected effects of climate change.

The warmer, drier conditions ushered in by climate change, has created ideal conditions for wildfires in Southern California. The rise in temperatures and prolonged periods of drought has increased the fire ignition potential, frequency, and duration of wildfires. In addition, the shorter and warmer winters, when combined with a decrease in snowfall and soil moisture reserves, have extended the traditional fire season.

Wildfires have major economic impacts and their costs could rise to millions of dollars annually. In order to protect communities and natural resources, the Fire Department tracks conditions associated with climate change and modifies plans accordingly. For example, the Department is in the process of instituting strategic changes to several wildland fire prevention programs to adapt to climate change. Programs affected include integrated vegetation management, strategic fire plan implementation, brush clearance inspection program, and fuel modification plan review. The strategic business process changes associated with these programs will maximize workforce capacity and leverage partnerships and resources with stakeholders to prepare for the increased threats to lives and property.

SERVING THE UNINCORPORATED AREAS OF LOS ANGELES COUNTY AND THE CITIES OF:

AGOURA HILLS
ARTESIA
AZUSA
BALDWIN PARK
BELL
BELL GARDENS
BELLFLOWER
BRADBURY

CALABASAS
CARSON
CERRITOS
CLAREMONT
COMMERCE
COVINA
CUDAHY

DIAMOND BAR
DUARTE
EL MONTE
GARDENA
GLENNDORA
HAWAIIAN GARDENS
HAWTHORNE

HIDDEN HILLS
HUNTINGTON PARK
INDUSTRY
INGLEWOOD
IRWINDALE
LA CANADA FLINTRIDGE
LA HABRA

LA MIRADA
LA PUENTE
LAKEWOOD
LANCASTER
LAWNDALE
LOMITA
LYNWOOD

MALIBU
MAYWOOD
NORWALK
PALMDALE
PALOS VERDES ESTATES
PARAMOUNT
PICO RIVERA

POMONA
RANCHO PALOS VERDES
ROLLING HILLS
ROLLING HILLS ESTATES
ROSEMEAD
SAN DIMAS
SANTA CLARITA

SIGNAL HILL
SOUTH EL MONTE
SOUTH GATE
TEMPLE CITY
WALNUT
WEST HOLLYWOOD
WESTLAKE VILLAGE
WHITTIER

Rita L. Robinson, Deputy CEO
August 15, 2014
Page 2

In addition to these effective defensible space programs, the Fire Department enforces fire and building codes related to the development in the Fire Hazard Severity Zones (FHSZ) in Los Angeles County. The Department has updated the FHSZ requirements in Title 32 (Fire Code) using the latest scientific data and methodologies to reduce the home ignition potential.

To further evaluate changes to the natural environment, the Fire Department is currently working with NASA Jet Propulsion Laboratory scientists, along with key federal, State and local agencies, to study the effects of climate change on fire danger. Specifically, the team is evaluating the use of remote sensing satellite data to measure patterns and relationships between temperature, precipitation, soil moisture, topography, and moisture levels in vegetation. The data will be utilized to create real-time fire danger products, including regional susceptibility and large fire potential.

The Sea Level Rise Vulnerability Study prepared by the University of Southern California for the City of Los Angeles has been reviewed by staff for Fire Department impacts. A Department Tsunami Response Policy, released in November 2013, addresses response procedures associated with immediate coastal flooding.

Climate change adaptations are now part of the Fire Department's daily operations. The Department's protocols and procedures have been issued for heat-related injuries, water conservation, power and fuel conservation, storm water, and waste and facilities management. In addition, vehicles are a major source of greenhouse gases (GHG) emissions and the Department's Fleet Services Division is proactively mitigating the GHG production by acquiring hybrid and alternative fuel vehicles and implementing new vehicle maintenance initiatives.

In closing, the Fire Department continues to collaborate with other County departments to develop and implement best management practices.

For any questions or concerns, please contact me at (323) 881-6180.

DLO:yh

ATTACHMENT III

INTERNAL SERVICES DEPARTMENT



JIM JONES
Director

County of Los Angeles
INTERNAL SERVICES DEPARTMENT

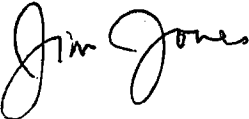
1100 North Eastern Avenue
Los Angeles, California 90063

Telephone: (323) 267-2101
FAX: (323) 264-7135

"To enrich lives through effective and caring service"

February 20, 2014

To: Each Supervisor

From: Jim Jones
Director 

Subject: **ENERGY & ENVIRONMENTAL POLICY REPORT #15**

This is the 15th semiannual report to your Board to discuss ongoing work by the Internal Services Department (ISD), including its County Office of Sustainability (COS), in support of the County's Energy and Environmental Policy.

Nearly all of the former ARRA programs, which were discussed in detail in the last report to your Board, will be continued through calendar year 2014 using funds received from the California Public Utilities Commission (CPUC). These programs were authorized by the CPUC and ordered to be made available directly within the County's buildings and throughout the Southern California region. The County, through ISD, was named as the administrator of the newly established Southern California Regional Energy Network (SoCalREN). In January 2013, your Board authorized ISD to accept funds from the CPUC to administer and implement programs under the SoCalREN.

Below are updates on various programs and initiatives overseen by ISD, as described in the following sections:

I. **REPORT OVERVIEW**

Programs for Los Angeles County, Southern California, and Beyond

- A. Programs for Internal County Operations
- B. Programs for Public Agencies
- C. Programs for Residents
- D. Programs for Contractors
- E. Programs for Businesses
- F. "Big Picture" Programs

II. DETAILED PROGRAM DESCRIPTIONS

A. Programs for Internal County Operations

1. Energy Management

ISD's Energy Management Division provides project implementation and other support services for County departments as detailed below.

ISD continues its highly successful building retro-commissioning program, which "tunes up" heating, ventilating, and air conditioning (HVAC) systems. By ensuring that HVAC equipment and systems perform optimally, departments' utilities spending is decreased and energy is utilized efficiently. Retro-commissioning projects are currently taking place at four Sheriff's stations, the Los Padrinos Juvenile Hall, and three health centers.

ISD has completed the installation of efficient chillers and ancillary equipment at the LAC+USC Medical Center central plant. ISD is currently in the preliminary stages of an additional project at LAC+USC to improve the energy efficiency of the chilled water delivery system to each building served by the existing power plant. These projects are expected to save the facility approximately 1.8 million kilowatt-hours (kWh) and \$250,000 annually. Funding for these projects derives from a 2007 settlement with the Los Angeles Department of Water and Power (LADWP).

ISD continues to install high-efficiency fluorescent lamps in Probation Camps, Sheriff Detention Facilities, and various other County sites by utilizing the Energy Investment Program (EIP) approved by your Board in 2012. The EIP is a "revolving loan fund" program. Departments are able to implement energy efficiency projects by utilizing ARRA seed funds, and then replenish these funds through their utility savings until the projects are repaid.

ISD is currently developing scopes of work for several library facilities to install energy efficiency measures, including solar, that will reduce energy usage by a minimum of 20 percent and, where possible, generate as much energy annually as the facilities consume. This broader development and implementation of this "zero net energy" strategy is being investigated by ISD for more widespread adoption.

ISD is now working with the Department of Public Works (DPW) to solicit bids to engineer and install an optimum fixed-flow hydropower pressure-reducing turbine at one of DPW's water pumping stations. This turbine will provide green, sustainable power and will offset electrical consumption at the pumping station by a minimum of 425,000 kWh per year.

ISD is currently retrofitting older emissions reduction systems at both the Civic Center and Pitchess Cogeneration Plants, which will also provide operating efficiencies by increasing plant electrical output. Upgrades at the Pitchess Plant will increase safety at the facility by eliminating the usage of hazardous chemicals. Upgrades at the Civic Center Cogeneration Plant to its steam turbine generator and cooling tower water pumps will increase electric output and create more efficient operations. These two projects will save over \$1 million in annual operating costs.

ISD is currently coordinating with DPW, the Department of Parks and Recreation, and the Sheriff's Department on lighting upgrades and potential solar and efficient pool pump retrofit projects.

ISD is currently supporting Department of Health Services' Capital Projects program to replace old, inefficient boilers at Rancho Los Amigos Rehabilitation Center. This project comports with new mandatory South Coast Air Quality Management District emissions restrictions.

2. Fleet and Transportation

ISD continues to assist other departments in reducing the greenhouse gas (GHG) emissions generated by County fleet and transportation generally, as detailed below.

ISD assisted the Sheriff's Department in obtaining \$7 million of grant funding from the South Coast Air Quality Management District. The funding consists of two Carl Moyer Program grants, which will enable the Sheriff's Department to offset the costs of replacing 37 of its 82 Prisoner Transportation Buses with ultra-low emission diesel buses that produce less than 2% of the nitrogen oxide emissions and particulate matter than the older buses. All 37 new buses will produce fewer emissions combined than one single older bus. Sixteen of the 37 green buses are now in service. Eight additional buses are planned for delivery by July 2014. At present, ISD is assisting the Sheriff's Department with project management and ongoing grant reporting requirements.

As co-lead with the LADWP, ISD, along with 21 other agencies, received an \$840,000 award from the California Energy Commission (CEC) to install Electric Vehicle (EV) charging infrastructure throughout the County. ISD is working with six County departments to install 93 chargers at 30 County locations. Last month, ISD conducted site walks and ordered necessary equipment. The first EV installations are expected to be completed by April 2014.

ISD and the Chief Executive Office (CEO) assisted several County departments in applying for more than \$3 million in Mobile Source Air Pollution Reduction Review

Committee (MSRC) grant funding for bicycle rack installations, bicycle path improvements, compressed natural gas refueling stations and trucks, and EV infrastructure (see also the "Healthy Design Workgroup" discussed below). The MSRC has already approved these grants; contracts are forthcoming. ISD/CEO will formally request Board acceptance in the coming months.

3. Green Buildings

As part of continued efforts to support efficiency improvements to existing County buildings, ISD has developed a County Green Building Program that offers other departments Leadership in Energy and Environmental Design (LEED) certification services, LEED feasibility assessments, technical support for departments seeking to perform their own LEED certification, and other green building measures implementation support. All of these services complement ISD's existing Energy Management services and other sustainability policies adopted by the Board.

ISD has developed a reporting tool – The Green Building Dashboard – to complement the Green Building Program. The Dashboard enables County building managers to monitor energy usage and other sustainability measures in selected facilities. ISD has linked the Dashboard to the Green L.A. County website (green.lacounty.gov) where building managers can easily access it.

ISD continues to maintain and update the Green L.A. County website with environmental and energy efficiency news and information, articles, links to other departmental sustainability programs, and links to valuable related resources. Some recent additions to the website include content related to the severe state drought and water conservation programs and resources. ISD also completed and posted a "Drought Tolerant Landscape" handbook.

4. Green Leadership Awards

ISD participates annually in reviewing and scoring Green Leadership Awards submissions in a contest administered by the CEO's Quality and Productivity Commission. This program recognizes outstanding efforts by individuals and organizations in fulfilling innovative strategies to improve our environmental sustainability. ISD will begin reviewing applicant submissions in late February.

5. Healthy Design Workgroup

COS actively participates in the County's Healthy Design Workgroup (HDW) – a consortium of high-level representatives from several County departments, including the Arts Commission; Beaches and Harbors; CEO; the Community Development

Commission; Fire; Parks and Recreation; Public Health (group lead); DPW; and Regional Planning. The HDW meets regularly to develop and implement strategies for designing and building healthy environments within the County. The inter-departmental nature of this effort aligns with County strategic planning efforts and Supervisor Knabe's 2014 goals as Chair of the Board of Supervisors to encourage collaboration across County departments.

B. Programs for Public Agencies

As discussed in detail in prior reports to your Board, "Energy Upgrade California" is a State initiative to help Californians take action to save energy and conserve natural resources, reduce demand on the electricity grid, and make informed energy management choices at home and at work. It is supported by an alliance of the CPUC, the California Energy Commission, utilities, regional energy networks, local governments, businesses, and nonprofits to help communities meet State and local energy and climate action goals. EUC Programs are described in further detail in this report beginning with programs for public agency buildings below.

1. Southern California Regional Energy Center (SoCalREC)

ISD has developed the SoCalREC program to support the implementation of energy efficiency projects in public agency buildings and facilities throughout Southern California. Now marketed under the name, "The Energy Network," its sub-programs are described below.

a. Clean Energy Workforce

One of SoCalREN's objectives is to build a local workforce for the clean energy jobs of the future. A collaborative effort between the County, Citibank Community Development, and Emerald Cities Collaborative trains low and moderate-income residents for future jobs in greening public buildings. As part of SoCalREN's workforce development efforts, the County recently held a green economic summit to promote clean energy jobs.

b. Community Energy Efficiency Project Management System (CEEPMS)

This program will provide a few pilot cities with the capability to identify energy efficiency projects through an online permit tracking system, which prioritizes and expedites the permitting process. The software will match permits applied for against incentives available to ensure that each project owner is aware of them.

c. EEMIS Expansion

The Enterprise Energy Management Information Systems (EEMIS) was developed by ISD to provide a cost-effective means to monitor, analyze, and benchmark facility energy usage and costs utilizing a single energy management software tool for County buildings. EEMIS functions as a robust data warehouse which offers several services, including: energy consumption and financial bill archiving; online tracking, reporting and analysis; automated facility benchmarking tools; energy consumption and cost management tools; and energy efficiency project and identification support.

EEMIS has been made available to other local governments to provide energy management services. Participating agencies pay an incremental portion of ISD's EEMIS operating costs to join (which is a fraction of the cost of purchasing their own system) and ISD receives revenues for administration, implementation and technical support. To date, over 70 cities have signed up for EEMIS.

d. Master Lease Financing

Master Lease Financing provides lease financing to implement energy projects to all public agencies. The SoCalREC has prequalified a set of financial institutions to provide this financing and has also developed a simplified, standardized agreement which may be executed by the participating agency and financial institution. This financing will help public agencies implement a greater number of energy projects.

e. Public Agency Building Retrofits

This turnkey project provides public agencies with access to centralized, standardized, and streamlined energy retrofit services such as: financing, solicitation, project management, auditing, engineering, construction, and technical assistance, all delivered through cooperatively-procured contracts using competitively bid pools of pre-qualified energy consulting firms and contractors. These services complement services provided by the utilities (e.g., initial audits and incentives processing).

This innovative project mitigates the need for public agencies to develop comprehensive, in-house resources to assess and implement projects. It also accomplishes several goals including: encouraging collaboration among all stakeholders; increasing energy savings; delivering improved quality products and services at a lower cost; and completing whole building, street lighting, and water/wastewater retrofits at an accelerated rate.

The project launched in September 2013 and the first retrofit was completed in December 2013 - a lighting retrofit in a Culver City owned parking structure. To date,

27 public agencies are enrolled. Public agencies may opt to take advantage of the entire slate of services offered, or only selected ones. The Turnkey Project goal is to achieve 29,675,000 kWh and 400,409 therms in annual energy savings by December 2014.

f. **Water/Energy Nexus**

The Water/Energy Nexus pilot program is a collaboration among the County, the Metropolitan Water District, and several water utilities to quantify the energy savings achieved by conserving water in water system operations and in upgrading water utilities buildings and facilities. Because handling water is energy intensive, emphasizing certain water system enhancements in wholesale delivery, retail delivery, and wastewater treatment has a dual societal benefit in conserving both water and energy. ISD plans to compile and disseminate its findings for broader acceptance and usage statewide.

C. Programs for Residents

1. **Assessment Vouchers & Discount Coupons**

This program provides assessment vouchers and discount coupons to homeowners interested in pursuing EUC Advanced Home upgrades. Vouchers and coupons help homeowners pay for either a portion or the entire amount, respectively, of the home energy assessment cost, which constitutes the first step of an EUC upgrade. As such, this program incentivizes homeowners to participate in EUC upgrades.

2. **Community Champions**

Community Champions is a marketing and outreach program geared towards building community awareness of EUC and SoCalREN program offerings. More specifically, SoCalREN works directly with 'Community Champions' – supportive and engaged community organizations in targeted communities – to leverage their networks to increase awareness of and encourage participation in these program offerings.

3. **Community Home Energy Retrofit Project (CHERP)**

CHERP is a volunteer-based education and outreach strategy to develop sustainable delivery channels for EUC programs and offerings by developing a core group of supporting citizens within the community. CHERP helps promote residential energy efficiency upgrades at a city level in engaged communities.

4. Energy Champions

Energy Champions utilizes non-profit community organizations such as universities and alumni associations that have organized networking sources within their respective communities to promote EUC and generate project leads. When participating organizations secure leads that result in completed projects, they can receive financial incentives.

5. Green Building Labeling

The Green Building Labeling (GBL) program educates real estate professionals about green building certifications and the value of conducting green home upgrade projects, including energy efficiency upgrades. Through workshops and other modes of outreach and training, GBL impresses upon realtors that green homes are more marketable – both for homeowners looking to sell and those looking to buy. To date, 151 realtors have undergone training.

6. Home Upgrade & Advanced Home Upgrade

Home Upgrade and Advanced Home Upgrade provide incentives for comprehensive, single-family home energy efficient retrofits by promoting interactive whole-home combinations of measures such as: insulation; HVAC equipment replacement; duct replacement/repairs; air sealing; radiant barriers; and hot water systems, etc.

7. Low-income Single Family Rehabilitation Program

The Low-income Single Family Rehabilitation pilot program seeks to develop and implement a business process that connects County Community Development Commission (CDC) program clients to EUC via outreach and coordination of the respective programs' requirements.

The CDC Home Improvement Program (HIP) assists low income, owner-occupied single family homes with rehabilitation financing of up to \$15,000. The low-income program educates interested clients about EUC measures for which they are eligible and about how best to integrate those measures into the rehabilitation work.

Program administrators encourage CDC-qualified contractors to also train to become EUC Home Upgrade qualified contractors such that they can best inform their customers about available programs.

8. Multi-Family Home Upgrade

Similar to the Home Upgrade and Advanced Home Upgrade programs for single-family homeowners, this program provides incentives to multi-family building owners to assess and implement comprehensive, interactive energy measures. The Multifamily Home Upgrade Program also promotes energy upgrades for portions of buildings where utilities are paid by both the tenants and landlord.

9. Single Family Home Financing

EUC utilizes Matador's Credit Union to provide single family homeowners with financing for their EUC Home Upgrade projects. Matador's Credit Union provides three loan options to qualified buyers, including a 4.99%, 5-year term loan; a 5.99%, 10- year term loan; or a 6.99%, 15- year term unsecured loan of up to \$50,000 to qualified borrowers. In order to generate initial program participation with competitive terms and conditions, the program uses a loan loss reserve credit enhancement, which helps protect lenders against losses stemming from defaulted loans.

10. Social Media

EUC utilizes several social media outlets to promote programs to targeted audiences across the Southern California region. Social media offers ways to encourage program participation, publicize energy-saving tips and environmentally friendly news stories, and build a strong connection between EUC contractors and potential participants.

D. Programs for Contractors

1. Co-op Marketing

This program provides matching fund reimbursements to participating EUC contractors who conduct their own marketing and advertising. The contractor marketing and advertising materials must satisfy EUC brand guidelines to receive these funds.

2. Cool Comfort Program

The Cool Comfort program provides low cost financing to residential customers for HVAC and other retrofits through Matador's Credit Union. Under this program, qualified single family homeowners may finance projects for up to \$50,000 under either 5 or 10 year term loans at a 4.99% or 5.99% interest rate, respectively. Cool Comfort incentivizes residents to adopt higher levels of equipment efficiency and supports the contractor community by yielding more retrofit jobs.

E. Programs for Businesses

1. Non-residential Property Assessed Clean Energy (PACE) Financing

ISD and the Treasurer & Tax Collector (TTC) are working together to administer a countywide PACE financing program for non-residential properties. The program provides financing through County-issued bonds for private sector energy projects, which are then paid back through assessments placed on the building owners' property tax statements. The program also provides marketing, education, recruitment, and technical support to property owners. The program's first PACE assessment was funded in July of 2013 and has an active application pipeline of over 40 projects.

On January 28, 2014, the Hilton Universal City hosted a ribbon cutting ceremony to announce project completion of its \$7 million PACE energy upgrade. Los Angeles Mayor, Eric Garcetti, and Los Angeles County TTC, Mark Saladino, attended the ceremony, which was heavily covered by television and print media. The project is the second PACE-funded building upgrade in the County and the largest project in the nation. There are currently 39 projects in the PACE development pipeline, and the County PACE team is working with property owners and financiers to move them forward.

F. "Big Picture" Programs

Alliance of Regional Collaboratives for Climate Adaptation (ARCCA)

ARCCA is a statewide consortium of climate adaptation organizations comprised of representatives from San Diego, Los Angeles, Sacramento, and the Bay Area, of which ISD is an active member. In mid-December, ARCCA members met to share high-value projects and best practices as well as news on upcoming legislative developments, conferences, and technical reports, and also discussed climate adaptation efforts throughout the State. In mid-January, ARCCA hosted a webinar with Climate Central to detail its new California sea-level rise tool. In early February, ARCCA joined a discussion with the Office of Planning and Research to learn about, discuss and comment upon California's "Environmental Policies and Goals Report." In the coming months, ARCCA will focus on: selecting high priority projects to work on for the year; drafting recommendations for President Obama's Task force on Climate Preparedness; and providing recommendations for the California Natural Resources Agency's update to the 2009 Climate Adaptation Strategy (now named, the "Safeguarding California Plan").

AmeriCorps

ISD participated in the planning process for the Governor's Initiative Program, of which the AmeriCorps Program is a part. AmeriCorps seeks to link talented young workers to local governmental entities to collaborate on regional sustainability projects. As such, AmeriCorps will provide training and guidance for future environmental leaders; bring crucial resources to local governments; and advance environmental sustainability projects throughout the County. ISD is leading a regional effort to apply for and obtain AmeriCorp workers to work in County and regional GHG reduction programs later this calendar year.

County Strategic Plan Revision

At the County strategic planning conference in early January, ISD/Regional Planning/Public Works jointly presented an environmental sustainability goal for the County's Strategic Plan. All County department heads were present, and the audience was receptive to this revision, which will lay the groundwork for more comprehensive and organized sustainability planning in the County and state.

Energy Atlas Project with UCLA

ISD has been heavily involved in contract negotiations with UCLA's Institute of the Environment and Sustainability for the development of an Energy Atlas to support countywide energy efficiency planning by local jurisdictions. The contract is nearly finalized and ISD will request authorization from your Board in March 2014 to execute the contract.

Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC)

ISD serves as the County's representative to the LARC. LARC is an organization committed to supporting climate mitigation and adaptation initiatives by convening representatives from local government, non-profits, academia, and industry to define meaningful approaches to reaching collective climate and sustainability goals. Current LARC efforts include the following:

- Holding its first "3rd Month Forum" with USC's Sea Grant to discuss: key findings from USC's Sea Level Rise Vulnerability Study for the City of Los Angeles; a new regional sea level rise planning initiative to inform Local Coastal Programs; and the Draft Sea Level Rise Policy Guidance document.
- Re-launching its website, LARRegionalCollaborative.com, to be more user-friendly and to serve as an informational umbrella for regional sustainability activities.

- Reviewing and reconciling data in the Regional Greenhouse Gas Inventory report and evaluating how best to disseminate this information to the public.
- Applying for a Strategic Growth Council grant with the County to create and carry out a curriculum targeted towards interest groups regarding the basics of sustainable land use and planning.
- Co-hosting the Safeguarding California public comment session in Irvine.
- Planning the Green Cities California conference in late February in San Diego as well as the California Adaptation Forum in late August in Sacramento.

Senate Select Committee on Climate Change and AB 32 Implementation

In early December, ISD attended the Senate Select Committee's hearing on "Opportunities to Build Resilient Communities, Cut Pollution, and Create Jobs through AB 32," which was hosted at UCLA's School of Law. The Select Committee heard testimony from an Atmospheric and Oceanic Sciences professor about the state of the climate, particularly in Southern California; a regulatory representative about AB 32 implementation throughout the State; and community leaders about opportunities to invest in jobs, pollution reduction, and resilient communities.

State and Federal Legislation

In conjunction with legislative consultants in Sacramento and Washington D.C., ISD continues to monitor and track pertinent legislative activities, especially those which support local government and regional greenhouse gas reduction programs and projects. Among the key legislation that ISD will continue to monitor is the implementation of AB 32 and Proposition 39 funds as discussed in detail in the last report to your Board.

ISD has also been working with the California Air Resources Board (CARB) in understanding the rollout of the State's Cap & Trade Emissions Market as mandated under AB32. Under Cap & Trade, large emitters in various industry sectors must reduce their GHG emissions and/or procure allocations for the emissions they produce ("capped entities"). The County's cogeneration plants at Civic Center and Pitchess meet the threshold established by CARB. As capped entities, these plants must comply with emissions reduction targets through 2020. ISD will review these impacts to the plants as part of the Fiscal Year 2015-16 Utilities Budget.

The Local Government Sustainable Energy Coalition (LGSEC)

The Local Government Sustainable Energy Coalition unites California cities and counties to leverage resources and work together in energy policy action and innovation

Honorable Board of Supervisors

February 20, 2014

Page 13

as well as climate action. More specifically, it shapes regulatory policy and utility programs by giving member governmental entities one strong voice before regulatory agencies (including the CPUC, the California Energy Commission, and CARB; stays informed and effective on energy issues; learns and shares best practices from experts and member governmental entities; and develops long-term energy strategies.

LGSEC also continues to monitor and officially respond to several regulatory matters at the CPUC, including: statewide energy efficiency programs development/energy data usage issues; energy efficiency financing; and long-term utility resource procurement planning. In early February 2014, LGSEC hosted its quarterly Energy Manager's meeting as well as its General Members meeting, where it discussed, among other things, updates on regulatory and legislative developments, PACE, the Regional Energy Networks, and Community Choice Aggregators; and strategies surrounding the 2015 CPUC planning cycle. At its recent Policy Committee meeting, LGSEC identified the following policy platform: Climate Change and Adaptation, Resource Management, Alternative Fueled Vehicles, and Innovation. As LGSEC Board Chair, COS plays a central role in these activities.

More detailed description about each of these programs described in this report, and other energy and environmental programs that are administered by other departments within the County and throughout the region, can be found at the County's comprehensive energy and environmental website: <http://green.lacounty.gov>.

If you have any questions, please contact me at (323) 267-2101 or Howard Choy at (323) 267-2006.

JJ:JC

c: ISD Board Deputies
William T Fujioka, CEO
Operations Cluster, Deputy CEO
Each Department Head

ATTACHMENT IV

DEPARTMENT OF PARKS AND RECREATION

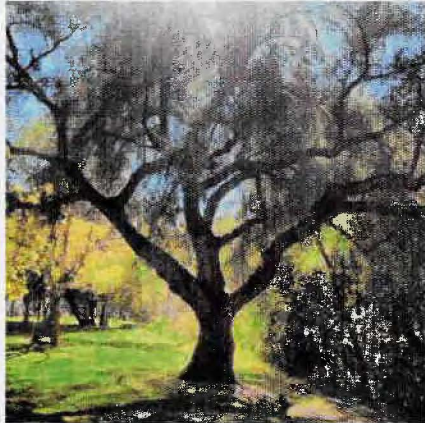
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Parks and Climate Change: The L.A. County Story

July 29, 2014 By [Clement Lau](#)



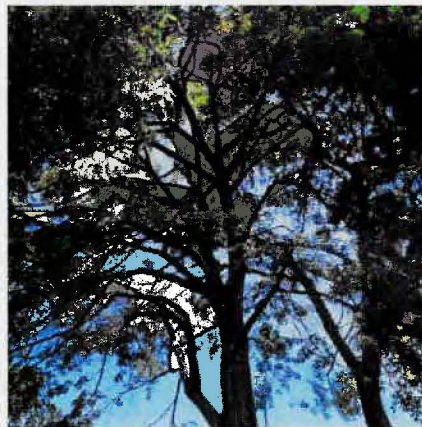
Local and regional parks can be used to mitigate the [urban heat island](#) effect and minimize local [climate change](#).

Unfortunately, this idea is not often shared, discussed, and/or adequately understood. If you do a search on the web on "climate change and parks," you will find that most of the results are links to information about how climate change is impacting national parks. Examples include a discussion on the National Park Service (NPS) [website](#), and recent articles published by [National Geographic](#) and [Scientific America](#). While it is clear from studies that [global warming](#) is threatening national parks, I would like to

focus instead on local and regional parks which I am more familiar with. Specifically, I will first briefly explain how local communities can use parks for climate change management, and then discuss with examples how the [Los Angeles County Department of Parks and Recreation](#) is addressing climate change and its effects.

Parks and Climate Change

Parks are the first and best line of defense against the urban heat island effect, and its mostly negative consequences of modified temperature, precipitation, wind, and air quality patterns. In particular, urban parks cool and clean the air, improve and modify local wind circulations, and better regulate precipitation patterns. Well-vegetated parks, in various sizes and forms, mitigate the urban heat island effect and minimize local climate change. Reduced impact of the urban heat island may prolong or even prevent more widespread global climate change as the size and number of urban communities continue to increase. The



[American Planning Association](#) (APA) has published a [briefing paper](#) which explains how cities use parks for climate change management. Summarized below are the key points:

- Parks moderate artificially higher temperatures from the urban heat island effect through shading and [evapotranspiration](#).
- Parks enhance local wind patterns in cities through the park breeze (cooler air over parks replaces warmer air in adjacent city neighborhoods).
- Parks mitigate local precipitation anomalies amplified by the urban heat island effect.
- Parks sequester carbon and other pollutants trapped by the urban heat island that may otherwise alter local and global atmospheric composition.

(For a more detailed explanation of each key point, please read the APA briefing paper.)

The L.A. County Story

The Los Angeles County Department of Parks and Recreation (DPR) owns and manages a wide variety of parks and recreational facilities including local, community and regional parks, natural areas, wildlife sanctuaries, lakes, arboreta and botanic gardens, and trails. DPR also operates the largest municipal golf system in the world, and owns well-known cultural venues like the [Hollywood Bowl](#) and [John Anson Ford Amphitheatre](#). To illustrate how local and regional parks can be and are being used to address the effects of climate change, I would like to highlight the following projects that my department has been working on:

Community Parks and Recreation Plans

As I shared previously (see [Parks and Recreation: Not Just Fun and Games](#)), DPR is currently preparing Community Parks and Recreation Plans to envision greener futures for the following six unincorporated communities in Los Angeles County: East Los Angeles; East Rancho Dominguez; Lennox; Walnut Park; West Athens-Westmont; and Willowbrook. This project is funded by the [Strategic Growth Council](#) through the Sustainable Communities Planning Grant Program. As part of our application for the grant, we explained in detail how parks improve air and water quality, protect natural resources, and reduce [greenhouse gas emissions](#). When completed, each of the six plans will identify and address the unique park and recreation needs of the communities. Specifically, each plan will first examine existing conditions, including: local demographics; existing parkland and recreational facilities; parkland gaps; recreation programs currently offered; trees and tree canopies in existing parks; transportation, safety and connectivity issues as they relate to parks; and availability of land for recreation purposes. Based upon the review of existing conditions and findings from the public outreach process, the plan will provide a detailed assessment and prioritization of community needs. The plan will present conceptual designs for potential new park/trail projects and urban forestry plans to address the identified needs, promote exercising and walking, and expand the urban tree canopy. These designs and plans will be developed with substantial input from community members.

Park Design Guidelines and Standards

This document is intended to provide design professionals, County staff, and other agencies with guidance on how to design and develop parks that meet County standards and expectations. It incorporates input from DPR staff, other County departments, as well as outside partners such as non-profit organizations and private developers which have an interest in park design. This manual is very detailed and addresses topics such as: spatial organization (e.g. physical access and adjacency compatibility, security and safety); buildings (e.g. contextual site and sustainability considerations); circulation (e.g. pedestrian, vehicular, bicycle); recreational facilities (e.g. ball fields, sports courts); landscaping (e.g. planted areas and irrigation); storm water management (e.g. grading and drainage, low-impact development strategies); utilities (e.g. electrical and lighting design); preferred manufactured products to be used at the parks; and preferred plant lists for both potable and recycled water.

Urban Forestry Manual

All of DPR's facilities have one thing in common: trees. They are our greatest asset in combating global warming, cooling our park patrons, capturing stormwater runoff and pollution, reducing heat islands, and cleaning the air we breathe. DPR's urban forest is an integral component of the larger southern California ecosystem which continues to evolve and adapt. DPR is responsible for maintaining this valuable resource, which is susceptible to decay and disease. To sustain the urban forest, we must know how, when, and why to intervene in its processes. This manual provides guidelines and standards for planning, protection, preservation, maintenance, and sustainability of the urban forest under DPR's care. Specifically, it addresses various topics such as: the County's Tree Preservation Policy; pruning standards; watering practices; soil condition and drainage; protection of trees during construction; tree removal, replacement; and planting; and safety standards. Also included in this manual are the inventories of trees at five County parks and the documented environmental benefits ([carbon sequestration](#), stormwater capture, and energy saving) of the trees as calculated using the [i-Tree](#) software.

Eugene A. Obregon Park Green Pilot Project

The goal of this Green Pilot Project is to create a conceptual site design for an existing County park, incorporating environmentally responsible practices to reduce the County's [carbon footprint](#) and promote environmental stewardship. [Eugene A. Obregon Park](#) is an 11-acre local park located in the unincorporated community of East Los Angeles. DPR staff first completed an in-depth site analysis to identify potential opportunities and constraints for the park to achieve greater efficiencies in building and site design, potable water usage, and on-site stormwater management. Following this assessment, a conceptual park renovation site plan, along with a detailed scope of work, was developed. The conceptual site plan was designed to meet the following criteria:

- The efficiency upgrades must maintain the functional needs of park users;
- Materials and design techniques would be used to reduce the park's carbon footprint;
- The design must include an educational component to promote sustainable environmental practices throughout the community; and
- The park must continue to provide a beautiful public space for the community's enjoyment.

In 2010, DPR installed solar panels on several facility rooftops at Obregon Park. The [project](#) was conceived as a part of the Green Pilot Project. The solar panels are projected to reduce electricity consumption by more than 20% while reducing carbon dioxide (CO₂) emissions by 40,000 lbs. per year. As one of the first solar panel projects implemented at a County park, this project raised public awareness of the importance for achieving sustainability through the use of a renewable energy resource.

Smart Controllers

"Smart controllers" automatically program the irrigation system operations based on daily weather conditions, which are transmitted to the controllers through a network of satellite communications systems. In response to the recent water shortage and the County Board of Supervisors mandate to reduce water usage, DPR recently replaced existing irrigation controllers with water efficient "Smart controllers" at seven County parks: [Jesse Owens Community Regional Park](#), [Whittier Narrows Recreation Area](#), [Kenneth Hahn State Recreation Area](#), [Hollywood Bowl Performing Arts Center](#), [El Cariso Community Regional Park](#), [Veterans Memorial Community Regional Park](#), and [Frank G. Bonelli Regional Park](#). After a twelve-month period of performance-monitoring at these County parks, a 23% reduction in water usage was observed. This water usage reduction resulted in 219 million gallons of water saved, and a \$385,000 cost savings. An initial \$1 million was funded by the County's Chief Executive Office for project construction. As a result of this project, water utility companies gave DPR \$208,000 of water conservation rebates.

LEED-EB Project: Placerita Canyon Natural Center and Natural Area

The [Placerita Canyon Nature Center/Natural Area](#) is the first County facility to be awarded LEED-EB (Leadership in Energy and Environmental Design for Existing Buildings) certification by the [U.S. Green Building Council](#) (USGBC). The facility was given the LEED-EB Silver rating for implementing measurable sustainable practices during construction and for post-construction maintenance and operations of the facility. The Nature Center building was originally constructed in 1971. As part of this project, the following renovations were made to the Nature Center building: energy and water conservation features including energy efficient air conditioning and cooling systems, exterior building wall insulations, new roofs, renovated bathrooms, windows and doors, septic system/leach field, court yard, and interior remodeling; accessibility upgrades in compliance with current [ADA](#) requirements; and a new gift shop. In July 2011 the facility received the [National Association of County Parks and Recreation Officials](#) "Environmental Leadership" award.

It is clear that local and regional parks can be used to mitigate the urban heat island effect and minimize local climate change. As explained above, DPR has been proactively and progressively addressing these challenges through its planning, design, construction, and renovation projects and practices. For more information about DPR's current and completed projects, please visit this

[website](#).

Note: Photos by author.

Filed Under: [Environment](#), [Feature Posts](#), [Los Angeles](#), [Planning](#), [Projects](#) Tagged With: [climate change](#), [Community Parks and Recreation Plans](#), [Global Warming](#), [greenhouse gas emissions](#), [LEED](#), [Los Angeles County](#), [Los Angeles County Department of Parks and Recreation](#), [parks](#), [smart controllers](#), [smart growth](#), [Sustainability](#), [transit](#), [trees](#), [urban forest](#), [urban forestry](#), [urban heat island](#), [urbanism](#)



About Clement Lau

Clement Lau, AICP, has 15 years of professional experience in urban and regional planning. Currently, Dr. Lau is a Departmental Facilities Planner with the Los Angeles County Department of Parks and Recreation. He enjoys writing about a variety of planning issues and is on the author panel for UrbDeZine. He also has published articles in the California Planning & Development Report, Public Works Management & Policy, and Progressive Planning. Dr. Lau previously worked for Los Angeles County's Department of Regional Planning and the consulting firm of Cotton/Bridges/Associates in Pasadena. He has guest lectured on public policy and urban planning topics at the University of Southern California and California State University, Northridge. He holds a doctorate and master's in urban planning from USC, and bachelor's in economics from the University of Hawaii at Manoa.

Comments



Clement Lau says:

August 5, 2014 at 6:46 am

On a related note, please also check out L.A. County's Community Climate Action Plan at: <http://planning.lacounty.gov/CCAP>

[RETURN TO TOP OF PAGE](#)

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ATTACHMENT V

DEPARTMENT OF PUBLIC HEALTH



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Director and Health Officer

CYNTHIA A. HARDING, M.P.H.
Chief Deputy Director

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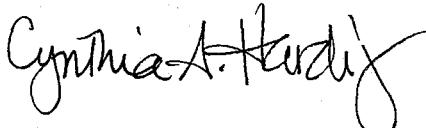
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August 15, 2014

TO: Rita L. Robinson
Deputy Chief Executive Officer, Community Services Cluster

FROM: Cynthia A. Harding, M.P.H. 
Chief Deputy Director

SUBJECT: **STEPS TAKEN TO PREPARE FOR POTENTIAL EFFECTS OF CLIMATE CHANGE (ITEM 55-A, JULY 3, 2013 BOARD AGENDA)**

This memorandum is to provide you a status update on the activities of the Department of Public Health with respect to climate change preparation, adaptation, and mitigation activities.

As reported last year, DPH's internal Climate Change Workgroup developed the attached report, *Five Point Plan to Reduce the Health Impacts of Climate Change*, outlining five strategic priorities, specific goals, and objectives guiding the Department's climate change work:

1. Inform and engage the general public about the nature of climate change and the health-related co-benefits associated with taking action to reduce carbon pollution.
2. Promote local planning, land use, transportation, water, and energy policies that reduce greenhouse gas emissions and support the design of healthy, sustainable communities.
3. Provide guidance on climate preparedness to local government and community partners to reduce health risks and create more resilient communities.
4. Build the capacity of Departmental staff and programs to monitor health impacts, integrate climate preparedness, and improve climate response.
5. Adopt best management practices to reduce carbon emissions associated with Departmental facilities and internal operations.

Summary of Efforts

DPH's climate change activities this year have included internal capacity building as well as public education and collaboration with outside agencies. DPH provided the 16-session Climate and Health Workshop Series to educate the DPH workforce on climate change issues, developed presentations on the public health implications of climate change and delivered them to emergency volunteers and the public, released two reports on the health impacts of climate change and the value of interagency cooperation in addressing climate change, and developed survey questions for the Los Angeles County Health Survey to track knowledge of and attitudes regarding climate change. Additionally, DPH has shared its activities through participation in a variety of forums, most notably in a presentation at the 78th National Environmental Health Association (NEHA) Annual Educational Conference and Exhibition in July 2014.

DPH's climate change activities are outlined in more detail below:

Internal Capacity Building

Climate and Health Workshop Series

The Climate and Health Workshop Series, which began in October 2013 and continued through April 2014, featured 16 workshops that educated and engaged DPH staff on the topic of climate change. The workshops were developed in partnership with UCLA's Dr. Hilary Godwin and her graduate students and were open to invited staff from the Division of Environmental Health, Veterinary Public Health, and Public Health Nursing. Workshops covered the basics of climate change science, projections for Los Angeles County (presented by Katherine Reich, of Dr. Alex Hall's lab at UCLA), climate change communication, vulnerable populations, and specific impacts of climate change on such factors as air pollution, water availability, vector-borne disease, and food systems. These workshops allowed staff to engage with the material and served to further inform DPH's climate adaptation planning.

Beginning September 2014, the Climate and Health Workshop Series will be provided again, this time open to all DPH staff and hosted at four County locations for staff convenience. The series will continue through fall 2015.

Research

DPH developed questions pertaining to climate change awareness and attitudes for inclusion in the upcoming Los Angeles County Health Survey. The LA County Health Survey is a population-based survey that the Department uses to collect and analyze a broad range of public health data. These survey questions will help track the public's awareness over time of the relationship between climate change and public health, and will therefore help inform DPH messaging related to the public health impacts of climate change.

Public Education and Collaborations with Other Agencies

Climate and Health Report Series

In mid-August 2014, DPH will be releasing two reports on the public health impacts of climate change in Los Angeles County and the importance of interagency collaboration to coordinate climate change mitigation and adaptation activities.

The first report, *Your Health and Climate Change in Los Angeles County*, is written for the general public and describes how the climate is expected to change in Los Angeles County and how such changes will affect health.

The second report, *Framework for Addressing Climate Change in Los Angeles County*, is written for other local government agencies and other local health departments around the country. It outlines how climate change relates to the mission of different local agencies and provides guidance on how to develop a plan to address climate change at a specific agency. The report presents DPH's *Five Point Plan to Reduce the Health Impacts of Climate Change* as a model for other agencies' plans.

Collaborations

Collaboration is a theme in all of DPH's climate change activities—as seen above in collaborations with UCLA on workshops and intradepartmental collaborations on educational presentations. Formal collaborations likewise form much of DPH's climate change activities. DPH participates actively in the following workgroups and collaboratives:

- Healthy Design Workgroup. This interdepartmental County workgroup convened by DPH works to promote collaboration on projects that promote a healthy and sustainable built environment. The following County departments participate: Beaches and Harbors, the Chief Information Office, the Community Development Commission, Fire Department, Internal Services Division Office of Sustainability, Parks and Recreation, Public Health, Public Works, and Regional Planning.
- Climate Change Subcommittee. Convened by DPH and launching in August 2014, the Climate Change Subcommittee of the Healthy Design Workgroup focuses on promoting interdepartmental collaboration on climate change mitigation and adaptation projects.
- The Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC). DPH has been a participating member since 2013.

Rita L. Robinson
August 15, 2014
Page 4

Presentations

Collaboration between the Division of Environmental Health and DPH's Health Education Administration has led to the development of a Speakers' Bureau presentation on climate change basics and health impacts. The Speakers' Bureau features presentations targeted to the general community and to community-based organizations upon request.

In addition, collaboration between the Division of Environmental Health and the Public Health Emergency Volunteer (PHEV) Network Coordinator led to the development of presentations targeted to PHEV and Medical Reserve Corps (MRC) volunteers. The presentations focused on the basics of climate change and the types of emergency situations that are predicted to become more frequent and/or more severe with climate change. Presentations were delivered to PHEV and MRC volunteers in April and June 2014.

In summary, DPH climate change activities have focused on internal capacity building, public education, and collaboration with outside agencies. DPH will continue to provide updates as needed on our activities to prepare for the potential effects of climate change, including our collaborative initiatives and steps to inform the public, our staff, and other agencies about responding to the effects of climate change.

Please let me know if you have any questions or need more information.

CAH:er
PH:1301:004

Attachment

c: Jonathan E. Fielding, M.D., M.P.H.
Jeffrey Gunzenhauser, M.D., M.P.H.
Angelo Bellomo

Appendix

Five-Point Plan to Reduce the Health Impacts of Climate Change, 2014-2015

The Los Angeles County Department of Public Health's framework for addressing climate change from a public health perspective.

Strategic Priority 1: INFORM	
Inform and engage the general public about the nature of climate change and the health-related co-benefits associated with taking action to reduce carbon pollution	
Goal 1.1	Develop an educational campaign to increase public awareness of the health impacts of climate change.
Goal 1.2	Prepare community outreach materials for use in raising public awareness.
Goal 1.3	Track knowledge, attitudes, perceptions, and behaviors related to climate change to evaluate the impact of future activities and determine obstacles to mitigation and adaptation actions.
Goal 1.4	Deliver presentations and outreach material to the general public.

Strategic Priority 2: PROMOTE	
Promote local planning, land use, transportation, water, and energy policies that reduce greenhouse gas emissions and support the design of healthy and sustainable communities	
Goal 2.1	Influence local governments and sectors to reduce greenhouse gas emissions and incorporate health considerations into their planning and policy development.
Goal 2.2	Incorporate healthy community design and sustainability strategies into land use decisions and projects.
Goal 2.3	Integrate public health considerations into the climate change planning of other sectors; i.e., transportation, residential energy, and urban greening.
Goal 2.4	Prepare guidance documents to promote greater use of alternative water.
Goal 2.5	Support the development of active transportation networks such as bicycle, pedestrian, and transit-supportive infrastructure to reduce vehicle miles traveled.
Goal 2.6	Convene an interdepartmental committee to implement the County Climate Action Plan by coordinating the efforts of County departments working on climate change mitigation and adaptation, and by seeking grant funding for specific activities.

Strategic Priority 3: PROVIDE**Provide guidance on climate preparedness to local government and community partners to reduce health risks and create more resilient communities**

Goal 3.1	Provide local officials, service agencies, and community groups with community-based health status information to reduce impacts of climate change.
Goal 3.2	Collaborate with LARC, the California Public Health Working Group for the Climate Action Team, and Los Angeles County Regional Environmental and Sustainability Programs to optimize Public Health efforts.
Goal 3.3	Publish a report on the health effects of climate change on the Los Angeles region.
Goal 3.4	Convene an interdepartmental workgroup to incorporate public health considerations in climate change planning.

Strategic Priority 4: BUILD**Build the capacity of Departmental staff and programs to monitor health impacts, integrate climate preparedness, and improve climate response**

Goal 4.1	Expand monitoring and surveillance programs to include key climate-related indicators.
Goal 4.2	Track data on environmental conditions and associated diseases related to climate change.
Goal 4.3	Develop preparedness and response plans to identify vulnerable populations in Los Angeles County.
Goal 4.4	Improve the Department's response to adverse weather events and other climate-related impacts.
Goal 4.5	Educate staff on the public health impacts of climate change.

Strategic Priority 5: ADOPT**Adopt best management practices to reduce carbon emissions associated with Departmental facilities and internal operations**

Goal 5.1	Review and revise Public Health's policies and practices to encourage "smart travel" and reduce vehicle miles traveled through use of telecommuting, office carpools and alternative work schedules.
Goal 5.2	Implement the use of energy-efficient technologies (e.g., paperless administrative processes, paperless inspection systems, use of energy-saving equipment).
Goal 5.3	Implement green purchasing practices within Public Health and require the same from contractors and suppliers.
Goal 5.4	Prepare a template based on Public Health model practices and promote its use by other local public health organizations.

ATTACHMENT VI

DEPARTMENT OF PUBLIC WORKS



GAIL FARBER, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

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IN REPLY PLEASE
REFER TO FILE: **A-0**

August 13, 2014

TO: William T Fujioka
Chief Executive Officer

Attention Rita Robinson

FROM: Gail Farber 
Director of Public Works

JULY 3, 2012, BOARD MOTION, AGENDA ITEM 55-A REPORT ON THE STEPS TAKEN TO PREPARE FOR THE POTENTIAL EFFECTS OF CLIMATE CHANGE

On July 3, 2012, the Board approved a motion instructing the Chief Executive Officer, in conjunction with the Directors of Public Health, Public Works, Beaches and Harbors, Regional Planning, and the Fire Chief, to review the University of California, Los Angeles' "Climate Change in the Los Angeles Region" project, document the steps being taken to prepare for the projected effects of climate change, and report back to the Board with a cost analysis on the steps being taken and recommended additional actions for the County to take to help the region prepare for the likely effects of climate change.

Attached is a report summarizing our comments on available UCLA climate change reports and practices that are being implemented and pursued by Public Works to address climate change. If you have any questions, please contact Mark Pestrella, Chief Deputy Director, at (626) 458-4001, or your staff may contact Youn Sim at (626) 458-7840 or at ysim@dpw.lacountv.gov.

YS:plg
C:MYFILES/MP/CLIMATE CHANGE

Attach.

cc: Chief Executive Office (Arena Turner)
Executive Office
Department of Beaches and Harbors
Department of Public Health
Department of Regional Planning
Fire Department

Attachment A

COMMENTS ON CLIMATE STUDIES

1. UCLA climate studies on temperature and snow pack
 - a. The UCLA study provides predictions of potential changes in temperature and snow pack for long-term periods (i.e., mid-21st century). However, it lacks information on the expected impacts during short-term periods. To make this report more useful, it is recommended that the report include projection of potential impacts in smaller time increments such as every 5 years.
 - b. Through the Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC), it would be extremely beneficial to this region's planners to establish a web portal repository for the downscaled result/output projections from the UCLA study. A "clearinghouse" of climate change information similar to the Cal-Adapt website (<http://cal-adapt.org/>) but with downscaled for the Los Angeles region, would be an invaluable resource for developing adaptation plans at a local level.
 - c. The temperature study focused on hot extreme (over 95 degrees F) but lacks the potential of cold extreme. If extreme hot and cold days are expected, such information would be critical to additional policy consideration or existing code revisions.
 - d. A report on how future reduction of snowfall will impact our overall drought condition would be of great benefit.
2. USC climate study on sea level rise
 - a. This report analyzed the effects of sea level rise along coastal areas only within the City of Los Angeles' jurisdiction excluding the majority of Los Angeles County's coastline. To make this report useful, it is recommended that the scope of the study be expanded to include the entire coastline of the County.
 - b. See No.1.a above for potential impact of sea level rise.
 - c. See No.1.b above for potential impact of sea level rise.
 - d. The report outlines general techniques to maintain or restore natural sand supply along the coast. However, there is no direct mention of utilizing sediment flushing or sluicing as techniques, and these options should be considered viable in addition to those listed. For reference, please see the Sediment Management Strategic Plan 2012-2032 developed by Public Works.

<http://dpw.lacounty.gov/lacfd/sediment/stplan.aspx>

Attachment B

UPDATE TO PREVIOUS REPORT ON THE ACTIONS TAKEN BY DEPARTMENT OF PUBLIC WORKS TO ADDRESS CLIMATE CHANGE

In its December 27, 2012, progress report, Public Works reported several actions that had been initiated to address climate change impacts. Since then, Public Works has continued implementing the reported actions and further improved them to build resiliency for continued operations and community services and to adapt to the climate impacts while reducing GHG emissions from the department operations as well as from the community.

Details of the update to previously reported actions are provided in Table 1. Note that each action is presented in conjunction with climate impact sectors that the action aims to support. A complete list of impact sectors can be found in the climate adaptation strategy matrix (Table 2).

Attachment C

REPORT ON ADDITIONAL ACTIONS IDENTIFIED BY DEPARTMENT OF PUBLIC WORKS TO ADDRESS CLIMATE CHANGE

1. Public Works Climate Adaptation Strategies Framework

According to various large-scale studies conducted by state and federal agencies, commonly predicted outcome of the climate change encompasses increased temperature accompanied by severe drought and more frequent wild fires, which along with intense storms, could lead to significant debris and mud-flow threats in the foothill areas. Rise in sea levels could affect the low-lying coastal community and infrastructure.

Climate change may have a number of short- and long-term impacts on a variety of sectors of the County community including, but not limited to, agriculture, public health, ecosystems and natural resources, energy, infrastructure, emergency management, and local economy. Therefore, it is critical to develop strategies to prepare for and to build resiliency against adverse impacts.

Development of climate adaptation strategies may be conducted sequentially starting with evaluation of threats, vulnerability and risk assessments, identification of necessary actions, and implementation and maintenance of identified actions. The strategies may also investigate short- and long-term funding mechanisms.

Public Works has proactively initiated a process of adaptation planning described above by researching various state and federal guidance manuals that are designed to assist local governments with climate adaptation strategies within agency's own operations as well as when providing support to community level efforts.

As a first step, Public Works created a framework for climate adaptation strategies by establishing a matrix that would guide and track the strategy development. See Table 2 for the matrix. Using the matrix, Public Works has applied a consistent approach across various impact sectors in examining potential threats and sensitivity of the risks and vulnerability of department operations. Results of the risk assessment will provide critical information to evaluating existing and identifying additional adaptation actions. Ultimately, adaptation actions identified for individual impact sectors will be prioritized based on the level of potential impact and existing adaptive capacity.

Public Works will make continuous efforts to explore new ideas to develop, implement, and maintain Countywide adaptation strategies to ensure the County community and public services to be resilient against climate change threats.

2. Measures to Comply with Emergency Water Conservation Regulations

In compliance with the County policy as adopted on July 22, 2014, by the Board of Supervisors and the subsequent memo dated July 23, 2014, from Chief Executive Officer Bill Fujioka instructing all County personnel to immediately implement recently adopted, statewide emergency water conservation regulations, Public Works promptly initiated actions to implement the following water conservation measures: immediately ceasing spray irrigation and preparing for drought-tolerant and stormwater quality improvements at the Headquarters campus, monitoring, repairing, and reporting water leaks and over spray at the Department's landscape and facilities, and updating the department's mobile application to add a water wasting reporting feature.

3. Sustainability implementation initiative

Public Works recognizes that sustainability is a key principle in developing strategies to mitigate climate change and adapt to the impacts. As an organizing paradigm that applies to the department mission and the entire business programs, sustainability was identified as one of the departmental values and was included in the department's five strategic focus areas. Since then, efforts have focused on institutionalizing sustainability through synchronized, enterprise-wide initiatives rather than isolated efforts.

By effectively adopting sustainability principles, Public Works has assessed opportunities across all operations and services, thereby developing strategic actions that would reduce Greenhouse Gas and air pollutant emissions and address climate change threats and infrastructure vulnerabilities.

Under the sustainability implementation initiative, various accomplishments have been made and efforts are continuing. A sustainability implementation framework has been established, which consists of an Executive Team, Sustainability Council, Sustainability Officer, and ad-hoc Work Groups. A Public Works policy on sustainability is in development, which will guide the entire initiative. A business program level planning framework has also been in development, which consists of sustainability goal areas, key sustainability indicators, performance metrics, and progress tracking.

Details of the latest achievements of this initiative are available in Public Works Sustainability Webpage:

<http://dpw.lacounty.gov/adm/sustainability/Default.aspx>

Table 1. Update to previously reported climate actions

Actions	Update	Impact Sectors
Los Angeles Basin Stormwater Conservation Study (LA Basin Study)	<p>On September 18, 2012, the Board of Supervisors approved Public Works entering into a Memorandum of Agreement with the United States Department of Interior – Bureau of Reclamation (Reclamation) to conduct the Los Angeles Basin Stormwater Conservation Study (LA Basin Study). The LA Basin Study is a long-range planning effort that is evaluating the potential of the existing Los Angeles County Flood Control District (LACFCD) facilities, other interrelated infrastructure, and potential new facility concepts to increase the capture of stormwater for water supply under uncertain climate futures. The LA Basin Study will also assess the current operations for existing LACFCD facilities and determine these operations' adequacy for the future. Detailed scientific, engineering, and economic analyses are being conducted to help address future water supply demands and challenges as a result of climate change.</p> <p>Work on the LA Basin Study began in December 2013 and will take three years to complete. The first major task of the LA Basin Study, downscaled climate change and hydrologic modeling projections, was completed in December 2013. Currently, the LA Basin Study is performing an analysis on the existing LACFCD infrastructure and its response to the future climate projections. Additionally, efforts have begun on water supply and water demand projections for the study area. Following the current two tasks, the LA Basin Study will proceed to develop concepts to enhance the infrastructure and its operations with respect to future climate change. These concepts may be structural or operational in characteristic and could also recommend new facilities.</p>	<ul style="list-style-type: none"> • Water management • Water infrastructure
Envision™	<p>The Institute of Sustainable Infrastructure's (ISI) Envision™ Rating System has been adopted as a standard sustainable infrastructure rating tool and its full program of education and research has been implemented. Staff has been or is in the process of being trained to use Envision™ and credentialed as Envision Sustainability Professionals (ENV SP) with the ISI. According to ISI, Public Works has the most ENV SP credentialed staff among the nation's public agencies.</p> <p>Using the rating system and supporting research for sustainability, Public Works now evaluates and assesses, at any point during its life cycle, the design, construction, and operation of infrastructure of all sizes and complexities in terms of economic, environmental, and social impacts. All infrastructure projects have been rated during early phases to maximize opportunity for sustainable practices to mitigate and adapt to climate impact. The Sun Valley Watershed Multi-Benefit Project has been submitted to the ISI for a Platinum Award.</p>	All sectors
Sustainable Projects for GHG reduction	<p>Since receiving LEED Gold certification for the Headquarters building, Public Works has continued applying sustainable principles of LEED as a guideline for its operation and maintenance. We have also continued to work with our sustainability partners to identify opportunities to implement more sustainable practices and equipment at our Headquarters campus. The cooling tower servicing our Headquarters annex building and variable frequency drives for domestic water are just two of many examples.</p>	<ul style="list-style-type: none"> • Land use planning (Building design) • Facility operations and maintenance
Best Technologies for Fleet	<p>Eleven electric vehicle charging stations have been constructed and are now operational. In addition, purchase of 28 alternative fuel vehicles (hybrid and compressed natural gas combined) has been budgeted for Fiscal Year 2014-15.</p>	Transportation infrastructure (Fleet)
Green Building Code Revision	<p>Public Works adopted the 2014 County of Los Angeles Green Building Standards Code on January 1, 2014. This Code amends the 2013 California Green Building Standards Code (CALGreen) with additional local requirements including an increase in drought-tolerant planting, higher construction and demolition debris recycling thresholds, and mandatory Tier 1 compliance for newly constructed high-rise buildings and non-residential buildings greater than 25,000 square feet. These amendments, coupled with the 2013 CALGreen reduction in energy usage and increased additions and alterations scoping thresholds, will lower GHG emissions associated with private development and preserve the County as a regional leader in sustainable construction.</p>	Land use planning (Development planning and Building design)
Low-Impact Development Ordinance	<p>On November 5, 2013, the Board of Supervisors approved the revisions to the County's Low Impact Development (LID) Ordinance, through which Public Works requires new development and re-development projects to comply with its LID standards. LID incorporates small, multifunctional, cost-effective landscape features, called Best Management Practices (BMP's), to manage storm runoff along with its quality through retention and redistribution. LID improves the quality and quantity of vegetation, which moderates the climate globally and locally by regulating greenhouse gasses and lowers heat island effects that tend to occur within urbanized areas. Similarly, LID creates healthy soils which lock up carbon, provides natural water filtration, increases groundwater supplies, and reduces the demands on flood control facilities. All of this can lower GHG emission of facilities and operations. In February 2014 Public Works created an updated LID Standards Manual which provides guidance for the implementation of stormwater quality control measures in new development and re-development projects in unincorporated areas of the County with the intention of improving water quality and mitigating potential water quality impacts from stormwater.</p>	Land use planning (Development planning and Building design)

ATTACHMENT VII

DEPARTMENT OF REGIONAL PLANNING



Los Angeles County
Department of Regional Planning

Planning for the Challenges Ahead



Richard J. Bruckner
Director

August 15, 2014

TO: William T Fujioka
Chief Executive Officer

Attention: Rita L. Robinson
Deputy Chief Executive Officer
Community Services Cluster

FROM: Richard J. Bruckner
Director

**REPORT ON THE STEPS TAKEN TO PREPARE FOR THE POTENTIAL EFFECTS
OF CLIMATE CHANGE (JULY 3, 2012, ITEM 55-A)**

On July 13, 2012, the Board of Supervisors instructed the Chief Executive Office (CEO), in conjunction with the Departments of Public Health, Public Works, Beaches and Harbors, Regional Planning, and the Fire Department, in cooperation with applicable utilities, to review the information provided by the Climate Change in the Los Angeles Region Project, as well as other relevant information; document the steps to prepare for the projected effects of climate change; and recommend any additional actions that the County should take to help the region prepare for the likely effects of climate change.

CLIMATE STUDIES REVIEW

The Department of Regional Planning (Department) has reviewed the first two University of California, Los Angeles (UCLA) climate studies on temperature and snowfall. Both studies underscore the point that the effects of climate change are inevitable. The Snowfall Study also indicates that some of the effects of snowfall and snowpack loss anticipated to occur at the end of the century can be mitigated with aggressive reductions in greenhouse gas (GHG) emissions. The emphasis on both adaptation and mitigation strategies is an important consideration for future long-range planning initiatives.

Of note in the Temperature Study is that by mid-century, we can anticipate a significant increase in temperatures throughout the unincorporated areas, although the effects will be greatest and occur the fastest in the desert and mountain communities. The study supports the Department's efforts to reduce outdoor ambient temperatures and protect people from extreme heat through strategies such as: cool roofs and cool pavement to reduce the urban heat island effect; energy efficient buildings; and tree planting requirements and design standards that provide shade and shelter.

Mr. William T Fujioka
August 15, 2014
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The Snowfall Study indicates that a reduction in snowfall and snowpack will result in changes to hydrology and ecosystems in the Los Angeles area, and that more research is needed to understand the specific impacts. The Department supports additional research, as water resources and critical plant and animal habitats are major considerations in how the County regulates land use and protects and manages resources in the unincorporated areas.

CURRENT CLIMATE CHANGE EFFORTS

The following highlights major planning initiatives that address climate change through adaptation and mitigation strategies in the unincorporated areas. These initiatives represent collaborations across many County departments and community partners.

General Plan Update

The General Plan Update (Draft General Plan), which is a comprehensive effort to update the County's 1980 General Plan, guides growth in the unincorporated areas through goals, policies, and programs, and lays the foundation for future community-based planning initiatives.

Community Climate Action Plan (CCAP): The CCAP, which is a component of the Draft General Plan, identifies GHG emissions related to community activities in the unincorporated areas; establishes a reduction target consistent with Assembly Bill 32; and provides a roadmap for successfully implementing actions selected by the County to reduce GHG emissions. The CCAP includes a 2020 GHG emissions target of 11% below 2010 levels, which will reduce GHG emissions generated within the unincorporated areas by approximately 2.4 million metric tons of carbon dioxide equivalent. In conjunction with state-level actions that are implemented at the local level, the CCAP includes 26 local actions that are necessary to meet the County's emissions reduction target. These local actions are grouped into five strategy areas: Green Building and Energy; Land Use and Transportation; Water Conservation and Wastewater; Waste Reduction, Reuse and Recycling; and Land Conservation and Tree Planting. As part of the CCAP effort, the Department has developed tools and resources to facilitate CCAP implementation, including a report on financing options for CCAP actions, and a tracking tool to estimate the County's progress in reducing GHG emissions. The Draft CCAP is available on the Department web site at the following link: planning.lacounty.gov/ccap.

Special Management Areas/Hazard, Environmental and Resource Constraints Map: The Hazard, Environmental and Resource Constraints Map is a tool in the Draft Land Use Element of the Draft General Plan that identifies special management areas with constraints, such as Very High Fire Hazard Severity Zones, Flood Hazard Zones, Tsunami Hazard Areas, Significant Ecological Areas, and Hillside Management Areas. The purpose of the Hazard, Environmental and Resource Constraints Map is to guide the development of land use policies for unincorporated areas through community-based planning efforts. It is also a tool to raise awareness to the public of potential site constraints and regulations. The Draft General Plan works toward reducing potential development in high-risk areas and facilitating development in safer areas, while not constraining overall growth. The Hazard, Environmental and Resource Constraints Map is available on the Department web site at the following link:
planning.lacounty.gov/assets/upl/project/gp_2035_FIG_C-1_appendix014.pdf.

The General Plan Update is currently in the public hearing process before the Regional Planning Commission. We anticipate that the General Plan Update will go before the Board of Supervisors for adoption in the spring of 2015.

Renewable Energy Ordinance

The Renewable Energy Ordinance (REO) amends Title 22 of the County Code to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary meteorological towers. The REO will help facilitate the development of renewable energy facilities on rooftops and other structures and the development of personal systems for on-site use as well as address concerns over environmental impacts and will establish development standards for ground-and-structure-mounted solar and wind renewable energy generation.

We anticipate that the REO will go before the Regional Planning Commission in January 2015, and to the Board of Supervisors for adoption in March 2015.

Santa Monica Mountains Local Coastal Program

The Santa Monica Mountains Local Coastal Program (LCP) is a comprehensive planning and regulatory program to manage the conservation and development of coastal resources in the Santa Monica Mountains Coastal Zone. The Santa Monica Mountains LCP includes goals and policies that address the potential impacts of sea level rise, including identifying the most vulnerable areas, structures, facilities and resources on the shoreline.

On August 26, 2014, the Board of Supervisors will consider the adoption of the LCP as approved by the California Coastal Commission; we anticipate final certification in 2014.

Mr. William T Fujioka
August 15, 2014
Page 4

Tree Planting Ordinance

The draft Tree Planting Ordinance proposes to amend the County Code to establish new tree planting requirements that will reduce air pollution, urban run-off and the urban heat island effect.

The draft Tree Planting Ordinance is currently in the public hearing process before the Regional Planning Commission. We anticipate that the Tree Planting Ordinance will go before the Board of Supervisors for adoption in February 2015.

Other Sustainability Initiatives

Many other efforts underway in the Department address climate change through the promotion of active transportation strategies, protection of resources, and promotion of sustainable development. These efforts include: the Antelope Valley Area Plan Update; Marina del Rey Visioning Effort; East Los Angeles 3rd Street Plan; West Carson Transit Oriented District Specific Plan; Willowbrook Transit Oriented District Specific Plan; Healthy Neighborhood Design Guidelines; and the Small Lot Subdivision Ordinance.

CONCLUSION

The first two UCLA climate studies on temperature and snowfall underscore the urgency of the County to act on climate change, and the importance of both adaptation and mitigation strategies. The studies support the County's current initiatives, and should be used to inform the County's critical next steps in addressing climate change. The Department looks forward to reviewing the other UCLA climate studies as they are released.

Should you have any questions or concerns about any of these efforts, please contact Mark Child, Deputy Director, Advance Planning Division at (213) 974-6457 or mchild@planning.lacounty.gov.

RJB:MC:CC:cc:ems

S_AP_081514_M_CLIMATE CHANGE



County of Los Angeles
CHIEF EXECUTIVE OFFICE

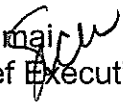
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SACHI A. HAMAI
Interim Chief Executive Officer

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First District
MARK RIDLEY-THOMAS
Second District
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Third District
DON KNABE
Fourth District
MICHAEL D. ANTONOVICH
Fifth District

June 22, 2015

To: Mayor Michael D. Antonovich
Supervisor Hilda L. Solis
Supervisor Mark Ridley-Thomas
Supervisor Sheila Kuehl
Supervisor Don Knabe

From: Sachi A. Hamai 
Interim Chief Executive Officer

STATUS REPORT NO. 5 – PREPARING FOR THE LIKELY EFFECTS OF CLIMATE CHANGE (ITEM NO. 55-A, AGENDA OF JULY 3, 2012)

This memorandum provides our fifth status report on the motion actions and accomplishments, as directed by the Board, on July 3, 2012, instructing the Chief Executive Officer, in conjunction with the Directors of Public Health, Public Works, Beaches and Harbors, Regional Planning, and the Fire Chief, and in cooperation with applicable utilities, to:

- 1) Review the study provided by the University of California, Los Angeles (UCLA) "Climate Change in the Los Angeles Region" project, as well as other relevant information;
- 2) Document the steps being taken by departments to prepare for the projected effects of climate change;
- 3) Report back to the Board with a cost analysis on the steps being taken; and
- 4) Recommend any additional actions that the County should take to help the region prepare for the likely effects of climate change.

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Intra-County Correspondence Sent Electronically Only**

As provided in our report dated August 29, 2014, the Chief Executive Office (CEO) continues to collaborate with the cited County departments to address the actions noted above. Additionally, this memorandum is to transmit the attached status updates by the departments, and summarizes their continued efforts and preliminary analysis of the recently released UCLA Climate Change study "Part III – 21st Century Precipitation Changes Over the Los Angeles Region" (Precipitation Study).

UCLA Climate Change - Precipitation Study Review

In December 2014, UCLA released the third part of the Climate Change - Precipitation Study, which evaluates how climate change will affect future rain and snowfall in the Southern California region. The Precipitation Study concludes that Los Angeles will experience: 1) highs and lows, but little to no change in total precipitation over the next century; and 2) more rain and less snow, with higher wintertime flows. The Precipitation Study also relates to the importance of preparing for future infrastructure needs in order to strengthen the region's ability to control floods and capture water. The cited County departments have provided their preliminary responses on the Precipitation Study, see Attachments I-VII. The consensus of their analysis is that although the Precipitation Study findings provides more awareness on this subject matter, it further underscores the urgency of the County to act on climate change, and the importance of both adaptation and mitigation strategies. It should be noted that the cited County departments continue to collaborate on the steps already taken to help the County to prepare for the likely effects of climate change; in addition to identify mid- and long-term climate priorities and strategies that will be sustainable for the County, and the public.

To date, the CEO has reported on the following UCLA Climate Change studies: temperature, snowfall, and sea level rise. These studies are downloadable for your review at www.c-change.la. UCLA will be issuing subsequent parts of the climate change study regarding Santa Ana Winds, Wildfire, and Sierra Nevada Snowpack; anticipated this year.

We will continue to work with the cited County departments on their review of the available UCLA Climate Change studies, and provide a more comprehensive assessment and analysis upon the release of the remaining parts of the study, in addition to summarizing the actions provided in the Board's July 3, 2012, motion.

RECENT ACCOMPLISHMENTS

As mentioned, the last report was issued on August 29, 2014. The following is a summary of significant activities and accomplishments by the cited County departments since that report:

- On March 24, 2015, the Board approved the General Plan Update, including the Community Climate Action Plan (CCAP), led by the Department of Regional Planning (DRP); adoption pending. The CCAP provides the roadmap for County departments to successfully implement and meet identified emissions related to community activities, greenhouse gas (GHG) reduction targets consistent with Assembly Bill 32, also known as the Global Warming Solutions Act of 2006 to address climate change; and provides a framework for successfully implementing GHG reduction measures selected by the County. Additionally, the CCAP will continue to be used as the County's roadmap for implementing and responding to critical climate change and adaptation strategies in the unincorporated areas for years to come. More information about the CCAP can be found at www.planning.lacounty.gov/cap.
- The County Climate Committee, a subcommittee of the Healthy Design Workgroup, led by the Department of Public Health (DPH), was initiated by DPH and formalized to address and respond to climate change by effectively and efficiently leveraging cross-departmental collaboration on climate change initiatives. The subcommittee consists of key representatives from the departments cited in this report and meets regularly to collaborate on climate change issues and healthy design. The subcommittee has identified several climate activities, as described in the Community Climate Action Plan – Strategy Areas, with the first initial work plans to develop the framework for an Urban Heat Island Mitigation Plan (Plan). As noted in the attached reports provided by the DPH and the DRP, the Plan will address problems caused by the urban heat island effects and the dangers posed by extreme heat through incentives, policies, and programs pertaining to cool roof technology, cool pavements, increased tree canopy, as well as other strategies that reduce temperatures in urban neighborhoods. The Plan is targeted to be finalized by early 2016.
- The Department of Beaches and Harbors continue to monitor and review national and local reports on climate change. Additionally, the Department is working closely with the United States Geological Survey, USC Sea Grant, and AdaptLA to study and evaluate shoreline change projections. The results of this data are scheduled to be released in 2016, and will be used to assess vulnerable beach locations and optimize the Department's seasonal sand berm program.
- The Fire Department has recently entered into a project with the Internal Services Department to replace and maintain landscaping at many of their larger, labor-intensive facilities. The Fire Department has mentioned this will achieve significant departmental savings and reductions in water consumptions.

Additionally, the department is seeking to obtain more long-term enhancements of existing facilities such as installation of energy efficient windows, shading, installation of cool roofs, and solar panels.

- On April 8, 2015, Internal Services Department (ISD) provided the Board with the Energy and Environmental Policy Report No. 17. This report provides the department's updates on various sustainability programs and initiatives that ISD oversees, including the anticipated County Water Conservation Program. The measures outlined for this program are crucial to the mitigation factors addressed in UCLA's Climate Change - Precipitation Study. ISD is working closely with County departments to respond to ongoing and future droughts, such as use of alternate water supplies, implementing measures to safeguard the County's infrastructure against flooding, upgrading plumbing fixtures, improving cooling tower processes, and replacing turf landscaping with drought-tolerant landscaping.
- The Department of Parks and Recreation is in the process of implementing several new policies to plan and provide for an integrated, sustainable parks and recreation system that meets the needs of County residents. These policies will support the uses of recycled water for landscape irrigation in County parks; support the use of alternative sources of energy, such as wind and solar sources, to reduce the use of fossil fuel at existing parks; prolong the life of existing buildings and facilities on County park properties through preventive maintenance programs and procedures; ensure that new buildings on County park properties are environmentally sustainable by reducing carbon footprints, and conserving water and energy; and ensure that routine maintenance and operations of County parks and recreational facilities optimize water and energy conservation.
- DPH successfully leads the multi-departmental County Climate Committee as described above, in addition to continuing efforts that started with the Healthy Design Workgroup to foster interdepartmental collaboration on climate change. More recently, DPH re-launched its Climate and Health Workshop series designed in collaboration with UCLA faculty to train DPH staff on climate change as it relates to their professional responsibilities.
- The Department of Public Works (DPW) continues to implement the actions provided in our previous reports, and update and track the developments of the available climate change studies in the attached DPW Climate Change Adaptation Strategy matrix. DPW noted that this matrix will be finalized upon completion of the remaining climate change studies, targeted in Fall 2015; and will be used to develop, implement, and maintain specific Countywide actions to prepare for climate change. Further, this matrix will be provided as a guide for the decision-making and planning

Each Supervisor
June 22, 2015
Page 5

of climate change activities for future discussion at the climate subcommittee. In addition, in response to the Governor's Executive Order and the Board motions on drought emergency, DPW has been cooperating with other County departments to develop actions to reduce potable water usage in the County department operations and the Waterworks Districts.

OTHER

ISD and DPW is working on revisions to the Board's Policy No. 3.045, Energy and Environmental Policy; adoption pending. The revised policy will support the development of a Countywide sustainability group, the Los Angeles County Sustainability Council (Council), which consists of representatives from the cited County departments. Additionally, the Council will develop a Sustainability Program Framework that promotes and enhances environmental sustainability; and will support and provide guidance on the County's actions to prepare for the likely effects of climate change and adaptation efforts. More information on the role of the Council and related climate change initiatives will be provided in a future report.

Our next status will be provided to the Board by January 4, 2016. If you have any questions or need additional information, please let me know, or your staff may contact Arena Turner at (213) 974-1319, or via email at aturner@ceo.lacounty.gov.

SAH:JJ:TT
AMT:os

Attachments (7)

c: Executive Office, Board of Supervisors
County Counsel
Beaches and Harbors
Fire
Internal Services
Parks and Recreation
Public Health
Public Works
Regional Planning

ATTACHMENT I

DEPARTMENT OF BEACHES AND HARBORS

DEPARTMENT OF BEACHES AND HARBORS
REPORT ON THE ACTIONS TAKEN TO ADDRESS CLIMATE CHANGE

May 4, 2015

The Department of Beaches and Harbors continues to research and prepare for any impacts associated with climate change in coastal regions. Potential impacts of sea level rise include coastal flooding and shoreline retreat, which can result in damage to infrastructure, property, and communities in coastal regions. Planning and preparing for these events is important to the Department as it is responsible for the operation and maintenance of nearly 30 miles of non-contiguous coastline and Marina del Rey. The Department keeps up with the various trends and research studies on climate change by participating in local symposiums as well as attending the annual American Shore and Beach Preservation Association (ASBPA) and the California Marine Affairs and Navigation Conference (CMANC) conferences, which regularly have leading experts presenting on sea level rise and climate change.

As reported to the Board in September 2014, the Department monitors and reviews national and local reports on climate change and sea level rise. These include the University of California Los Angeles (UCLA) climate change studies, which are produced in partnership with the Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC – includes municipal governments, agencies, and universities) and use global climate models to predict how climate change will affect the Los Angeles region. The Department has previously reported on three studies released by LARC; temperature, snowfall, and sea level rise. This report adds a fourth report, 21st Century Precipitation Changes over the Los Angeles Region, released by the same group in December 2014. Three additional LARC climate change studies, to be released in the coming months, will address the Santa Ana winds, wildfire, and the Sierra Nevada snowpack.

Key findings of the studies reviewed by the Department are listed in the table below:

Organization(s)	Study Title and Release Date	Key Findings
UCLA Climate Change Studies: UCLA Institute of the Environment, the City of Los Angeles, and LARC	Temperature Study: "Mid-Century Warming in the Los Angeles Region" (2012) Released 2012 [PREVIOUSLY REPORTED]	1) By mid-century, average annual temperatures will rise by 4-5 degrees Fahrenheit. 2) Coastal locations will have 2-3 times the number of extremely hot days. 3) High elevations and inland areas will have 3-5 times the number extremely hot days.
	Mid- and End-of-the-Century Snowfall in the Los Angeles Region (Prepared by UCLA Department of Atmospheric and Oceanic Sciences) Released June 2013 [PREVIOUSLY REPORTED]	1) By mid-century, Los Angeles region's mountains may see a reduction in snowfall of up to 42% if greenhouse gas emissions continue to increase. 2) Reduced snowfall could potentially alter important hydrological and ecosystem processes in Los Angeles, affecting water resources, and plant and animal habitat.

Organization(s)	Study Title and Release Date	Key Findings
UCLA Climate Change Studies: UCLA Institute of the Environment, the City of Los Angeles, and LARC	Sea Level Rise Vulnerability Study for the City of Los Angeles (Prepared by University of Southern California (USC) Sea Grant, City of Los Angeles, and ICLEI – Local Governments for Sustainability) Released January 2014 [PREVIOUSLY REPORTED]	<ol style="list-style-type: none"> 1) Sea level rise in Los Angeles is expected to increase 0.3 - 2.0 feet (2000 – 2050), and 1.3 - 5.6 feet from (2000 – 2100). 2) Identified the communities, infrastructure, and property that are most vulnerable to the impacts of potential flooding and damage from sea level rise. 3) As sea level rise accelerates, additional steps will need to be taken, to expand and stabilize beaches, including sand and dune replenishment and the construction of groins, jetties, and breakwaters to safeguard beaches. 4) Summarized a preliminary report on coastal vulnerabilities for beaches located within City boundaries including recommendations for monitoring programs.
	21st-Century Precipitation Changes over the Los Angeles Region (Prepared by UCLA Institute of the Environment and Sustainability) Released December 2014 [NEW]	<ol style="list-style-type: none"> 1) Average annual precipitation in the Los Angeles region is expected to remain nearly the same as it has been in recent decades. 2) Although the total precipitation is not expected to change much, it is known from the Snowfall study that warmer temperatures will cause less of that precipitation to fall as snow and more as rain in local mountains. 3) Southern California may face an increased risk for floods as precipitation events will more often consist of rain instead of snow.
National Research Council	Sea-level rise for the coasts of California, Oregon, and Washington: Past, Present and Future Released June 2012 [PREVIOUSLY REPORTED]	<ol style="list-style-type: none"> 1) The Intergovernmental Panel on Climate Change (IPCC) projects that sea level will rise on the West Coast by as much as nine inches by 2030, 1.5 feet by 2050, and 4 feet by 2100 (in comparison to 2000 levels). 2) For Southern California, sea level will rise by as much as 1 foot by 2030, 2 feet by 2050, and 5 feet by 2100 (in comparison to 2000 levels). 3) As most coastal damage occurs during storms, sea level rise will magnify these impacts particularly when there is a confluence of large waves, storm surges, and high astronomical tides. 4) Together, storms and sea-level rise will result in coastline retreat, ranging from less than a few inches per year for cliffs to several feet for beaches and dunes.

Organization(s)	Study Title and Release Date	Key Findings
California Climate Change Center (established by the California Energy Commission's Public Interest Energy Research (PIER) Program)	The Impacts of Sea-Level Rise on the California Coast Released in May 2009 [PREVIOUSLY REPORTED]	1) Study projects sea level along the California coast to rise by as much as 4.5 feet by 2100. 2) A 4.5 feet rise in sea level would put 480,000 people at risk from coastal flooding. The estimated property loss would be about \$100 billion. 3) A 4.5 feet rise in sea level would accelerate coastline erosion that could potentially result in the loss of 41 square miles of the coast by 2100. 4) Coastal armoring is one potential adaptation strategy; however the cost of building the needed 1,100 miles of new or modified coastal protection structures would be about \$14 billion.

The Department will continue to monitor new research and discussions on climate change and sea level rise at various forums and will analyze and evaluate both the risks and the actions we can implement to mitigate and/or prevent climate change impacts. Attending the ASBPA meetings and the CMANC conferences will continue to be of benefit as both organizations are actively involved in planning for climate change and sea level rise along the California coast.

As reported to the Board in September 2014, the Department applied for and was granted a Climate Ready grant by the California State Coastal Conservancy. To reiterate what was reported then, for over 30 years, the Department has built seasonal sand berms at various beaches to protect public facilities (i.e., parking lots, maintenance yards, and concession buildings). However, these are built based solely on the experience of the Department's crew and may not be built at the optimum height, width, and location. With the threat of sea level rise and predicted increase in winter coastal storms with high tides, a seasonal sand berm program utilizing science and engineering will optimize protection of public facilities and allow maximum use of them by the public. Using the grant funds, the Department has retained the services of a harbor engineer to develop a seasonal sand berm protection program based on science and engineering, to be completed early 2016.

Additionally, the Department continues to exchange information and data with the United States Geological Survey (USGS), USC Sea Grant, and AdaptLA as they work on a collaborative study looking at shoreline change projections and aimed at developing a Coastal Storm Modeling System for Southern California. The data, model, and results is now expected to be released early 2016 and will be utilized to assess vulnerable beach locations and optimize the Department's seasonal sand berm program.

Lastly, the Department continues its participation on the County's Climate Change subcommittee that includes Public Works, Regional Planning, Public Health, Fire, and the Chief Executive Office. The Climate Change subcommittee is developing an urban heat island reduction plan for the County, which would be included in the General Plan update being led by Regional Planning.

ATTACHMENT II

FIRE DEPARTMENT



COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH ASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

DARYL L. OSBY
FIRE CHIEF
FORESTER & FIRE WARDEN

April 24, 2015

TO: ARENA M. TURNER, EXECUTIVE SPECIAL ASSISTANT
CHIEF EXECUTIVE OFFICE CENTRAL SERVICES

FROM: DARYL L. OSBY, FIRE CHIEF *Daryl Osby*

JULY 3, 2012 BOARD MOTION, AGENDA ITEM 55-A THIRD STATUS REPORT ON STEPS TAKEN TO PREPARE FOR THE POTENTIAL EFFECTS OF CLIMATE CHANGE

On July 3, 2012, the Board approved a motion requesting the Fire Department's (Department) progress on the items outlined in the University of California, Los Angeles "Climate Change in the Los Angeles Region" project. This memorandum serves as a third Board status report and it highlights initiatives outlined in the Department's January 2, 2013 and August 15, 2014 status reports. It also includes additional strategic efforts currently underway to address the projected effects of climate change.

As reported previously, most Department efforts have been in reaction to the changing conditions around us. This has included the effects that climate change has had on the length of fire season, the effects on vegetation, and the biological effects on both our personnel and the public we serve. As a result, we have updated and changed fire prevention programs, provided additional training to personnel on heat-related injuries, and adapted daily operations, policies and procedures to adjust to the changes that are happening in the surrounding environment.

The Department has a significant carbon footprint. With nearly 200 facilities, numerous heavy vehicles, and a fleet of firefighting bulldozers and helicopters, there are many areas we can continue to look at that may lessen the Department's environmental impact. Many strides have already been made in these areas. New fire stations over 10,000 square feet are required to meet U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Silver Certification, many gasoline-powered vehicles have been replaced with hybrid vehicles, and Department standards for both new and replacement landscaping have been updated and published.

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BELLFLOWER
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COMMERCE
COVINA
CUDAHY

DIAMOND BAR
DUARTE
EL MONTE
GARDENA
GLEN DORA
HAWAIIAN GARDENS
HAWTHORNE

HIDDEN HILLS
HUNTINGTON PARK
INDUSTRY
INGLEWOOD
IRVINDALE
LA CANADA FLINTRIDGE
LA HABRA

LA MIRADA
LA PUENTE
LAKEWOOD
LANCASTER
LAWDALE
LOMITA
LYNWOOD

MALIBU
MAYWOOD
NORWALK
PALMDALE
PALOS VERDES ESTATES
PARAMOUNT
PICO RIVERA

POMONA
RANCHO PALOS VERDES
ROLLING HILLS
ROLLING HILLS ESTATES
ROSEMead
SAN DIMAS
SANTA CLARITA

SIGNAL HILL
SOUTH EL MONTE
SOUTH GATE
TEMPLE CITY
WALNUT
WEST HOLLYWOOD
WESTLAKE VILLAGE
WHITTIER

Arena M. Turner, Executive Special Assistant
April 24, 2015
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Many Department facilities were built decades ago, well before the advent of green building standards. Replacement of facilities on a large scale is not an option. For this reason, we will use multiple approaches to minimize our impacts on the environment. When building new facilities, proper site planning, green building principles, and proper placement of landscaping will minimize energy requirements. Enhancement of existing facilities could include installation of energy efficient windows, effective building and building utilities shading, installation of cool roofs, and installation of solar panels.

Landscaping at many Department facilities was designed and installed well before current water related issues were considered. However, the Department has been a leader in replacing existing landscapes with low maintenance and reduced water requirements in mind. The Department landscaping policy provides instructions on the construction of both new and replacement landscapes. The use of artificial turf, rock gardens, and low-water plants use is recommended.

In addition, the Department has entered into a project with the Internal Services Department to replace and maintain landscaping at many of our larger, labor-intensive facilities. This program, under the direction of the our Forestry Division, is currently replacing the hardscape, irrigation, and landscaping at Fire Station 118 in the City of Industry. This large facility had nearly an acre of irrigated turf. When the project is completed, a colorful and low-maintenance landscape will result, and irrigation requirements will be reduced by approximately 90 percent. In addition, a rebate for the turf that has been removed has been applied for.

As the Department moves ahead, mitigating the effects of climate change will continue to be considered both when working with external customers and when planning internal operations. We look forward to continuing to work with other County departments to develop and apply best management practices.

For any questions or concerns, please contact me at (323) 881-6180.

DLO:jt

ATTACHMENT III

INTERNAL SERVICES DEPARTMENT



JIM JONES
Director

County of Los Angeles
INTERNAL SERVICES DEPARTMENT

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"To enrich lives through effective and caring service"

January 22, 2015

To: Arena M. Turner
Chief Executive Office

From: Dave Chittenden 
Chief Deputy Director

Subject: **ISD'S ANALYSIS OF UCLA'S "21ST CENTURY PRECIPITATION
CHANGES OVER THE LOS ANGELES REGION" STUDY**

UCLA recently released Part III of its "Climate Change in the Los Angeles Region" Project, namely, "21st Century Precipitation Changes over the Los Angeles Region" ("the Precipitation Study"). The Precipitation Study identified many precipitation-related changes likely to result from climate change, which will affect all County departments and residents. To respond to these changes, the Internal Services Department (ISD) anticipates the following developments:

- Water rates will likely increase at a greater than historical rate. More specifically, snowpack is projected to dwindle and thus retain (i.e. "store") less water. Water utilities will in turn have to create new water storage systems and pass along these additional costs to customers.
- To mitigate the aforementioned water rate increases and to respond to ongoing and future droughts, ISD will seek capital funding to implement water saving measures at County facilities. These measures will include upgrading plumbing fixtures, improving cooling tower processes, and replacing turf landscaping with drought-tolerant landscaping.
- Finally, to make the County more resilient to climate uncertainty, ISD will look to use rain water as an alternate water source. ISD will need to obtain capital funding to modify County facilities such that they catch, store, and use rain water as needed. Equipping County facilities to utilize this sustainable source of water has many benefits, including: reducing the flow of storm waters, which helps to safeguard County infrastructure against flooding; reducing the County's use of potable water, thereby lowering County costs and dependence on the water system; and reducing the County's use of energy to import water, thereby lowering County costs and protecting it from catastrophic water infrastructure failure since local water supplies are less prone to the effects of disasters.

Arena M. Turner
January 22, 2015
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Utilizing this alternate water supply aligns with a tri-department effort to update the Board of Supervisor's Water Recycling Policy (3.046). The Departments of Public Health, Public Works, and ISD have jointly submitted recommended revisions to the Board, which, if adopted, will grant the County more flexibility to use alternate water supplies such as rain water, recycled water, and desalination. This Water Recycling Policy update also aligns with other County sustainability-related efforts, as discussed in ISD's bi-annual Energy and Environmental Report and in the Regional Environmental and Sustainability Programs discussed on Green Los Angeles County (<http://green.lacounty.gov/>).

If you have any questions, please contact Aaron Klemm at (323) 267-3971 or via email at aklemm@isd.lacounty.gov.

DC:AK:et

c: Chief Operating Officer
Department of Public Works
Department of Public Health



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"To enrich lives through effective and caring service"

April 8, 2015

To: Each Supervisor

From: Dave Chittenden
Chief Deputy Director 

Subject: ENERGY & ENVIRONMENTAL POLICY REPORT #17

This is the 17th semiannual report to your Board to discuss ongoing work by the County Office of Sustainability (COS) within the Internal Services Department (ISD) in support of the County's Energy and Environmental Policy.

Below are updates on various sustainability programs and initiatives that ISD oversees.

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**DETAILED DESCRIPTION OF PROGRAMS FOR LOS ANGELES COUNTY,
SOUTHERN CALIFORNIA, AND BEYOND**

A. Programs for Internal County Operations

1. Energy Management

The Energy Management Division (EMD) within ISD provides project implementation and other energy related support services for County departments as detailed below.

a. Chiller Installations

ISD will begin implementation of a chiller replacement project at the Department of Public Works (DPW) Headquarters facility. This project is expected to save 642,340 kilowatt hours or \$89,990 per year. In addition, the project will qualify for \$100,000 in rebates through the County's Partnership program with Southern California Edison (SCE), which is funded by the California Public Utilities Commission (CPUC).

b. Emissions Reduction System Retrofits

ISD retrofitted the gas-fired turbine emission reduction systems at both the Civic Center and Pitchess Cogeneration Plants. These plants are now more efficient and safer (by eliminating the usage of the hazardous chemical, Anhydrous Ammonia).

ISD completed upgrades to the Civic Center Cogeneration Plant's steam turbine generator, which will increase its electrical generation, level of efficiency, and revenue generation.

ISD recently replaced an industrial refrigeration unit at the Los Padrinos Juvenile Hall facility and new cooling tower controls at Olive View Medical Center, thereby increasing the efficiency at each power plant.

c. HVAC Retrofits

ISD continues its highly successful building retro-commissioning program, which "tunes up" heating, ventilating, and air conditioning (HVAC) systems. When HVAC equipment and systems perform optimally, buildings use energy more efficiently, which ends up saving money. Retro-commissioning projects are underway at four Sheriff's stations, the Los Padrinos Juvenile Hall, and three health centers.

d. Hydro-powered Turbine Installation

ISD and DPW have contracted with a vendor to design a hydropower, pressure-reducing turbine-generator at one of DPW's water pumping stations. The vendor has provided 30 percent of design submittals, which ISD has approved. The project is scheduled to be completed by June 30, 2015. This unit will provide clean, sustainable power and will offset electrical consumption at the water pumping station by a minimum of 425,000 kilowatt hours per year (for a savings of over \$50,000 per year).

e. Lighting Installations

ISD has contracted with a vendor to install high efficiency fluorescent lamps at various facilities within the Sheriff's Department, the Department of Public Health (DPH), and other administrative buildings. Projects have begun in the Twin Towers, the Men's Central Jail and the Lynwood Justice Facility. The Energy Investment Program, a "revolving loan fund," which your Board approved in 2012, funds these projects. Departments can implement energy efficiency projects by utilizing American Recovery and Reinvestment Act seed funds. They then replenish these funds through their utility savings until the projects are repaid.

f. Solar Installations

ISD has contracted with a vendor to install photovoltaic systems at two libraries - A.C. Bilbrew and Julian Dixon - including rooftop and parking lot (canopy) solar panels. The projects will be funded partially by the CPUC and partially by the Chief Executive Office (CEO).

ISD is currently coordinating with Department of Parks and Recreation (DPR), DPW, and the Sheriff's Department on additional, potential solar installations and efficient equipment retrofit projects.

ISD also has an active solicitation underway, through ISD's Energy Efficiency Project Master Agreement (EEPMA) and including options for County and third-party financing models, for several solar rooftop and parking lot canopy installations as directed in the Board's November 25, 2014 motion.

2. Fleet and Transportation

ISD continues to assist other departments in reducing the greenhouse gas (GHG) emissions generated by their fleet, transportation activities, and employee commutes, as detailed below.

ISD assisted the Sheriff's Department in obtaining two Carl Moyer grants from the South Coast Air Quality Management District, totaling \$7 million dollars. These funds offset \$7 million dollars of the \$20 million dollar cost of replacing 45% of the Sheriff's prisoner transportation buses (i.e., 37 of 82 buses). When combined, the emissions from all 37 new buses will produce fewer emissions than just one of the old buses being retired. 24 buses are now in service. The remaining 13 buses will be in service by July 2016. ISD and the Sheriff's Department are currently managing this project and fulfilling the technical and reporting requirements of these grants.

As co-lead with the Los Angeles Department of Water and Power, ISD and 21 other agencies received an \$840,000 award from the California Energy Commission (CEC) to install Electric Vehicle (EV) charging infrastructure across the County. Leveraging the CEC award, ISD obtained an additional \$193,000 in matching funds from the Mobile Source Air Pollution Reduction Review Committee (MSRC) to install approximately 110 EV chargers at 30 sites controlled by eight departments throughout the County.

The MSRC recently awarded ISD \$104,000 dollars to furnish and install 38 additional EV chargers at Department of Health Services (DHS) sites. ISD worked with CEO's Real Estate Division and the Department of Child and Family Services (DCFS) to obtain \$96,000 in CEC funding to install 16 EV chargers at a DCFS facility.

ISD worked with the CEO, DHS, DPH, DPR, and DPW to obtain almost \$3 million dollars in grant funding to install bicycle racks at various County sites, conduct bike path improvements, and install three Compressed Natural Gas stations to refuel DPW trucks.

ISD was part of the Governor's Interagency Working Group on Zero-Emission Vehicles (ZEV), which developed the "ZEV Action Plan, a Roadmap to 1.5 Million Zero Emissions Vehicles on California Roadways by 2025." ISD has also contributed to the "Zero-Emission Vehicles in California: Community Readiness Guidebook" from the Governor's Office of Planning and Research.

ISD collaborated with a consortium of Southern California-based organizations led by the Los Angeles Economic Development Corporation to receive a CEC grant to create a Southern California Center for Alternative Fuels and Advanced Vehicle Technology. The Center, which will be comprised of one "virtual hub" and two physical locations (in San Diego and Los Angeles), will serve as a "one-stop-shop" for those exploring alternative fuels as well as a resource for businesses and technologies seeking to locate or grow in the region. The Center will serve the following counties: Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara and Ventura. ISD is a co-Chair of the Center.

3. Green Buildings

As part of continued efforts to support efficiency improvements to existing County buildings, ISD has developed a County Green Building Program that offers other departments: Leadership in Energy and Environmental Design (LEED) certification services; LEED feasibility assessments; technical support for departments seeking to perform their own LEED certification; and specific green building services such as xeriscaping and solar feasibility analyses. Your Board's direction on water conservation in response to California's severe drought has resulted in increasing activity on xeriscaping/drought tolerant landscaping. Please see "Water Conservation Program" for additional details.

ISD has developed a reporting tool – The Green Building Dashboard – to complement the Green Building Program. The Dashboard enables County building managers to monitor energy usage and other sustainability measures in selected facilities. ISD has linked the Dashboard to the Green L.A. County website (green.lacounty.gov) where building managers can easily access it.

ISD continues to maintain and update the Green L.A. County website with environmental and energy efficiency news and information, articles, links to other departmental sustainability programs, and other valuable related resources. Some recent additions to the website include content related to the severe state drought and water conservation programs and resources.

4. Green Leadership Awards

ISD participates annually in reviewing and scoring Green Leadership Awards submissions in a contest administered by the CEO's Quality and Productivity Commission. This program recognizes outstanding efforts by individuals and organizations in fulfilling innovative strategies to improve our environmental sustainability. ISD is currently evaluating submissions and conducting site visits. Winners will be announced in April.

5. Healthy Design Workgroup

ISD actively participates in the County's Healthy Design Workgroup (HDW) – a consortium of high-level representatives from several County departments, including the Arts Commission; Beaches and Harbors; CEO; the Community Development Commission; Fire; DPH (group lead); DPR; DPW; and the Department of Regional Planning (DRP). The HDW meets regularly to

develop and implement strategies for designing and building healthy environments within the County. The inter-departmental nature of this effort aligns with County strategic planning efforts and Supervisor Knabe's 2014 goals as Chair of the Board of Supervisors to encourage collaboration across County departments. On August 21, 2014, a Climate Change subcommittee convened and meets regularly.

6. Water Conservation Program

ISD's COS and Facilities Operation Service have developed a recommended Water Conservation Program to respond to the accelerating drought. First, suspecting that water savings potential existed throughout County facilities in outdated plumbing fixtures and cooling towers processes as well as drought-unfriendly turf landscaping, ISD devised a survey inquiring about these three water saving potential measures and disseminated it to several County facility managers. Upon receipt of the survey results, ISD began analyzing data and developing a methodology that would estimate water savings for all County facilities if these three measures were adopted.

Then, ISD developed a desegregation and analysis tool (tool), which analyzes a variety of metrics (paid water bills, current water providers, site occupancy, fixture types and their flow rates, number of existing cooling towers, and square footage of non-recreational turf grass) and calculations (including the integrated LEED indoor water usage calculators, water industry engineering standards, and California Department of Water Resources guidelines) to provide three key outputs: 1) water usage at each County facility; 2) potential water savings at each County facility; and 3) costs and savings associated with implementing water saving measures at each County facility.

This new tool and its capabilities would constitute the cornerstone of an ISD-lead Water Conservation Program. If adopted, this Program would not only achieve significant reductions in water consumption at County facilities (roughly 475.7 million gallons of water would be saved annually Countywide – a 13% reduction in total County water usage), it would also reduce County-generated GHG emissions (by roughly 2,648 metric tons annually) and the County's energy load, all of which align with the state's broad climate goals under A.B. 32. Under this Program, the County could save roughly \$2,964,883 after the first year of project implementation on water bill costs alone.

If fully instituted, this program would be integrated with ISD's ongoing Energy Management and Green Building Services Programs. Those two services include the following components: outreach to departments; provision of technical support and services; assistance in identifying external funding and incentives; and reporting results through the County's sustainability website or other online reporting tools, which would easily be extended to the water Program.

B. Programs for Public Agencies

As discussed in detail in prior reports to your Board, "Energy Upgrade California" (EUC) is a State initiative to help Californians take action to save energy and conserve natural resources,

reduce demand on the electricity grid, and make informed energy management choices at home and at work. It is supported by an alliance of the CPUC, the CEC, utilities, regional energy networks, local governments, businesses, and nonprofits to help communities meet state and local energy and climate action goals. EUC Programs are described in further detail in this report beginning with programs for public agency buildings below.

Under the Southern California Regional Energy Network (SoCalREN), ISD has developed a program which provides centralized, technical services that support the implementation of energy efficiency projects in public agency buildings and facilities throughout Southern California. The SoCalREN is administered by ISD and its programs are funded primarily from the CPUC (over \$65 million dollars from 2013 thru 2015) and American Recovery and Reinvestment Act grants awarded to the County. Those services and sub-programs are described below.

1. Clean Energy Workforce

One of the SoCalREN's objectives is to build a robust local workforce for the clean energy jobs of the future. A unique partnership between the County, Citibank Community Development, and Emerald Cities Collaborative trains low and moderate-income residents for future jobs in greening public buildings. This initiative also provides training to minority and women-owned energy businesses on how to qualify for ISD's EEPMA. As part of ISD's workforce development efforts, the County recently held a green economic summit to promote clean energy jobs.

In addition, on August 12, 2014 your Board approved the utilization of a Local Worker Hiring Program (LWHP) as part of ISD's EEPMA. This LWHP requires vendors to indicate the number of workers or sub-contractors hired for EEPMA projects from zip codes designated with high unemployment rates. The EEPMA LWHP has aspirational goals for hiring workers from these designated areas. The work ISD is doing mentioned earlier is intended to "supply" underrepresented workers and contractors to meet the "demand" of the EEPMA LWHP for these workers.

2. Community Energy Efficiency Project Management System

This program will provide a few pilot cities with software that is capable of matching building permits applications with eligible energy efficiency rebates and incentives through an online permit tracking system. The goal is to increase awareness and expand the installation of more energy efficient equipment and systems. A beta version of the software is nearing completion and a pilot city has been selected to field test the software during the first half of 2015.

3. Enterprise Energy Management Information Systems (EEMIS) Expansion

ISD developed EEMIS to provide a cost-effective means to monitor, analyze, and benchmark facility energy usage and costs utilizing a single energy management software tool for County buildings. EEMIS functions as a robust data warehouse, which offers several services, including:

energy consumption and financial bill archiving; online tracking, reporting and analysis; automated facility benchmarking tools; energy consumption and cost management tools; and energy efficiency project and identification support.

EEMIS has been made available to other local governments to provide energy management services. SoCalREN funds agencies to participate in EEMIS such that they can pay for an incremental portion of ISD's EEMIS operating costs (which is a fraction of the cost of purchasing their own system). ISD receives revenues through this funding for administration, implementation and technical support.

To date, 56 cities have submitted SCE Customer Information Release Authorizations for billing data and other requisite documents to join EEMIS. Southern California Gas is currently developing an electronic billing file that will ultimately be used to also populate EEMIS with each local government's gas bill data. Having both electric and gas utility data in EEMIS will result in a more complete energy usage profile for the local governments' facilities, enabling them to identify energy saving project opportunities.

4. Master Lease Financing

Master Lease Financing provides lease financing to all public agencies to implement energy projects. The program has pre-qualified a set of financial institutions to provide this financing and has also developed a simplified, standardized agreement which can be executed by the participating agency and financial institution. This financing helps public agencies implement a greater number of energy efficiency projects. The program also provides technical assistance, analytical tools and administrative support for other financing options that may be available. To date, the program has submitted over 60 financing applications totaling over \$9 million dollars, and over \$4 million dollars of financing has been approved. The program works in conjunction with The Energy Network project delivery program (detailed immediately below) for public agencies.

5. Public Agency Building Retrofits

This turnkey project provides public agencies with access to centralized, standardized, and streamlined energy retrofit services such as: financing (described above), project management, energy auditing, design and engineering, and contract procurement assistance, all delivered through competitively bid pools of pre-qualified energy project contractors. These services augment and complement what is provided by the utilities. Participating public agencies may opt to take advantage of the entire slate of services offered, or may select customize services.

This innovative project mitigates the need for public agencies to develop comprehensive, in-house resources to assess and implement projects. It also accomplishes several goals including: encouraging collaboration amongst all stakeholders; increasing energy savings; delivering improved quality products and services at a lower cost; and completing whole building, street lighting, and water/wastewater retrofits at an accelerated rate.

The program is on track to meet its energy savings goals. Launched in September 2013, the program has enrolled 52 public agencies and has already identified a pipeline of 130 viable energy efficiency retrofit projects in public agency facilities (including lighting, mechanical, water distribution and treatment, and street lighting) that will deliver over 50 million kilowatt hours of energy savings. These projects have a combined estimated construction cost of over \$70 million dollars and will result in 760 construction jobs. Approximately 55% of enrolled agencies are utilizing all of the program's services, including expedited contractor procurement. The other 45% of enrolled agencies are receiving customized services uniquely designed for their particular project needs.

6. Water/Energy Nexus

The Water/Energy Nexus Pilot Project is in a collaboration amongst ISD, the Metropolitan Water District, and other public agencies to conserve water, quantify the embedded energy in conserved water, demonstrate how targeted marketing will increase residential customer participation in conservation programs, and engage water and wastewater agencies with The Energy Network public agency retrofit services discussed above. Because providing water services in Southern California is especially energy intensive, water system enhancements in supply, consumption, and recycling provides the dual societal benefit of conserving both water and energy. ISD plans to compile and disseminate its findings for broader acceptance and usage statewide.

The pilot consists of three distinct initiatives: analysis of the embedded energy savings from water agency rebate programs; combined water and energy audits for multiple public agency facilities; and a targeted marketing initiative to increase residential customer participation in water efficiency programs. To date, selected school districts have received combined water and energy audits and are pursuing both water and energy efficiency projects through the Public Agency Building Retrofits program. Other school campuses were evaluated for interior and exterior water efficiency and conservation opportunities. Each of these water audits is being evaluated to integrate embedded energy calculations and a financial analysis to determine the combined water and energy savings value from the projects. A report on the successful completion of all three pilot initiatives is scheduled for completion in May 2015.

C. Programs for Residents

1. Community Champions

Community Champions is a marketing and outreach program geared towards building community awareness of the EUC and SoCalREN program offerings. More specifically, SoCalREN partners with 'Community Champions' – supportive and engaged community organizations in targeted communities – to leverage their networks to increase awareness of and encourage participation in program offerings geared towards single-family residential homeowners.

2. Discount Coupons

This program provides discount coupons to homeowners interested in pursuing EUC Home upgrades. Coupons help homeowners pay for either a portion or the entire amount of the home energy assessment cost, which constitutes the first step of an EUC upgrade. As such, this program incentivizes single-family residential homeowners to participate in EUC upgrades.

3. Energy Champions

Energy Champions utilizes non-profit community organizations such as universities and alumni associations that have organized networking sources within their respective communities to promote EUC and generate project leads. When participating organizations secure leads that result in completed projects, they receive financial incentives.

4. Green Building Labeling

The Green Building Labeling (GBL) program trains and certifies National Association of Realtors about green designation training and the value of conducting green home upgrade projects, including energy efficiency upgrades. Through workshops and other modes of outreach and training, GBL impresses upon realtors and appraisers that green homes are more marketable – both for homeowners looking to sell and those looking to buy. To date, 516 realtors and 23 appraisers have undergone training.

5. Home Upgrade Incentives

Home Upgrade provides incentives for single-family home energy efficient retrofits by promoting interactive whole-home combinations of measures such as: insulation; HVAC equipment replacement; duct replacement/repairs; air sealing; radiant barriers; and hot water systems, etc.

6. Low-income Single Family Rehabilitation Program

This pilot program seeks to develop and implement a business process that connects Community Development Commission (CDC) program clients to EUC via outreach and coordination of the respective programs' requirements.

The CDC Home Improvement Program assists low income, owner-occupied single family homes with rehabilitation financing of up to \$25,000 for Home Upgrade qualifying measures. The low-income program educates interested clients about EUC measures for which they are eligible and about how best to integrate those measures into the rehabilitation work.

Program administrators encourage CDC-qualified contractors to also train to become EUC Home Upgrade qualified contractors such that they can best inform their customers about available programs.

7. Multi-Family Home Upgrade

Similar to the Home Upgrade program for single-family homeowners, this program provides incentives to multi-family building owners to implement comprehensive, interactive energy efficiency measures.

8. Residential Property Assessed Clean Energy (PACE) Financing

On August 12, 2014, your Board approved the inter-departmental development of a residential PACE program (with ISD and the Treasurer & Tax Collector, along with coordination from the CEO and County Counsel). The residential PACE program will be a financing option available to Los Angeles County residential property owners to fund on-site energy efficiency, renewable energy, and water-saving improvements that will enhance home values, lower GHG emissions, and create jobs.

Your Board authorized ISD to release a new Request for Proposals (RFP) to acquire one or more residential PACE program administrators. To date, The RFP for Residential PACE Program Administration was released in August 2014, proposals were received September 30th, negotiations between the County and potential contractors concluded in January 2015, and ISD selected two vendors (Renovate America and Renewable Funding) to implement this program. On March 3, 2015, the Board of Supervisors approved a request by ISD and the Treasurer & Tax Collector to execute agreements with the two selected vendors. Program implementation details are currently being developed towards a formal program launch in early May 2015.

9. Single Family Home Financing

EUC has partnered with Matador's Credit Union to provide single family homeowners with financing for their EUC Home Upgrade projects. Matador's Credit Union provides three loan options to qualified buyers, including a 4.99%, 5-year term loan; a 5.99%, 10-year term loan; or a 6.99%, 15-year term unsecured loan of up to \$50,000 to qualified borrowers. In order to generate initial program participation with competitive terms and conditions, the program uses a loan loss reserve credit enhancement, which helps protect lenders against losses stemming from defaulted loans.

10. Social Media

SoCalREN utilizes several social media outlets to promote EUC programs to targeted audiences across the Southern California region. Social media offers various ways to encourage program participation, disperse energy-saving tips and environmentally friendly news stories, and build a strong connection between EUC contractors and potential participants.

D. Programs for Contractors

1. Co-op Marketing

This program provides matching fund reimbursements to participating EUC contractors who conduct their own marketing and advertising, equipment purchases, equipment calibration, training and certification. The contractor marketing and advertising materials must satisfy EUC brand guidelines to receive these funds.

2. Cool Comfort Program

The Cool Comfort program provides low cost financing to single-family residential customers for HVAC-specific retrofits through Matador's Credit Union. Under this program, qualified single family homeowners may finance projects for up to \$15,000 under either 5 or 10 year term loans at a 4.99% or 5.99% interest rate, respectively. Cool Comfort incentivizes residents to adopt higher levels of HVAC efficiency and also requires that a building permit be completed through the local building department. This program attempts to reduce the number of unpermitted HVAC projects throughout the region.

E. Programs for Businesses

1. Non-residential Property Assessed Clean Energy (PACE) Financing

ISD and the Treasurer & Tax Collector are administering a County-wide PACE financing program for non-residential properties. The program provides financing through County-issued bonds for private sector energy projects, which are then paid back through assessments placed on building owners' property tax statements. The program also provides marketing, education, recruitment, and technical support to property owners.

To date, PACE has financed five projects totaling over \$14 million dollars. Los Angeles County issued its fourth PACE bond on October 31, 2014. This bond funded a \$270,000 HVAC upgrade for the Huntington East Medical Building in Glendora. On November 25, 2014, Los Angeles County issued a \$100,000 PACE bond for the Masonic Temple Association in Pomona for a solar system upgrade.

At present, over 30 projects are in the pipeline for PACE funding. The County PACE team is working with property owners and financiers to move them forward.

F. Regional Sustainability Efforts and Programs

1. CivicSpark

CivicSpark is an AmeriCorps program administered by the Local Government Commission in partnership with the Governor's Office of Planning and Research. This program has placed 48 talented college graduates with a background in environmental sustainability into local governments throughout California to help them with projects pertaining to climate action planning, energy efficiency, and sustainable communities.

ISD is currently serving as the Civic Spark Regional Administrator for Southern California under a contract it executed with the Local Government Commission on November 1, 2014. ISD entered into Memorandums of Understanding in mid-November with COS, EMD, and DRP to carry out various Civic Spark projects. Civic Spark interns are currently working on: the aforementioned Water Conservation Program and Electric Vehicle projects; the Energy Benchmarking Pilot (discussed below); climate action planning trainings for Councils of Government; and helping to update the County's Municipal Climate Action Plan. Not only are the Civic Spark interns producing high-quality work for the County, they are also obtaining first-hand experience and training on cutting-edge local government sustainability initiatives.

2. Energy Atlas Project with UCLA

As discussed in the prior report to your Board, ISD finalized the Southern California Regional Energy Network-funded contract with UCLA's California Center for Sustainable Communities to develop an interactive "Energy Atlas." This tool will present countywide parcel-level energy usage data (sufficiently aggregated to protect customer privacy) in a visually pleasing and illuminating manner to facilitate informed policy-making around energy issues such as climate action planning and energy benchmarking.

ISD and UCLA hosted two external stakeholder meetings (with the assistance of The Energy Network) and two internal meetings to vet the structure and functionality of the Energy Atlas. UCLA has also presented information about the Energy Atlas to SCE as well as to the CPUC. UCLA is currently: improving mapping functionality on the website; reviewing the accuracy of the underlying geocoding and data findings; and writing a white paper summarizing the methodologies it has employed. UCLA has also collected and organized Energy Strategies 'best practices' throughout the state for inclusion on the website.

Lastly, ISD and UCLA have devised a communications plan, including launching the Energy Atlas at the Conference of Mayors in June.

3. Energy Benchmarking Pilot

The City of Los Angeles and ISD are currently running a building Energy Benchmarking Pilot aimed at identifying high-intensity energy users within the County and facilitating energy use reductions through policies targeting these high-intensity users. The City is in the process of passing an ordinance that will require building owners to benchmark their buildings' energy usage by entering relevant data into the Environmental Protection Agency's Energy Star Portfolio Manager ("Energy Star"). Energy Star will enable building owners to retrieve their

Energy Star scores and/or comparative performance rankings. While the City handles the policy side of the effort, ISD is building the hardware and software infrastructure to support the building benchmarking.

More specifically, ISD is focusing on collecting and storing data. In terms of collecting data, ISD is working on a variety of efforts to enable building owners to retrieve and report on their Energy Star scores. ISD and its GIS staff are developing a map viewer for users to determine their unique building identification numbers (i.e. a County GIS-supplied algorithm).

In terms of storing data, ISD is creating a Standard Energy Efficiency Data (SEED) Platform. SEED is a U.S. Department of Energy open-source software application that helps organizations easily manage data on the energy performance of large groups of buildings. Users can combine data from multiple sources, clean and validate it, and share the information with others.

ISD will continue to develop the County's capacity to collect and hold benchmarking data for cities such as Los Angeles and will eventually implement energy benchmarking throughout the County.

4. Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC)

ISD serves as the County's representative to the LARC and sits on its Governing Board. LARC is an organization committed to supporting climate mitigation and adaptation initiatives by convening representatives from local government, non-profits, academia, and industry to define meaningful approaches to reaching collective climate and sustainability goals. Current representative LARC efforts include the following:

- Released Regional Greenhouse gas inventory data and hosted a webinar for local Councils of Government on the purpose of this release;
- Created training materials (three fact sheets, a PowerPoint presentation, and a video) for cities about what do after a GHG inventory is conducted and why to proceed beyond an inventory;
- Serving as the Southern California regional representative on ARCCA – the Alliance of Regional Collaboratives for Climate Adaptation (ARCCA). ARCCA is a Statewide consortium of climate adaptation organizations comprised of representatives from the Bay Area, Los Angeles, Sacramento, San Diego, of which ISD is an active member;
- Continuing to compile a Framework for Regional Climate Action and Sustainability, which will integrate countywide and jurisdiction-specific best practices and model ordinances for widespread use amongst local government decision-makers;
- Holding forums every third month; and

- Holding monthly membership meetings.

5. Community Choice Aggregation (CCA)

On March 17, 2015, the Board of Supervisors directed ISD to prepare a report back to the Board in 90 days on the feasibility of the County and cities within the County to develop a CCA program.

CCA allows cities and counties to aggregate their buying power to secure electrical energy supply contracts on a region-wide basis. In California, CCA was adopted into law in September 2002. Over the last five years, CCA has become an increasingly popular option among local governments interested not only in providing greater customer choice and competitive energy pricing, but also in obtaining power from cleaner and renewable sources. CCA programs typically offer consumers the choice to opt-in or to opt-out of partially and/or fully renewable energy programs.

ISD will report back on the costs, benefits and risks of CCA; potential CCA operational and financial models; the benefits of CCA scale (involving many cities and the County); potential partnering opportunities with other local utilities; and potential sources of funding for initial feasibility studies.

6. State and Federal Legislation

Pursuant to County legislative priorities, ISD works with analysts in Sacramento and Washington, D.C. to monitor and track pertinent legislative activities, especially those which support local government and regional GHG reduction programs and projects. Among the key legislation that ISD will continue to monitor is the implementation of AB 32 and Proposition 39 funds.

ISD has also been working with the California Air Resources Board (CARB) to understand the rollout of the State's Cap & Trade Emissions Market as mandated under AB 32. Under Cap & Trade, large emitters in various industry sectors must reduce their GHG emissions and/or procure allocations for the emissions they produce ("capped entities"). The County's cogeneration plants at Civic Center and Pitchess meet the threshold established by CARB. As capped entities, these plants must comply with emissions reductions targets through 2020. ISD has assessed the impacts to the plants as part of the Fiscal Year 2015-16 Utilities Budget.

ISD recently provided input on the state's legislative agenda.

7. The Local Government Sustainable Energy Coalition (LGSEC)

The Local Government Sustainable Energy Coalition unites California cities and counties to leverage resources and work together in energy policy action and innovation as well as climate action. More specifically, it shapes regulatory policy and utility programs by giving member governmental entities one strong voice before regulatory agencies (including the CPUC, the

Each Supervisor
April 8, 2015
Page 16

CEC, and CARB); stays informed and effective on energy issues; learns and shares best practices from experts and member governmental entities; and develops long-term energy strategies.

LGSEC also continues to monitor and officially respond to several regulatory matters, including: statewide energy efficiency programs development/energy data usage issues; energy efficiency financing; and long-term utility resource procurement planning. ISD's Office of Sustainability is the current board chair of the LGSEC.

CONCLUSION

Additional information about the programs described in this report, and other energy and environmental programs that are administered by other departments within the County and throughout the region, can be found at the County's comprehensive energy and environmental website: <http://green.lacounty.gov>.

If you have any questions, please contact me at (323) 267-2103 or Howard Choy at (323) 267-2006.

DC:HC:JC

c: ISD Board Deputies
Chief Executive Officer
Chief Operating Officer
Each Department Head

ATTACHMENT IV

DEPARTMENT OF PARKS AND RECREATION



COUNTY OF LOS ANGELES
DEPARTMENT OF PARKS AND RECREATION

"Parks Make Life Better!"


Russ Guiney, Director

John Wicker, Chief Deputy Director

May 18, 2015

Sent via e-mail: aturner@ceo.lacounty.gov

TO: Tom Tindall, Director
Chief Executive Office, Central Services
Attention: Arena Turner

FROM: Kathline J. King, AICP, Chief of Planning
Planning & Development Agency 

SUBJECT: **DEPARTMENT OF PARKS AND RECREATION'S EFFORTS
TO ADDRESS CLIMATE CHANGE**

The Department of Parks and Recreation (DPR) owns and manages a wide variety of parks and recreational facilities including local and regional parks, natural areas, wildlife sanctuaries, lakes, arboreta and botanic gardens, and trails. DPR also operates the largest municipal golf system in the world, and owns well-known cultural venues like the Hollywood Bowl and John Anson Ford Amphitheatre.

Local and regional parks can be used to mitigate the urban heat island effect and minimize local climate change, as explained in the article *Parks and Climate Change: The L.A. County Story* (<http://losangeles.urbdeazine.com/2014/07/29/parks-and-climate-change-the-l-a-county-story/>). DPR has been proactively and progressively addressing climate change and its effects through the Department's planning, design, construction, and renovation projects and practices. Presented below is a summary of DPR's efforts:

Parks and Recreation Element of the General Plan

DPR worked collaboratively with the Department of Regional Planning to develop the Parks and Recreation Element of the Los Angeles County General Plan. The purpose of the Element is to plan and provide for an integrated parks and recreation system that meets the needs of County residents. One of the goals of the Element is the creation of a sustainable park system. Specifically, to achieve this goal, DPR is in the process of implementing the following policies:

- Policy P/R 6.1: Support the use of recycled water for landscape irrigation in County parks.
- Policy P/R 6.2: Support the use of alternative sources of energy, such as wind and solar sources, to reduce the use of energy at existing parks.
- Policy P/R 6.3: Prolong the life of existing buildings and facilities on County park properties through preventative maintenance programs and procedures.

- Policy P/R 6.4: Ensure that new buildings on County park properties are environmentally sustainable by reducing carbon footprints, and conserving water and energy.
- Policy P/R 6.5: Ensure the routine maintenance and operations of County parks and recreational facilities to optimize water and energy conservation.

The General Plan Update, which is a comprehensive effort to update the County's 1980 General Plan, guides growth in the unincorporated areas through goals, policies, and programs, and lays the foundation for future community-based planning initiatives. The Board approved the General Plan Update after its hearing on March 24, 2015; adoption is pending.

Community Parks and Recreation Plans

DPR has been working on Community Parks and Recreation Plans for six urban unincorporated communities: East Los Angeles, East Rancho Dominguez, Lennox, Walnut Park, West Athens-Westmont, and Willowbrook. These communities have very low median household incomes (less than \$47,000 annually), high levels of childhood obesity (over 25%), and insufficient parkland (less than one acre of local parkland per 1,000 residents). To be completed later this year, each of the six plans will identify and provide strategies to address the unique park and recreation needs of the communities. This project is funded by the Strategic Growth Council's Sustainable Communities Planning Grant Program.

Tree Inventory within County Parks and Urban Forestry Plans: As part of this planning effort, DPR has completed tree inventories within County parks in all six communities. Not only do these inventories document the number and type of trees, they also estimate and quantify the environmental benefits of the trees. Provided below are examples of data obtained through this research:

- There are about 1,700 trees in County parks in Willowbrook. These trees generate the following environmental benefits: nearly 3.3 million gallons of stormwater intercepted, over 3,000 pound of reduced air pollutants, and about 338,000 pounds of carbon dioxide sequestered (calculations performed using a tool called iTrees).
- There are approximately 1,040 trees in County parks in East Los Angeles. These trees generate the following environmental benefits: about 1.7 million gallons of stormwater intercepted, 1,640 pounds of reduced air pollutants, and almost 153,000 pounds of carbon dioxide sequestered.

Also included in the Community Parks and Recreation Plans will be Urban Forestry Plans which are intended to increase tree canopy coverage, while also reducing water usage at all existing parks and capturing 100 percent of stormwater runoff onsite at existing and future parks.

Implementation Actions: The Community Parks and Recreation Plans will include implementation actions that address water conservation, water quality, energy efficient and green buildings, carbon sequestration, and healthy soil. Examples of actions include:

- Install smart controllers at existing and new County parks.
- Introduce recycled water for irrigation at existing and new County parks.
- Replace existing paving with permeable paving in parking lots and use pervious surfaces in County parks where appropriate.
- Install solar panels on building roofs at existing and new County parks.
- Pursue Leadership in Energy and Environmental Design (LEED) certification (or other equivalent energy certified ratings) for all new buildings of 5,000 square feet or more at County parks.

Park Design Guidelines and Standards

This document (http://file.lacounty.gov/dpr/cms1_216063.pdf) is intended to provide design professionals, County staff, and other agencies with guidance on how to design and develop parks that meet County standards and expectations. This manual is very detailed and addresses topics such as: spatial organization (e.g. physical access and adjacency compatibility, security and safety); buildings (e.g. contextual site and sustainability considerations); circulation (e.g. pedestrian, vehicular, bicycle); recreational facilities (e.g. ball fields, sports courts); landscaping (e.g. planted areas and irrigation); storm water management (e.g. grading and drainage, low-impact development strategies); utilities (e.g. electrical and lighting design); preferred manufactured products to be used at the parks; and preferred plant lists for both potable and recycled water. As part of the land subdivision process, DPR shares this document with private developers, and works with them to design and develop new public parks. This ensures that new County parks included in new residential subdivisions are sustainable and meet County standards.

Model Green Park Project at Eugene A. Obregon Park

This project involves the conversion of the traditional landscape of Eugene A. Obregon Park, an existing County park in East Los Angeles, to native/drought resistant by incorporating bioswales, bio-retention basins, turf reduction, trees, rain barrel, plants, and demonstration garden. The objective of this project is to provide multiple benefits including air/water quality that reduce greenhouse gas emissions and are consistent with the State's planning priorities. This project is funded by the Strategic Growth Council's Urban Greening Grant Program.

Smart Controllers

"Smart controllers" automatically program the irrigation system operations based on daily weather conditions, which are transmitted to the controllers through a network of satellite communications systems. In response to the recent water shortage and the Board of Supervisors mandate to reduce water usage, DPR has replaced existing irrigation controllers with water efficient smart controllers at seven County parks: Jesse Owens Community Regional Park, Whittier Narrows Recreation Area, Kenneth Hahn State

Mr. Tom Tindall
May 18, 2015
Page 4

Recreation Area, the Hollywood Bowl, El Cariso Community Regional Park, Veterans Memorial Community Regional Park, and Frank G. Bonelli Regional Park. After a twelve-month period of performance-monitoring at these County parks, a 23% reduction in water usage was observed. This water usage reduction resulted in 219 million gallons of water saved, and a \$385,000 cost savings. An initial \$1 million was funded by the County's Chief Executive Office for project construction. As a result of this project, water utility companies gave DPR \$208,000 of water conservation rebates. DPR will identify additional County parks where smart controllers may be installed.

Turf Removal

Turf grass is one of the most water-intensive plants in our landscape. Its high water use and frequent maintenance make it a time-consuming and expensive landscape option. By replacing selected turf areas at County parks with more water-efficient landscaping, DPR could save on its water bills and reduce landscape maintenance costs. To help with turf removal projects, various water districts, including the Metropolitan Water District (MWD) and the Los Angeles Department of Water and Power, are offering rebates for \$2.00 or more per square foot of turf removed or replaced. MWD estimates that removing one square foot of grass in Southern California saves 42 gallons of water a year. Eligible water-efficient replacement landscaping typically includes: artificial turf, drought-tolerant plants, mulch, rock, un-grouted stepping-stones, and permeable hardscape. Turf removal rebates are being provided in response to Governor Edmund G. Brown Jr.'s emergency drought declaration. DPR is in the process of identifying turf areas at various County parks which may be removed and replaced.

Alternative Modes of Transportation to Parks

The majority of greenhouse gas (GHG) emissions from transportation are carbon dioxide emissions resulting from the combustion of petroleum-based products, like gasoline, in internal combustion engines. The largest sources of transportation-related GHG emissions include passenger cars and light-duty trucks, including sport utility vehicles, pickup trucks, and minivans. To help reduce GHG emissions from vehicles and encourage the use of alternative modes of transportation, DPR now provides information on public transit (bus, rail, and shuttle) services and bike lanes on its website (<http://parks.lacounty.gov/>) to show patrons how to reach County regional parks without using a car. The Department is working towards the goal of providing "Go Car Free" information for all County parks on its website. In addition, DPR is in the process of identifying County parks where new or additional bike racks may be needed.

Should you have any questions about any of these efforts, please contact Clement Lau, Departmental Facilities Planner II, of my staff at (213) 351-5120 or clau@parks.lacounty.gov.

KK:CL

c: Parks and Recreation (N. E. Garcia, C. Lau)

ATTACHMENT V

DEPARTMENT OF PUBLIC HEALTH



CYNTHIA A. HARDING, M.P.H.
Interim Director

JEFFREY D. GUNZENHAUSER, M.D., M.P.H.
Interim Health Officer

313 North Figueroa Street, Room 708
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TEL (213) 240-8156 • FAX (213) 481-2739

www.publichealth.lacounty.gov

BOARD OF SUPERVISORS

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Fifth District

May 1, 2015

TO: Tom Tindall, Director
Chief Executive Office, Central Services

FROM: Cynthia A. Harding, M.P.H.
Interim Director

A handwritten signature in black ink that reads "Cynthia A. Harding". The signature is written in a cursive style and is positioned to the right of the printed name in the "FROM:" field.

SUBJECT: **JULY 3, 2012 BOARD MOTION, AGENDA ITEM 55-A, REPORT ON THE STEPS TAKEN TO PREPARE FOR THE POTENTIAL EFFECTS OF CLIMATE CHANGE**

Background

The University of California, Los Angeles' (UCLA) publication of studies on the effects of climate change on temperature (*Mid-Century Warming in the Los Angeles Region*, released 2012), snowfall (*Mid- and End-of-Century Snowfall in the Los Angeles Region*, released 2013), and precipitation (*21st Century Precipitation Changes over the Los Angeles Region*, released 2014), have informed the Department of Public Health's (DPH) climate change adaptation and mitigation activities. This memo outlines DPH's progress since our last report in regard to climate change mitigation and adaptation.

As reported earlier, DPH's review and analysis of the UCLA climate change studies led to the formation of the division-level Climate Change Workgroup. The Climate Change Workgroup developed and finalized the Department's *Five Point Plan to Reduce the Health Impacts of Climate Change* (Attachment A). The plan outlines five strategic priorities, each supported by specific goals and objectives that drive and guide the Department's climate change work:

1. Inform and engage the general public about the nature of climate change and the health-related co-benefits associated with taking action to reduce carbon pollution.
2. Promote local planning, land use, transportation, water, and energy policies that reduce greenhouse gas emissions and support the design of healthy, sustainable communities.
3. Provide guidance on climate preparedness to local government and community partners to reduce health risks and create more resilient communities.

4. Build the capacity of Departmental staff and programs to monitor health impacts, integrate climate preparedness, and improve climate response.
5. Adopt best management practices to reduce carbon emissions associated with Departmental facilities and internal operations.

Summary of Efforts

DPH's climate change activities during the later months of 2014 and thus far in 2015 have included leading a County-wide collaboration on climate adaptation initiatives and continuing internal capacity building. DPH also continues its focus on public education and collaboration with academic institutions, non-profits, and outside agencies. In August 2014, DPH launched a Climate Committee, a subgroup of the Healthy Design Workgroup focused specifically on climate. This committee is tackling climate change challenges from an interdepartmental perspective. DPH also continues its work leading the Healthy Design Workgroup (HDW). The HDW has submitted a separate report summarizing its 2014 accomplishments and describing its new work plan for 2015.

Internal Capacity Building

Climate and Health Workshop Series

Background: The original Climate and Health Workshop Series began in October 2013 and continued through April 2014. It featured 16 workshops that educated and engaged DPH staff on the topic of climate change. The workshops were developed in partnership with UCLA's Fielding School of Public Health under the direction of Dr. Hilary Godwin in the Environmental Health Services Department. The workshops were open to invited staff from DPH's Division of Environmental Health, Veterinary Public Health, and Public Health Nursing. Workshops covered the basics of climate change science, the UCLA projections for Los Angeles County, climate change communication, vulnerable populations, and specific impacts of climate change on such factors as air pollution, water availability, vector-borne disease, and food systems. These workshops allowed staff to engage with the material and served to further inform DPH's climate adaptation planning.

In the last report, DPH noted that the well-received Climate and Health Workshop Series would re-launch in September 2014, open now to all DPH staff and hosted at four different locations around the County. The re-launch has maintained the success of the original series with waitlists for many of the sessions. The new round of workshops (continuing into early 2016) has so far educated over 100 staff.

County-Wide Leadership and Collaborations

County Climate Committee

DPH initiated and leads the County Climate Committee, a subcommittee of the successful Healthy Design Workgroup. The goal of the committee is to improve effectiveness and efficiency through cross-departmental collaboration on climate change challenges. With

representatives from the County departments of Beaches and Harbors, Fire, Internal Services, Parks and Recreation, Public Health, Public Works, and Regional Planning, the Climate Committee is dedicated to tackling climate change challenges from an interdepartmental perspective. As a first project, the committee has elected to work on the development of urban heat island reduction strategies for Los Angeles County. The urban heat island effect refers to the phenomenon in which urban areas are warmer than surrounding rural areas due in large part to the proliferation of surfaces that absorb heat, like dark pavement and rooftops. The urban heat island will compound the warming effects of climate change in the Los Angeles region, particularly in low-income areas that lack tree canopy. Strategies for reducing the urban heat island effect include promoting cool roofs, cool pavements, and improved tree canopy.

Healthy Design Workgroup

Pursuing healthy design in our neighborhoods is a critical element of climate change mitigation. The implementation of healthy design principles in urban areas facilitates and encourages healthy activities such as walking, cycling, public transit use, and outdoor physical activity. By encouraging alternative transportation modes, healthy design reduces vehicle miles traveled in cars, thereby reducing the greenhouse gas emissions that contribute to climate change.

DPH has led the Healthy Design Workgroup (HDW) since 2013. In 2014, the HDW drafted guidance documents to assist County staff and partners in increasing access to bicycling, walking, transit, and healthy foods. With a subcommittee focused on acquiring grant funding, the HDW facilitated collaborations between departments on healthy design grant applications, which led to over \$10 million in awards for the County. More detail on the work of the HDW can be found in its April 2015 report to the Board.

Other Collaborations

In addition to running the HDW and the Climate Committee, DPH participates actively in the following collaborative initiatives:

- The Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC). DPH has been a participating member since 2013.
- Roadmap for a Sustainable Solid Waste Management Future Working Group: Representatives from the Environmental Health Division of DPH have been actively participating in Public Works' Board-mandated working group. DPH will be particularly involved in facilitating the implementation of the roadmap.
- The Mediterranean City Climate Change Consortium: This network of practitioners, policymakers, business leaders, and academics from cities that have climates like ours focuses on knowledge-sharing, collaboration, and applicable research.

If you have any questions or would like additional information, please let me know.

CAH:ch

ATTACHMENT VI

DEPARTMENT OF PUBLIC WORKS



COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

GAIL FARBER, Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
<http://dpw.lacounty.gov>

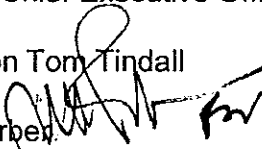
ADDRESS ALL CORRESPONDENCE TO
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

April 29, 2015

IN REPLY PLEASE
REFER TO FILE. A-0

TO: Sachi A. Hamai
Interim Chief Executive Officer

Attention Tom Tindall

FROM: Gail Farber 
Director of Public Works

**JULY 3, 2012, BOARD MOTION, AGENDA ITEM 55-A
REPORT ON THE STEPS TAKEN TO PREPARE FOR THE POTENTIAL EFFECTS
OF CLIMATE CHANGE**

On July 3, 2012, the Board approved a motion instructing the Chief Executive Officer, in conjunction with the Directors of Public Health, Public Works, Beaches and Harbors, Regional Planning, and the Fire Chief, to review the University of California, Los Angeles' "Climate Change in the Los Angeles Region" project, document the steps being taken to prepare for the projected effects of climate change, and report back to the Board with a cost analysis on the steps being taken and recommended additional actions for the County to take to help the region prepare for the likely effects of climate change.

Attached is a report summarizing our comments on UCLA's latest precipitation climate study and the update on practices that are being implemented and pursued by Public Works to address climate change. If you have any questions, please contact me at (626) 458-4002 or your staff may contact Youn Sim at (626) 458-7840 or at ysim@dpw.lacountv.gov.

YS:plg
C:/MYFILES/MP/CLIMATE CHANGE MOTION

Attach.

cc: Arena Turner
Executive Office
Department of Beaches and Harbors
Fire Department
Internal Services Department
Department of Parks and Recreation
Department of Public Health
Department of Regional Planning

Attachment A

COMMENTS AND ANALYSIS ON UCLA PRECIPITATION CLIMATE STUDY

1. The UCLA study found that total precipitation over a long-term scale, e.g., next century, may not be much different from historical patterns under a climate change regime. However, rainfall variations over a shorter timescale such as rainfall intensity, which are critical for flood protection infrastructure, seem inconclusive. A report on rainfall intensity impact would be of great benefit to flood protection infrastructure planning, operation, and maintenance.
2. Although total precipitation may remain relatively unchanged under climate change conditions, when considered together with other parts of the UCLA study indicating temperature increase and consequent evaporation water loss and snow pack reduction, the region's water resources will be significantly stressed. Further, population increase predicted in the next century will exacerbate the situation.

Attachment B

UPDATE TO PREVIOUS REPORT ON THE ACTIONS TAKEN BY DEPARTMENT OF PUBLIC WORKS TO ADDRESS CLIMATE CHANGE

In an August 29, 2014, progress report, Public Works reported several actions that had been initiated to address climate change impacts. Since then, Public Works has continued implementing the reported actions and further improved them to build resiliency for continued operations and community services and to adapt to the climate impacts while reducing Greenhouse Gas emissions from the department operations as well as from the community.

Details of the update to previously reported actions are provided in Table 1. Note that each action is presented in conjunction with climate impact sectors that the action aims to support. A complete list of impact sectors can be found in the DPW Climate Change Adaptation Strategy Matrix (Table 2).

Attachment C

REPORT ON ADDITIONAL ACTIONS IDENTIFIED BY DEPARTMENT OF PUBLIC WORKS TO ADDRESS CLIMATE CHANGE

1. Public Works Climate Adaptation Strategies Framework

In an August 29, 2014, progress report, Public Works reported that a climate change adaptation matrix had been created to guide and track climate adaptation strategy development. See Table 2 for the matrix.

Since then, Public Works has applied the matrix across all impact sectors to examine potential threats and sensitivity of the risks and vulnerability of department operations to evaluate existing and identify additional adaptation actions. Identified adaptation actions will be prioritized based on the level of potential impact and existing adaptive capacity.

The matrix is currently being populated based on available UCLA study results on snowfall, temperature, sea level, and precipitation impact. The matrix will be eventually finalized with additional analysis of Santa Ana Winds, Wildfire, Hydrology, and Sierra Nevada Snowpack impact when the remaining UCLA studies on those subjects are released.

The finalized matrix will then be used to develop, implement, and maintain specific actions countywide to ensure the County community and public services to be resilient against climate change threats.

2. Measures to Comply with the Board Motions for Drought Response

In compliance with the Board of Supervisors' July 22, 2014, directive to immediately implement statewide emergency water conservation regulations, Public Works promptly initiated actions to implement various water conservation measures at Public Works facilities and field operations. Under the Board's subsequent directive on April 7, 2015, Public Works, collaboratively with other County departments, is currently preparing a report on water conservation actions taken by the County departments. The report will include various actions that have been taken to reduce water use at facilities and operations and will also identify additional actions for further reductions in response to the current ongoing drought.

Table 1. Update to previously reported climate actions

Actions	Update	Impact Sectors
Los Angeles Basin Stormwater Conservation Study (LA Basin Study)	<p>On September 18, 2012, the Board of Supervisors approved Public Works entering into a Memorandum of Agreement with the United States Department of Interior – Bureau of Reclamation (Reclamation) to conduct the Los Angeles Basin Stormwater Conservation Study (LA Basin Study). The LA Basin Study is a long-range planning effort that is evaluating the potential of the existing Los Angeles County Flood Control District (LACFCD) facilities, other interrelated infrastructure, and potential new facility concepts to increase the capture of stormwater for water supply under uncertain climate futures. The LA Basin Study will also assess the current operations for existing LACFCD facilities and determine these operations' adequacy for the future. Detailed scientific, engineering, and economic analyses are being conducted to help address future water supply demands and challenges as a result of climate change.</p> <p>Work on the LA Basin Study began in December 2013 and is expected to finish in three years. The first major task of the LA Basin Study, local climate change and stormwater runoff projections, was completed in December 2013. Public Works coordinated with UCLA to ensure each other's approach, findings, and most importantly – our messaging – about climate change studies are consistent in order to accurately inform the public. Our combined efforts have been successful and we agree with the consistent findings of these independent studies – there is little to no change in future rainfall.</p> <p>Since last report, a major task of the LA Basin Study was to analyze the existing LACFCD infrastructure and its response to the future climate projections. This task was completed in December 2014. Generally, due to the flexibility in Public Works' operations, most facilities performed reasonably well under future climate conditions. However, there are certain facilities that can be enhanced to capture additional stormwater to increase our resilience to climate change. Also completed in December 2014, future water supply and water demand projections were developed out to 2095. The findings indicate that there is the potential for supply to exceed demand, however, to make this a reality, new infrastructure and changes in policy will be required to tap into these water resources. Presently, stormwater capture concepts are being developed to enhance the LACFCD infrastructure and its operations with respect to future climate change. These concepts may be structural or operational in characteristic and could also include the proposal for new facilities. The final set of stormwater capture recommendations will be based upon an economic tradeoff analysis which will guide implementation of the most effective climate solutions first. The final report is anticipated to be released this coming December 2015.</p>	<ul style="list-style-type: none"> • Water management • Water infrastructure
Envision™	<p>The Institute of Sustainable Infrastructure's (ISI) Envision™ Rating System has been used as a standard sustainable infrastructure rating tool and its full program of education and research has been implemented. According to ISI, Public Works has the highest number of Envision Sustainability Professionals (ENV SP) credentialed by ISI among the nation's public agencies. The Sun Valley Watershed Multi-Benefit Project was submitted to ISI and received a Platinum Award with the highest rating score the ISI ever issued.</p>	All sectors
Best Technologies for Fleet	<p>Eleven electric vehicle charging stations have been constructed and are now operational. In addition, purchase of 34 alternative fuel vehicles (hybrid and compressed natural gas combined) has been budgeted for Fiscal Year 2014-15.</p>	Transportation infrastructure (Fleet)

ATTACHMENT VII

DEPARTMENT OF REGIONAL PLANNING



Los Angeles County
Department of Regional Planning

Planning for the Challenges Ahead



Richard J. Bruckner
Director

April 30, 2015

TO: Sachi A. Hamai
Interim Chief Executive Officer

FROM: Richard J. Bruckner ^{DJS}
Director _{for RJB}

REPORT ON THE STEPS TAKEN TO PREPARE FOR THE POTENTIAL EFFECTS OF CLIMATE CHANGE (JULY 3, 2012, ITEM 55-A)

On July 13, 2012, the County Board of Supervisors (Board) instructed the Directors of Beaches and Harbors, Regional Planning, and the Chief, Fire Department, in cooperation with applicable utilities, to review the information provided by the Climate Change in the Los Angeles Region Project, as well as other relevant information; document the steps to prepare for the projected effects of climate change; and recommend any additional actions that the County should take to help the region prepare for the likely effects of climate change.

PRECIPITATION STUDY REVIEW

The Department of Regional Planning (Department) has reviewed the third University of California, Los Angeles (UCLA), study on precipitation (Precipitation Study). The Precipitation study analyzes local precipitation using accepted global climate models to simulate wet-season precipitation in the Los Angeles Region from 1981-2000. The Precipitation Study also uses the models to make projections, assuming greenhouse gas (GHG) emissions continue unabated, for the periods 2041-2060 and 2081-2100. Some of the projections predict increases in precipitation and others predict decreases; in either case, the rate of change is small. The Precipitation Study concludes that Los Angeles could expect roughly the same amount of total precipitation as it has in the last few decades of the twentieth century, and that the year-to-year variability in the amount of precipitation is expected to continue. The Precipitation Study relates to the results of an earlier UCLA study on snowfall that found that future precipitation will be comprised of more rain and less snow, resulting in a shorter timeframe for recapture and storage and with potential for increased complications related to runoff and flooding.

CURRENT CLIMATE CHANGE EFFORTS

There are numerous major planning initiatives that address climate change through adaptation and mitigation strategies in the unincorporated areas. These initiatives represent collaborations across many County departments and community partners. The following is a summary of County initiatives:

General Plan Update

The General Plan Update, which is a comprehensive effort to update the County's 1980 General Plan, guides growth in the unincorporated areas through goals, policies, and programs, and lays the foundation for future community-based planning initiatives. The Board approved the General Plan Update after its hearing on March 24, 2015; adoption is pending.

Community Climate Action Plan: The Community Climate Action Plan (CCAP), a component of the General Plan Update, identifies GHG emissions related to community activities in the unincorporated areas; establishes a reduction target consistent with Assembly Bill 32; and provides a roadmap for successfully implementing actions selected by the County to reduce GHG emissions. The CCAP includes a 2020 GHG emissions target of 11% below 2010 levels, which will reduce GHG emissions generated within the unincorporated areas by approximately 2.4 million metric tons of carbon dioxide equivalent. In conjunction with state-level actions implemented at the local level, the CCAP includes 26 local actions that are necessary to meet the County's emission reduction target. These local actions are grouped into five strategy areas: Green Building and Energy; Land Use and Transportation; Water Conservation and Wastewater; Waste Reduction, Reuse and Recycling; and Land Conservation and Tree Planting. Furthermore, as part of the CCAP effort, the Department has developed tools and resources to facilitate CCAP implementation, including a report on financing options for CCAP actions, and a tracking tool to estimate the County's progress in reducing GHG emissions. The CCAP is available on the Department website at the following link: planning.lacounty.gov/ccap.

Recycling Ordinance

The Recycling Ordinance amends Title 22 of the County Code (Zoning Ordinance) to establish a comprehensive set of development standards for facilities used for recycling, composting, and waste disposal. Facilities for the collection and handling of recyclable, biodegradable, and landfill waste materials are necessary to support a thriving and sustainable County. The Recycling Ordinance is anticipated to be considered by the Regional Planning Commission (RPC) before the end of 2016.

Renewable Energy Ordinance

The Renewable Energy Ordinance (REO) amends Title 22 of the County Code (Zoning Ordinance) to establish regulations for the development of small-scale solar and wind energy systems, utility-scale solar and wind energy facilities, and temporary meteorological towers. Through permitting and development standards, the REO will help facilitate the development of solar and wind energy facilities on rooftops and other structures as well as personal systems for on-site use, and further address concerns over environmental impacts from wind energy and ground-mounted solar energy projects. The RPC recommended approval of the REO on April 22, 2015, and a public hearing before the Board is pending.

Santa Monica Mountains Local Coastal Program

The Santa Monica Mountains Local Coastal Program (LCP) is a comprehensive planning and regulatory program to manage the conservation and development of coastal resources in the Santa Monica Mountains Coastal Zone. The Santa Monica Mountains LCP includes goals and policies that address the potential impacts of sea level rise, including identifying the most vulnerable areas, structures, facilities and resources on the shoreline. The Santa Monica Mountains LCP was adopted by the Board on August 26, 2014, and certified by the California Coastal Commission on October 10, 2014.

Tree Planting Ordinance

The Tree Planting Ordinance amends Title 22 of the County Code (Zoning Ordinance) to establish new tree planting requirements that will reduce air pollution, reduce urban run-off, and help to mitigate the urban heat island effect. The RPC recommended approval of the Tree Planting Ordinance on December 17, 2014. It is scheduled for public hearing before the Board on May 26, 2015.

Urban Heat Island Mitigation Plan

The Urban Heat Island Mitigation Plan addresses problems caused by urban heat islands and the danger posed by extreme heat through policies, such as requiring cool roof technology, and implementation strategies that maximize the co-benefits of reducing urban heat islands, such as energy savings and improved human health. The plan is being developed in cooperation with the Healthy Design Work Group Climate Change Subcommittee, which is an interdepartmental work group that meets regularly to collaborate on climate change issues and healthy design. The Department will continue to provide updates on the progress of this effort.

Other Sustainability Initiatives

Many other efforts underway in the Department address climate change through the promotion of active transportation strategies, protection of resources, and promotion of sustainable development. These efforts include: the West Carson Transit Oriented

District Specific Plan; the Willowbrook Transit Oriented District Specific Plan; the West Athens-Westmont Transit Oriented Specific Plan; the Significant Ecological Areas Ordinance; the Healthy Neighborhood Design Guidelines; the Small Lot Subdivision Ordinance; and participation/co-leadership in the proposed County Sustainability Council.

CONCLUSION

The CCAP, a component of the Air Quality Element of the General Plan Update, includes two measures that are affected by precipitation: one to meet the State established per capita water use reduction goal as identified by Senate Bill X7-7 for 2020; and another to promote the use of wastewater and gray water, and effectively manage stormwater to improve recapture and protect local ground water supplies. Increasing conservation efforts and improving local recapture will be important to ensure an adequate water supply and mitigate the effects of climate change. Additionally, the Department has begun collecting from County departments the data needed to update the CCAP tracking tool that will monitor the County's progress toward reducing GHG emissions. Specifically, the Department will be able to report the County's progress toward meeting its water conservation and wastewater goals as identified in the CCAP.

The UCLA climate studies on temperature, snowfall, and precipitation underscore the urgency of the County to act on climate change, and the importance of both adaptation and mitigation strategies. The studies support the County's current initiatives, and should be used to inform the County's critical next steps in addressing climate change. The Department looks forward to reviewing the other climate studies as they are released.

Should you have any questions or concerns about any of these efforts, please contact Mark Child, Deputy Director, Advance Planning Division, at (213) 974-6457 or at mchild@planning.lacounty.gov.

RJB:MC:CC:LF:lf:ems



GAIL FARBER, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

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IN REPLY PLEASE
REFER TO FILE: **A-0**

August 13, 2014

TO: William T Fujioka
Chief Executive Officer

Attention Rita Robinson

FROM: Gail Farber
Director of Public Works

**JULY 3, 2012, BOARD MOTION, AGENDA ITEM 55-A
REPORT ON THE STEPS TAKEN TO PREPARE FOR THE POTENTIAL EFFECTS OF
CLIMATE CHANGE**

On July 3, 2012, the Board approved a motion instructing the Chief Executive Officer, in conjunction with the Directors of Public Health, Public Works, Beaches and Harbors, Regional Planning, and the Fire Chief, to review the University of California, Los Angeles' "Climate Change in the Los Angeles Region" project, document the steps being taken to prepare for the projected effects of climate change, and report back to the Board with a cost analysis on the steps being taken and recommended additional actions for the County to take to help the region prepare for the likely effects of climate change.

Attached is a report summarizing our comments on available UCLA climate change reports and practices that are being implemented and pursued by Public Works to address climate change. If you have any questions, please contact Mark Pestrella, Chief Deputy Director, at (626) 458-4001, or your staff may contact Youn Sim at (626) 458-7840 or at ysim@dpw.lacountv.gov.

YS:plg
C:MYFILES/MP/CLIMATE CHANGE

Attach.

cc: Chief Executive Office (Arena Turner)
Executive Office
Department of Beaches and Harbors
Department of Public Health
Department of Regional Planning
Fire Department

Attachment A

COMMENTS ON CLIMATE STUDIES

1. UCLA climate studies on temperature and snow pack
 - a. The UCLA study provides predictions of potential changes in temperature and snow pack for long-term periods (i.e., mid-21st century). However, it lacks information on the expected impacts during short-term periods. To make this report more useful, it is recommended that the report include projection of potential impacts in smaller time increments such as every 5 years.
 - b. Through the Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC), it would be extremely beneficial to this region's planners to establish a web portal repository for the downscaled result/output projections from the UCLA study. A "clearinghouse" of climate change information similar to the Cal-Adapt website (<http://cal-adapt.org/>) but with downscaled for the Los Angeles region, would be an invaluable resource for developing adaptation plans at a local level.
 - c. The temperature study focused on hot extreme (over 95 degrees F) but lacks the potential of cold extreme. If extreme hot and cold days are expected, such information would be critical to additional policy consideration or existing code revisions.
 - d. A report on how future reduction of snowfall will impact our overall drought condition would be of great benefit.
2. USC climate study on sea level rise
 - a. This report analyzed the effects of sea level rise along coastal areas only within the City of Los Angeles' jurisdiction excluding the majority of Los Angeles County's coastline. To make this report useful, it is recommended that the scope of the study be expanded to include the entire coastline of the County.
 - b. See No.1.a above for potential impact of sea level rise.
 - c. See No.1.b above for potential impact of sea level rise.
 - d. The report outlines general techniques to maintain or restore natural sand supply along the coast. However, there is no direct mention of utilizing sediment flushing or sluicing as techniques, and these options should be considered viable in addition to those listed. For reference, please see the Sediment Management Strategic Plan 2012-2032 developed by Public Works.

<http://dpw.lacounty.gov/lacfd/sediment/stplan.aspx>

Attachment B

UPDATE TO PREVIOUS REPORT ON THE ACTIONS TAKEN BY DEPARTMENT OF PUBLIC WORKS TO ADDRESS CLIMATE CHANGE

In its December 27, 2012, progress report, Public Works reported several actions that had been initiated to address climate change impacts. Since then, Public Works has continued implementing the reported actions and further improved them to build resiliency for continued operations and community services and to adapt to the climate impacts while reducing GHG emissions from the department operations as well as from the community.

Details of the update to previously reported actions are provided in Table 1. Note that each action is presented in conjunction with climate impact sectors that the action aims to support. A complete list of impact sectors can be found in the climate adaptation strategy matrix (Table 2).

Attachment C

REPORT ON ADDITIONAL ACTIONS IDENTIFIED BY DEPARTMENT OF PUBLIC WORKS TO ADDRESS CLIMATE CHANGE

1. Public Works Climate Adaptation Strategies Framework

According to various large-scale studies conducted by state and federal agencies, commonly predicted outcome of the climate change encompasses increased temperature accompanied by severe drought and more frequent wild fires, which along with intense storms, could lead to significant debris and mud-flow threats in the foothill areas. Rise in sea levels could affect the low-lying coastal community and infrastructure.

Climate change may have a number of short- and long-term impacts on a variety of sectors of the County community including, but not limited to, agriculture, public health, ecosystems and natural resources, energy, infrastructure, emergency management, and local economy. Therefore, it is critical to develop strategies to prepare for and to build resiliency against adverse impacts.

Development of climate adaptation strategies may be conducted sequentially starting with evaluation of threats, vulnerability and risk assessments, identification of necessary actions, and implementation and maintenance of identified actions. The strategies may also investigate short- and long-term funding mechanisms.

Public Works has proactively initiated a process of adaptation planning described above by researching various state and federal guidance manuals that are designed to assist local governments with climate adaptation strategies within agency's own operations as well as when providing support to community level efforts.

As a first step, Public Works created a framework for climate adaptation strategies by establishing a matrix that would guide and track the strategy development. See Table 2 for the matrix. Using the matrix, Public Works has applied a consistent approach across various impact sectors in examining potential threats and sensitivity of the risks and vulnerability of department operations. Results of the risk assessment will provide critical information to evaluating existing and identifying additional adaptation actions. Ultimately, adaptation actions identified for individual impact sectors will be prioritized based on the level of potential impact and existing adaptive capacity.

Public Works will make continuous efforts to explore new ideas to develop, implement, and maintain Countywide adaptation strategies to ensure the County community and public services to be resilient against climate change threats.

2. Measures to Comply with Emergency Water Conservation Regulations

In compliance with the County policy as adopted on July 22, 2014, by the Board of Supervisors and the subsequent memo dated July 23, 2014, from Chief Executive Officer Bill Fujioka instructing all County personnel to immediately implement recently adopted, statewide emergency water conservation regulations, Public Works promptly initiated actions to implement the following water conservation measures: immediately ceasing spray irrigation and preparing for drought-tolerant and stormwater quality improvements at the Headquarters campus, monitoring, repairing, and reporting water leaks and over spray at the Department's landscape and facilities, and updating the department's mobile application to add a water wasting reporting feature.

3. Sustainability implementation initiative

Public Works recognizes that sustainability is a key principle in developing strategies to mitigate climate change and adapt to the impacts. As an organizing paradigm that applies to the department mission and the entire business programs, sustainability was identified as one of the departmental values and was included in the department's five strategic focus areas. Since then, efforts have focused on institutionalizing sustainability through synchronized, enterprise-wide initiatives rather than isolated efforts.

By effectively adopting sustainability principles, Public Works has assessed opportunities across all operations and services, thereby developing strategic actions that would reduce Greenhouse Gas and air pollutant emissions and address climate change threats and infrastructure vulnerabilities.

Under the sustainability implementation initiative, various accomplishments have been made and efforts are continuing. A sustainability implementation framework has been established, which consists of an Executive Team, Sustainability Council, Sustainability Officer, and ad-hoc Work Groups. A Public Works policy on sustainability is in development, which will guide the entire initiative. A business program level planning framework has also been in development, which consists of sustainability goal areas, key sustainability indicators, performance metrics, and progress tracking.

Details of the latest achievements of this initiative are available in Public Works Sustainability Webpage:

<http://dpw.lacounty.gov/adm/sustainability/Default.aspx>

Table 1. Update to previously reported climate actions

Actions	Update	Impact Sectors
Los Angeles Basin Stormwater Conservation Study (LA Basin Study)	<p>On September 18, 2012, the Board of Supervisors approved Public Works entering into a Memorandum of Agreement with the United States Department of Interior – Bureau of Reclamation (Reclamation) to conduct the Los Angeles Basin Stormwater Conservation Study (LA Basin Study). The LA Basin Study is a long-range planning effort that is evaluating the potential of the existing Los Angeles County Flood Control District (LACFCD) facilities, other interrelated infrastructure, and potential new facility concepts to increase the capture of stormwater for water supply under uncertain climate futures. The LA Basin Study will also assess the current operations for existing LACFCD facilities and determine these operations' adequacy for the future. Detailed scientific, engineering, and economic analyses are being conducted to help address future water supply demands and challenges as a result of climate change.</p> <p>Work on the LA Basin Study began in December 2013 and will take three years to complete. The first major task of the LA Basin Study, downscaled climate change and hydrologic modeling projections, was completed in December 2013. Currently, the LA Basin Study is performing an analysis on the existing LACFCD infrastructure and its response to the future climate projections. Additionally, efforts have begun on water supply and water demand projections for the study area. Following the current two tasks, the LA Basin Study will proceed to develop concepts to enhance the infrastructure and its operations with respect to future climate change. These concepts may be structural or operational in characteristic and could also recommend new facilities.</p>	<ul style="list-style-type: none"> • Water management • Water infrastructure
Envision™	<p>The Institute of Sustainable Infrastructure's (ISI) Envision™ Rating System has been adopted as a standard sustainable infrastructure rating tool and its full program of education and research has been implemented. Staff has been or is in the process of being trained to use Envision™ and credentialed as Envision Sustainability Professionals (ENV SP) with the ISI. According to ISI, Public Works has the most ENV SP credentialed staff among the nation's public agencies.</p> <p>Using the rating system and supporting research for sustainability, Public Works now evaluates and assesses, at any point during its life cycle, the design, construction, and operation of infrastructure of all sizes and complexities in terms of economic, environmental, and social impacts. All infrastructure projects have been rated during early phases to maximize opportunity for sustainable practices to mitigate and adapt to climate impact. The Sun Valley Watershed Multi-Benefit Project has been submitted to the ISI for a Platinum Award.</p>	All sectors
Sustainable Projects for GHG reduction	<p>Since receiving LEED Gold certification for the Headquarters building, Public Works has continued applying sustainable principles of LEED as a guideline for its operation and maintenance. We have also continued to work with our sustainability partners to identify opportunities to implement more sustainable practices and equipment at our Headquarters campus. The cooling tower servicing our Headquarters annex building and variable frequency drives for domestic water are just two of many examples.</p>	<ul style="list-style-type: none"> • Land use planning (Building design) • Facility operations and maintenance
Best Technologies for Fleet	<p>Eleven electric vehicle charging stations have been constructed and are now operational. In addition, purchase of 28 alternative fuel vehicles (hybrid and compressed natural gas combined) has been budgeted for Fiscal Year 2014-15.</p>	Transportation infrastructure (Fleet)
Green Building Code Revision	<p>Public Works adopted the 2014 County of Los Angeles Green Building Standards Code on January 1, 2014. This Code amends the 2013 California Green Building Standards Code (CALGreen) with additional local requirements including an increase in drought-tolerant planting, higher construction and demolition debris recycling thresholds, and mandatory Tier 1 compliance for newly constructed high-rise buildings and non-residential buildings greater than 25,000 square feet. These amendments, coupled with the 2013 CALGreen reduction in energy usage and increased additions and alterations scoping thresholds, will lower GHG emissions associated with private development and preserve the County as a regional leader in sustainable construction.</p>	Land use planning (Development planning and Building design)
Low-Impact Development Ordinance	<p>On November 5, 2013, the Board of Supervisors approved the revisions to the County's Low Impact Development (LID) Ordinance, through which Public Works requires new development and re-development projects to comply with its LID standards. LID incorporates small, multifunctional, cost-effective landscape features, called Best Management Practices (BMP's), to manage storm runoff along with its quality through retention and redistribution. LID improves the quality and quantity of vegetation, which moderates the climate globally and locally by regulating greenhouse gasses and lowers heat island effects that tend to occur within urbanized areas. Similarly, LID creates healthy soils which lock up carbon, provides natural water filtration, increases groundwater supplies, and reduces the demands on flood control facilities. All of this can lower GHG emission of facilities and operations. In February 2014 Public Works created an updated LID Standards Manual which provides guidance for the implementation of stormwater quality control measures in new development and re-development projects in unincorporated areas of the County with the intention of improving water quality and mitigating potential water quality impacts from stormwater.</p>	Land use planning (Development planning and Building design)



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March 21, 2018

To: Supervisor Sheila Kuehl, Chair
Supervisor Hilda Solis
Supervisor Mark Ridley-Thomas
Supervisor Janice Hahn
Supervisor Kathryn Barger

From: Sachi A. Hamai 
Chief Executive Officer

FINAL STATUS REPORT – PREPARING FOR THE LIKELY EFFECTS OF CLIMATE CHANGE (ITEM NO. 55-A, AGENDA OF JULY 3, 2012)

This memorandum provides the final status report to the Board of Supervisors on department assessments and responses to studies conducted by the University of California, Los Angeles (UCLA) on the expected impacts of climate change on the Los Angeles region, as directed by Board motion on July 3, 2012. That motion instructed the Chief Executive Officer (CEO) in conjunction with the Departments of Public Health, Public Works, Beaches and Harbors, Fire, and Regional Planning, and in cooperation with applicable utilities, to:

- 1) Review the UCLA "Climate Change in the Los Angeles Region" studies, as well as other relevant information;
- 2) Document the steps being taken by County departments to prepare for the projected effects of climate change on the region;
- 3) Report back to the Board with a cost analysis on the steps being taken; and
- 4) Recommend any additional actions that the County should take to help the region prepare for the likely effects of climate change.

The previous status reports to the Board were coordinated by the CEO, but prior to the creation of the Chief Sustainability Office (CSO). This is the first report back (report) on the issue managed by the Chief Sustainability Officer and will be the final report related to the July 3, 2012 motion, though not the end of the County's efforts to understand and respond to a changing climate. This report presents an analysis by County departments on research findings on the likely impacts of wildfire. The departments of Public Health (Attachment I), Public Works (Attachment II), Beaches and Harbors (Attachment III), Fire (Attachment IV), Regional Planning (Attachment V), and Animal Care and Control (Attachment VI) have submitted individual memos with details on climate impacts and their departments' recommendations.

Previous Reports

Each of the previous status reports covered a different climate impact and provided updates on County actions to prepare for and make the region more resilient to the expected changes. In the January 3, 2013 report, departments described potential impacts on the County due to changing temperatures. On August 29, 2014, departments reported on anticipated changes to snowpack levels, and Beaches and Harbors reported on sea level rise. In the most recent report from June 22, 2015, departments reported on climate impacts related to anticipated changes to the frequency, intensity, and total amount of precipitation.

Wildfire Key Impacts

The UCLA study on impacts of climate change on wildfires found a dramatic increase in the size of the area expected to be burned by wildfire by 2050. In a business-as-usual climate scenario (that is, if current actions are continued but no new actions are taken to reduce greenhouse gas emissions), the overall burn area for Santa Ana related fires would increase 64 percent on average, and the overall area burned by non-Santa Ana related fires would increase 77 percent on average. These increases in wildfire size are driven by factors such as temperature increases and shifts in precipitation. In addition to wildfires burning larger areas, the report also indicates that the annual wildfire season will start earlier and last longer than in the past; fires will be more frequent, and will burn more intensely.

Departmental memos outline what these changes mean to residents, infrastructure, and property. Some stark examples include significant public health hazards such as death and injury; trauma and mental health issues related to property loss and displacement; water and waste infrastructure challenges from increased debris production in burn areas (and subsequent mud and debris flows from precipitation in denuded areas); and impacts to domestic and barnyard animals, such as extended periods of disease vectors.

The memos also outline specific responses already underway to address these hazards and provide additional recommendations to further prepare for ongoing and worsening conditions.

Among the actions described in the attached reports that County departments are taking to address these impacts are:

- The Fire Department has made changes to its operational practices and has established a new training for damage inspection teams for post-event assessment and cleanup based on lessons learned from the Wine Country fires;
- The Department of Regional Planning has strengthened its regulations for development in the wildland-urban interface as part of its update to the General Plan;
- The Department of Animal Care and Control has developed plans for animal evacuation and sheltering during emergency events; and
- The Department of Public Health has created a *Five Point Plan to Reduce the Health Impacts of Climate Change*.

Related Board Action

On December 19, 2017, the Board approved a motion by Supervisor Solis directing the CEO, through the CSO, to report on how climate impacts and extreme weather will be addressed in the Countywide Sustainability Plan. The CEO submitted that related report on January 19, 2018, and responded to Supervisor Solis' motion by:

- Detailing the framework for the Countywide Sustainability Plan;
- Overviewing anticipated approach to addressing climate impacts in the Plan;
- Discussing coordination and potential opportunities for innovative partnerships to address climate impacts;
- Pointing out data sources and other resource tools the CSO anticipates using during the Plan development; and
- Providing specific responses by key departments on these impacts.

As required by the December 19, 2017 motion, that Board report was developed in coordination with the Office of Emergency Management, Public Works, Fire, and Public Health.

Conclusion

While this report concludes a series of reporting over nearly six years related to Item No. 55-A, of the July 3, 2012 agenda, it does not signify the end of the County's commitment to support a climate resilience region. The County, through the Sustainability Council, the Countywide Sustainability Plan, individual departmental actions, and continued collaboration with cutting-edge climate researchers, will continue to prepare the region for the impacts of climate change, especially for the County's most vulnerable populations. As an example, the CSO, Office of Emergency Management, and the Department of Public Health are contributing to the forthcoming California Fourth Climate Change Assessment. The three previous assessments were authored by academic researchers, but the County will be one of the first local governments to contribute to this body of research. That report will be available in the fall of 2018.

SAH:JJ:FAD
GG:KTP:jg

Attachments

c: Executive Office, Board of Supervisors
County Counsel
Animal Care and Control
Beaches and Harbors
Fire
Health Agency
Public Health
Public Works
Regional Planning



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October 4, 2017

TO: Gary Gero, Chief Sustainability Officer
Chief Executive Office, Chief Sustainability Office

FROM: Barbara Ferrer, Ph.D., M.P.H., M.Ed.
Director of Public Health 

SUBJECT: JULY 3, 2012 BOARD MOTION, AGENDA ITEM 55-A, REPORT ON THE STEPS TAKEN TO PREPARE FOR THE POTENTIAL EFFECTS OF CLIMATE CHANGE

On July 3, 2012, the Board approved a motion directing the Chief Executive Officer, in conjunction with several other departments including the Department of Public Health, to review the findings outlined in the University of California, Los Angeles' (UCLA) "Climate Change in the Los Angeles Region" project, report on the steps departments are taking to prepare for the projected effects, and recommend additional actions that the County should take to improve climate resiliency. This report constitutes the final update in response to this motion.

Since UCLA's publication of studies on the effects of climate change on the region (beginning with *Mid-Century Warming in the Los Angeles Region*, released 2012), the projections outlined in these studies have informed the Department of Public Health's (DPH) climate change adaptation and mitigation activities. This document outlines DPH's progress since our last report in regard to climate change mitigation and adaptation.

As reported earlier, DPH's review and analysis of the UCLA climate change studies led to the development of the Department's *Five Point Plan to Reduce the Health Impacts of Climate Change*. Language in this plan has since been adopted by other jurisdictions. The plan outlines five strategic priorities, each supported by specific goals and objectives that drive and guide the Department's climate change work:

1. Inform and engage the general public about the nature of climate change and the health-related co-benefits associated with taking action to reduce carbon pollution
2. Promote local planning, land use, transportation, water, and energy policies that reduce greenhouse gas emissions and support the design of healthy, sustainable communities
3. Provide guidance on climate preparedness to local government and community partners to reduce health risks and create more resilient communities
4. Build the capacity of Departmental staff and programs to monitor health impacts, integrate climate preparedness, and improve climate response
5. Adopt best management practices to reduce carbon emissions associated with Departmental facilities and internal operations

Gary Gero
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Page 2

Comments and Analysis on UCLA Wildfire Projections

The UCLA study on the impacts of climate change on wildfires in the Southern California region found that the area burned by wildfires will increase dramatically by mid-century: Downscaled models predicted that under a 'business as usual' climate scenario, the overall area burned by Santa Ana-related fires would increase 64% on average, and the overall area burned by non-Santa Ana-related fires would increase 77% on average, driven by factors such as warming and shifts in precipitation.

Fires present a significant public health hazard, with impacts including:

- Deaths and injuries.
- Air quality issues caused by smoke and particulates, which can impact residents dozens of miles away from the fire.
- Environmental hazards stemming from disruptions to infrastructure, such as roadways and water systems.
- Trauma and mental health issues related to deaths and injuries, property loss, and displacement.

Update to Previous Report on Actions Taken to Address Climate Change

DPH focuses its climate change efforts in two major areas: (1) mitigating greenhouse gas emissions by promoting the health benefits of active transportation and other aspects of healthy design, primarily through the Healthy Design Workgroup and the PLACE Program (Policies for Livable, Active Communities and Environments); and (2) increasing resiliency to climate change by reducing the urban heat island and addressing environmental justice issues. Both of these areas of work are detailed below.

Climate Change Mitigation: Healthy Design

The implementation of healthy design principles in urban areas facilitates and encourages healthy activities, such as walking, cycling, public transit use, and outdoor physical activity. However, healthy design benefits not just public health and wellbeing, but the environment as well. By encouraging alternative transportation (walking, cycling, and public transit) healthy design reduces vehicle miles traveled in cars, thereby reducing the greenhouse gas emissions that contribute to climate change.

Trees are also an important component of healthy design. Trees have a multitude of benefits: they sequester carbon, reduce the urban heat island effect, improve air quality, capture stormwater, calm traffic, reduce urban noise, reduce violent and property crime, and increase overall mental well-being. A healthy urban forest can reduce the air quality impacts from wildfires by trapping particulates and absorbing certain gaseous pollutants.

DPH has led the Healthy Design workgroup since 2013. In 2015, the HDW received an award from the Los Angeles County Quality and Productivity Commission for the work of its Grants Committee, which to date has been awarded more than \$23 million in grants. The HDW issued guidance documents to assist County staff and partners in increasing access to bicycling, walking, transit, and healthy foods.

The Healthy Design Workgroup Tree Committee, which formed in 2015 and is led by DPH, has worked on developing a set of holistic strategies for preserving, maintaining, and expanding Los Angeles County's urban forest. The Tree Committee received Proposition A and Juvenile Justice Crime Prevention Act funds totaling \$1.16 million to plant more than 2,000 street trees in unincorporated County communities and educate residents about the many benefits of trees. The

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Page 3

Tree Committee also applied for and received CAL FIRE funding to conduct a street tree inventory for unincorporated areas. The Tree Committee continues to pursue other grants and projects.

More detail on the work of the Healthy Design Workgroup can be found in its 2017 Annual Report to the Board of Supervisors.

Climate Resiliency: Urban Heat Island Reduction

Given that climate projections indicate that significant climate impacts will be experienced in the Los Angeles Region, it is crucial that the County take steps to protect the public from these impacts. One important strategy to improve climate resilience is urban heat island reduction. The urban heat island effect causes urban areas to be considerably warmer than surrounding rural areas due to (1) roofs, pavements, and other impervious surfaces that retain and re-emit heat into the environment; (2) lack of vegetation (because trees and other greenery provide a natural cooling effect); and (3) anthropogenic heat, for instance from energy use. Urban heat island reduction cools buildings and neighborhoods, helping to offset the temperature increases expected with climate change, reduce energy use and associated greenhouse gas emissions, and address inequities in disproportionately impacted neighborhoods. By emphasizing long-term solutions that provide important health and economic co-benefits, urban heat island reduction helps to create healthier, more resilient, and more equitable communities.

The Healthy Design Workgroup Climate Committee, which formed in 2014 and is led by DPH, focuses on improving effectiveness and efficiency through cross-departmental collaboration on climate change challenges. The Climate Committee has developed a draft Urban Heat Island Reduction Plan—a suite of strategies to guide County departments in preserving and expanding the urban forest, promoting green space, and increasing the adoption of cool roofs and cool and permeable pavements. DPH is currently conducting stakeholder outreach to inform equity considerations in the Plan.

Equity and environmental justice are important considerations in DPH's climate resiliency work. Climate change disproportionately impacts low-income communities, communities of color, and people with pre-existing conditions, further worsening existing disparities. Hence, DPH's climate work both internally and with external partners interweaves equity considerations throughout. For instance, the Urban Heat Island Reduction Plan prioritizes increasing tree canopy and green space in low-income communities and communities of color, which typically have less tree canopy and access to green space. In promoting cool roofs, the Urban Heat Island Reduction Plan prioritizes options such as rebate programs in order to ensure that disadvantaged communities will not be disproportionately economically burdened by a cool roofs mandate, and are equally able to access its benefits (reduced temperatures, less energy use). By prioritizing urban heat island reduction measures in low-income communities and communities of color, Los Angeles County can also address existing environmental justice issues in these neighborhoods, such as poorer air quality: Reducing air temperatures and increasing tree canopy help reduce air pollution.

Other Collaborations

The activities described above comprise just some of DPH's climate-related work. DPH additionally (a) evaluates proposed climate legislation, for public health implications; (b) gives presentations to the public, policymakers, and academic audiences on the health impacts of climate change; (c) responds to media requests related to the public health impacts of climate change; (d) trains staff on how to address climate impacts; and (e) brings public health expertise to various Countywide and regional workgroups and networks that deal with climate change, some of which are listed below:

Gary Gero
October 4, 2017
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- The County Sustainability Council. DPH sits on the Leadership Committee and its Departmental Sustainability Officer and other staff participate in the Coordinating Committee. DPH provides subject matter expertise on the development of the Los Angeles County Sustainability Plan, particularly with regard to the *Public Health and Well-Being* section of the Plan.
- LA Metro Sustainability Council. DPH sits on the Council, which advises Metro on its sustainability-related projects.
- Cannabis Sustainability Council. DPH sits on this County interdepartmental council to advise the Los Angeles County Office of Cannabis Management on the sustainability-related impacts of cannabis cultivation and sale.
- The Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC). DPH has been a participating member since 2013, and now sits on the Executive Committee.
- The Mediterranean City Climate Change Consortium (MC-4). DPH participates in this network of practitioners, policymakers, business leaders, and academics from cities that have climates like ours. MC-4 focuses on knowledge-sharing, collaboration, and applicable research.

Recommendations

DPH recommends that the County should continue to support and prioritize efforts that improve resilience to and lessen the public health impacts from climate change, with a particular focus in disadvantaged communities, including:

- Support the implementation of urban heat island reduction strategies, particularly in disadvantaged communities.
- Support efforts that mitigate the negative public health consequences of increases in extreme heat events. UCLA's "Climate Change in the Los Angeles Region" project predicts 2-5 times as many days of extreme heat by mid-century. This increase will contribute to more heat-related illness and death, and more emergency calls, emergency room visits, and hospitalizations. Measures to reduce negative public health outcomes could include (a) reviewing the location, accessibility, and effectiveness of existing cooling centers, and designating new cooling centers if needed; (b) promoting non-traditional cool spaces such as pools and parks; (c) educating at-risk populations about their susceptibility to heat, as research shows low awareness; (d) targeting vulnerable populations with health-protective messages before and during extreme heat events, such as through an opt-in alert system; and (e) implementing initiatives to facilitate residents checking on vulnerable neighbors.
- Support investments in Environmental Health activities. DPH's Environmental Health Division leads the department's climate change work, and is also integral in the Public Health response to wildfires: The Environmental Health Strike Team monitors and responds to wildfires by assessing the safety of temporary shelters and fire base camps; taking action to address food safety issues resulting from power outages, water outages, and contamination from toxic fumes and particulates; and conducting assessments of burned properties for possible health hazards.

If you have questions or need additional information, please let me know.

BF:ab



MARK PESTRELLA, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

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ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

October 5, 2017

IN REPLY PLEASE

REFER TO FILE: **SPSO-0**

TO: Gary Gero
Chief Sustainability Officer

FROM: Shari Afshari
Deputy Director

**JULY 3, 2012, BOARD MOTION, AGENDA ITEM 55-A
REPORT ON THE STEPS TAKEN TO PREPARE FOR THE POTENTIAL
EFFECTS OF CLIMATE CHANGE**

In response to your request to support the report on the subject Board Motion, Public Works has reviewed UCLA's recently published climate change report on wildfire and has the following comments on the potential impacts and the proposed actions to address them.

POTENTIAL IMPACTS OF INCREASED WILDFIRE

1. Water Infrastructure - Increased debris (sediment) production from burned areas with more frequent wildfire events requires increased operation and maintenance of debris control facilities.
2. Land Use Planning - Temperature extremes and drought combine to expand the range of wildfires and increase the proximity of developed communities to potential wildfire-prone areas.
3. Transportation Infrastructure - More frequent wildfires increase the potential for damage to transportation infrastructure located in wildfire-prone areas, including bridges, roads, and bikeways.
4. Waste Infrastructure - Increased debris (sediment) production from burned areas creates the need for additional sediment disposal sites.
5. Emergency Management - More frequent wildfires and other climate-related emergencies increase the need for additional resources to provide for emergency response and recovery.

Gary Gero
October 5, 2017
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PREPARING FOR POTENTIAL IMPACTS

A number of actions can be taken to improve the County's climate adaptation efforts to help prepare for the potential impacts of climate change including the following:

1. Analyze operational vulnerabilities to climate change and update County policies and practices to specifically address the potential impacts of climate change.
2. Identify funding sources for continuous climate adaptation efforts.
3. Improve interdepartmental coordination and interagency coordination regarding climate-related emergencies.

Public Works has initiated several such actions to address climate change impacts and continues to improve adaptation strategies to enhance the resiliency of our operations and services.

If you have any questions, please contact me at (626) 458-4008 or safshari@dpw.lacounty.gov, or your staff may contact Youn Sim at (626) 300-4519 or at ysim@dpw.lacounty.gov.

CS:ad

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DEPARTMENT OF BEACHES AND HARBORS
REPORT ON THE ACTIONS TAKEN TO ADDRESS CLIMATE CHANGE

October 5, 2017

The Department of Beaches and Harbors continues to research and prepare for any impacts associated with climate change in coastal regions. Potential impacts of sea level rise include coastal flooding and shoreline retreat, which can result in damage to infrastructure, property, and communities in coastal regions. Planning and preparing for these events is important to the Department as it is responsible for the operation and maintenance of nearly 30 miles of non-contiguous coastline and Marina del Rey. The Department keeps up with the various trends and research studies on climate change by participating in local workshops and symposiums as well as attending the annual American Shore and Beach Preservation Association (ASBPA) and the California Marine Affairs and Navigation Conference (CMANC) conferences, which regularly have leading experts presenting on sea level rise and climate change.

As reported to the Board in May 2015, the Department monitors and reviews national and local reports on climate change and sea level rise. These include the University of California Los Angeles (UCLA) climate change studies, which are produced in partnership with the Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC – includes municipal governments, agencies, and universities) and use global climate models to predict how climate change will affect the Los Angeles region. The Department has previously reported on four studies released by LARC; temperature, snowfall, sea level rise, and precipitation. This report adds a fifth and sixth report; Identification of two distinct fire regimes in Southern California: implications for economic impact and future change, released by scientists from UC Davis, UC Irvine, UCLA, the US Forest Service, and NASA's Jet Propulsion Laboratory; and 21st Century Snowfall and Snowpack Changes in the Southern California Mountains, released by LARC. Both reports were released in September and December 2015, respectively.

Key findings of the studies reviewed by the Department are listed in the table below:

Organization(s)	Study Title and Release Date	Key Findings
UCLA Climate Change Studies: UCLA Institute of the Environment, the City of Los Angeles, and LARC	Temperature Study: "Mid-Century Warming in the Los Angeles Region" (2012) Released 2012 [PREVIOUSLY REPORTED]	1) By mid-century, average annual temperatures will rise by 4-5 degrees Fahrenheit. 2) Coastal locations will have 2-3 times the number of extremely hot days. 3) High elevations and inland areas will have 3-5 times the number of extremely hot days.
	Mid- and End-of-the-Century Snowfall in the Los Angeles Region (Prepared by UCLA Department of Atmospheric and Oceanic Sciences) Released June 2013 [PREVIOUSLY REPORTED]	1) By mid-century, Los Angeles region's mountains may see a reduction in snowfall of up to 42% if greenhouse gas emissions continue to increase. 2) Reduced snowfall could potentially alter important hydrological and ecosystem processes in Los Angeles, affecting water resources, and plant and animal habitat.

Organization(s)	Study Title and Release Date	Key Findings
UCLA Climate Change Studies: UCLA Institute of the Environment, the City of Los Angeles, and LARC	<p>Sea Level Rise Vulnerability Study for the City of Los Angeles</p> <p>(Prepared by University of Southern California (USC) Sea Grant, City of Los Angeles, and ICLEI – Local Governments for Sustainability)</p> <p>Released January 2014</p> <p>[PREVIOUSLY REPORTED]</p>	<ol style="list-style-type: none"> 1) Sea level rise in Los Angeles is expected to increase 0.3 - 2.0 feet (2000 – 2050), and 1.3 - 5.6 feet from (2000 – 2100). 2) Identified the communities, infrastructure, and property that are most vulnerable to the impacts of potential flooding and damage from sea level rise. 3) As sea level rise accelerates, additional steps will need to be taken, to expand and stabilize beaches, including sand and dune replenishment and the construction of groins, jetties, and breakwaters to safeguard beaches. 4) Summarized a preliminary report on coastal vulnerabilities for beaches located within City boundaries including recommendations for monitoring programs.
	<p>21st-Century Precipitation Changes over the Los Angeles Region</p> <p>(Prepared by UCLA Institute of the Environment and Sustainability)</p> <p>Released December 2014</p> <p>[PREVIOUSLY REPORTED]</p>	<ol style="list-style-type: none"> 1) Average annual precipitation in the Los Angeles region is expected to remain nearly the same as it has been in recent decades. 2) Although the total precipitation is not expected to change much, it is known from the Snowfall study that warmer temperatures will cause less of that precipitation to fall as snow and more as rain in local mountains. 3) Southern California may face an increased risk for floods as precipitation events will more often consist of rain instead of snow.
	<p>21st Century Snowfall and Snowpack Changes in the Southern California Mountains</p> <p>(Prepared by UCLA Institute of the Environment and Sustainability)</p> <p>Released December 2015</p> <p>[NEW]</p>	<ol style="list-style-type: none"> 1) By 2050, Los Angeles area mountains will lose a substantial amount of snowfall: <ul style="list-style-type: none"> • The region's mountains may see a reduction in snowfall of up to 42% of their annual averages, if greenhouse gas emissions continue to increase. • If immediate efforts are made to substantively reduce emissions through mitigation, mid-century loss of snow will be limited to 31%. 2) By the end of the century, the contrast between action and inaction is stark: <ul style="list-style-type: none"> • Under the mitigation scenario, the loss of snowfall stabilizes and is not much worse than the 31% seen by mid-century. • However if emissions are not curbed, the mountains will lose 66% of their snowfall by the end of the century, compared with present day.
	<p>Identification of two distinct fire regimes in Southern California: implications for economic impact and future change</p> <p>(Scientists from UC Davis, UC Irvine, and UCLA, the US Forest Service, and NASA's Jet Propulsion Laboratory)</p>	<p>Researchers compared the wildfires projected for the 2041-2060 period with those occurring in a baseline period of 1981-2000:</p> <ol style="list-style-type: none"> 1) The area burned by Santa Ana fires increases by 64 percent, mainly because four of the five global climate model projections showed more intense Santa Ana wind events. 2) The area burned by non-Santa Ana fires increases by 77 percent, mainly because of an increase in temperatures.

Organization(s)	Study Title and Release Date	Key Findings
	Released September 2015 [NEW]	3) The number of structures destroyed by Santa Ana fires increases by 20 percent, and the number of structures destroyed by non-Santa Ana fires increases by 74 percent.
	Sea-level rise for the coasts of California, Oregon, and Washington: Past, Present and Future Released June 2012 [PREVIOUSLY REPORTED]	1) The Intergovernmental Panel on Climate Change (IPCC) projects that sea level will rise on the West Coast by as much as nine inches by 2030, 1.5 feet by 2050, and 4 feet by 2100 (in comparison to 2000 levels). 2) For Southern California, sea level will rise by as much as 1 foot by 2030, 2 feet by 2050, and 5 feet by 2100 (in comparison to 2000 levels). 3) As most coastal damage occurs during storms, sea level rise will magnify these impacts particularly when there is a confluence of large waves, storm surges, and high astronomical tides. 4) Together, storms and sea-level rise will result in coastline retreat, ranging from less than a few inches per year for cliffs to several feet for beaches and dunes.
California Climate Change Center (established by the California Energy Commission's Public Interest Energy Research (PIER) Program)	The Impacts of Sea-Level Rise on the California Coast Released in May 2009 [PREVIOUSLY REPORTED]	1) Study projects sea level along the California coast to rise by as much as 4.5 feet by 2100. 2) A 4.5 feet rise in sea level would put 480,000 people at risk from coastal flooding. The estimated property loss would be about \$100 billion. 3) A 4.5 feet rise in sea level would accelerate coastline erosion that could potentially result in the loss of 41 square miles of the coast by 2100. 4) Coastal armoring is one potential adaptation strategy; however the cost of building the needed 1,100 miles of new or modified coastal protection structures would be about \$14 billion.

The Department will continue to monitor new research and discussions on climate change and sea level rise at various forums and will analyze and evaluate both the risks and the actions we can implement to mitigate and/or prevent climate change impacts. Attending the ASBPA meetings and the CMANC conferences will continue to be of benefit as both organizations are actively involved in planning for climate change and sea level rise along the California coast.

As reported to the Board in September 2014 and May 2015, the Department applied for and was granted a Climate Ready grant by the California State Coastal Conservancy. These funds were used to develop a seasonal sand berm program that is based on science and engineering, and provides the optimum height, width, and location for protection of coastal public facilities in Los Angeles County.

Additionally, the Department retained the services of a coastal engineer to develop the 2016 [Los Angeles County Public Beach Facilities Sea Level Rise Vulnerability Assessment](#). This report provides a review of the current scientific sea level rise projections for Southern California and recommends the best short-term and long-term strategies to mitigate the effects of sea level rise associated with climate change. For the short-

term, less than 1 foot of sea level rise, the report recommends continuing with the seasonal sand berm program. Currently these sand berms are built at Zuma, Venice, Dockweiler State Beach, and Hermosa Beach. The seasonal sand berms provide the best soft protection against coastal storm wave action. On the long-term, 2 feet and above of sea level rise, the report recommends beach nourishment as needed along the County's coastline. Particularly at the northern and central beaches like Zuma, Point Dume, and Will Rogers. Lastly, the report provides recommendations for offshore sand sources that could be used for beach nourishment when the time comes.

The Department also worked closely with the United States Geological Survey (USGS), USC Sea Grant, and AdaptLA exchanging information and data as they developed the Coastal Storm Modeling System (CoSMoS 3.0) for Southern California. The data, model, and results were released early 2016 and were evaluated and used as part of the recommendations of the County's Public Beach Facilities Sea Level Rise Vulnerability Assessment.

Lastly, the Department continues its participation on the County's Climate Change subcommittee that includes Public Works, Regional Planning, Public Health, Fire, and the Chief Executive Office. The Climate Change subcommittee is developing a cool roof ordinance with the Department of Public Works as the lead. It is anticipated that a finalized ordinance to go to the Building Standards Commission and the California Energy Commission by late November/early December 2017 with Board adoption expected in April 2018.



COUNTY OF LOS ANGELES

FIRE DEPARTMENT

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LOS ANGELES, CALIFORNIA 90063-3294
(323) 881-2401

DARYL L. OSBY
FIRE CHIEF
FORESTER & FIRE WARDEN

November 3, 2017

TO: GARY GERO, CHIEF SUSTAINABILITY OFFICER
CHIEF EXECUTIVE OFFICE

FROM: JOHN R. TODD, DEPUTY CHIEF 

JULY 3, 2012 BOARD MOTION, CLIMATE CHANGE IN THE LOS ANGELES REGION

On July 3, 2012, the Board approved a motion requesting the Fire Department's (Department) progress on items outlined in the University of California, Los Angeles "Climate Change in the Los Angeles Region" project. In addition to reviewing the reports developed as part of the project, we have reviewed and analyzed other key reports such as the "Sea Level Rise Vulnerability Study for the City of Los Angeles" prepared by the University of Southern California Sea Grant Program and articles like "Identification of Two Distinct Fire Regimes in Southern California: Implications for Economic Impact and Future Change."

Our firefighters are well aware of these climatic changes, since several studies have previously highlighted the changes to our fire season in California. The annual fire season now starts earlier and lasts longer than it did in past decades. In addition, wildfires burn with greater intensity, spread faster, and affect more residents than ever. This situation has only been exacerbated by the recent five-year California drought that has created an abundance of dead material that will fuel wildfires for several more years.

As a result of these changes in the environment, the Department has initiated changes to numerous programs that affect the entire spectrum of Department operations. Programs that have been modified as a result of climate change include the following:

- Operations – training to improve recognition of symptoms of heat-related injuries, greater focus on hydration and ensuring proper nutrition, improved fitness and physical training to prepare for the physical conditions and to avoid heat-related injury.
- Personnel – effect of increased temperatures on dehydration, rehabilitation, improved use of active cooling measures to counteract the effects of heat exposure.

SERVING THE UNINCORPORATED AREAS OF LOS ANGELES COUNTY AND THE CITIES OF:

AGOURA HILLS	BRADBURY	CUDAHY	HAWTHORNE	LA HABRA	LYNWOOD	PICO RIVERA	SIGNAL HILL
ARTESIA	CALABASAS	DIAMOND BAR	HIDDEN HILLS	LA MIRADA	MALIBU	POMONA	SOJTH EL MONTE
AZUSA	CARSON	DUARTE	HUNTINGTON PARK	LA PUENTE	MAYWOOD	RANCHO PALOS VERDES	SOJTH GATE
BALDWIN PARK	CERRITOS	EL MONTE	INDUSTRY	LAKEWOOD	NORWALK	ROLLING HILLS	TEMPLE CITY
BELL	CLAREMONT	GARDENA	INGLEWOOD	LANCASTER	PALMDALE	ROLLING HILLS ESTATES	WALNUT
BELL GARDENS	COMMERCE	GLENDDORA	IRWINDALE	LAWNDALE	PALOS VERDES ESTATES	ROSEMEAD	WEST HOLLYWOOD
BELLFLOWER	COVINA	HAWAIIAN GARDENS	LA CANADA-FLINTRIDGE	LOMITA	PARAMOUNT	SAN DIMAS	WESTLAKE VILLAGE
						SANTA CLARITA	WHITTIER

Gary Gero, Chief Sustainability Officer
November 3, 2017
Page 2

- Wildland Programs – instituting strategic changes to several defensible space programs including vegetation management, brush clearance, and fuel modification.
- Post-Disaster Damage Inspection Teams – the Wine Country fires that devastated northern California in October destroyed over 10,000 structures. When structures are destroyed, significant environmental hazards are often found in the remaining debris. To respond to these hazards, several members of the Department's Health Hazardous Materials Division have been trained as Damage Inspectors (DINS). Whenever a disaster affects homes or property in the County, a DINS Team is dispatched to document losses and mitigate hazards so site clean-up can be completed.
- Tsunami Response Plan – updated the Department's Tsunami Response Plan based on expected sea-level rise, increased tides, and greater storm surge.
- Facilities – new fire stations over 10,000 square feet are required to meet U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Silver Certification. Also, examining opportunities to retro-fit existing structures with features such as cool roofs, cool pavements, utilities shading, and improved tree and vegetation placement that will shade facilities during the hottest times of the day.
- Vehicles – increased use of hybrid and electric vehicles. The first Department electric-vehicle charging stations have been installed at Fire Department Headquarters. Additional locations for electric-vehicle charging stations at Department facilities are being considered.
- Landscaping of Department Facilities – The Department has contracted with Internal Services Department to replace turf and redesign landscaping at several Department facilities. At Fire Station 118 in the City of Industry, this resulted in the removal of nearly an acre of turf and a 90 percent reduction in necessary watering. Existing turf and landscaping was replaced with drought-tolerant and native vegetation. The Department has also updated guidelines for landscaping new facilities and for replacing landscaping at existing facilities.

The Fire Department will continue to collaborate with other County Departments to develop and implement best management practices as they relate to the sustainability of the environment.

If you have any questions or concerns, please contact me at (323) 881-2461.

JRT:jt



Los Angeles County
Department of Regional Planning

Planning for the Challenges Ahead



Dennis Slavin
Acting Director

October 5, 2017

TO: Gary Gero, Chief Sustainability Officer
Chief Executive Office

FROM: Patricia Hachiya, AICP, Supervising Regional Planner
Environmental Planning and Sustainability Section
Advance Planning Division

REPORT ON THE STEPS TAKEN TO PREPARE FOR THE POTENTIAL EFFECTS OF CLIMATE CHANGE (JULY 3, 2012, ITEM 55-A)

On July 3, 2012, the Los Angeles County (County) Board of Supervisors (Board) instructed the Department of Regional Planning (Department), along with other County departments to: (1) Review the information provided by the UCLA Climate Change in the Los Angeles Region Project, as well as other relevant information; (2) Document the steps they are taking to prepare for the projected effects of climate change; (3) Recommend any additional actions that the County should take to help the region prepare for the likely effects of climate change; and, (4) Provide this information in a report to the Board.

WILDFIRE STUDY REVIEW

The Department has reviewed the recent findings of scientists on wildfire¹ based on the study. The study discussed how meteorology and fuel structure are universally recognized controllers of wildfire, but their relative importance, and hence the efficacy of abatement and suppression efforts, remains controversial. The Project classified wildfires in Southern California as being Santa Ana winds (SA fires) which happen October through April, or non-Santa Ana winds (non-SA fires) which take place during warm and dry periods in June through September.

Both types of fires were shown to have contributed almost equal burn areas, although the SA fires were responsible for 80% of cumulative economic losses, as they often encroached into densely populated coastal areas. The study also discusses other characteristics of SA fires, such as the fact that they spread three times faster, occur closer to urban areas, and burn into areas of greater housing value. Non-SA fires were shown to be more sensitive to older vegetation, occurred in higher elevations, lasted for extended periods, and typically occurred in sparsely populated inland areas.

¹ Yufang Jin et al 2015 "Identification of Two Distinct Fire Regimes in Southern California: Implications for Economic Impact and Future Change" Environmental Research Letters **10** 094005

Mr. Gary Gero
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The study identified various important characteristics of both types of fires, including fire size, meteorology variables, topographic features of the terrain burned, human and vegetation variables, the cost of fire suppression and fire impact. Both types of fire are forecasted to increase (by 77% for non-SA fires and 64% for SA fires) due to climate change and unique factors to each type, although the study indicates that the greatest changes in the fire regime of Southern California will be from non-SA fires. The study mapped the pattern of structural loss from both SA and non-SA fires, from 1990-2009, which showed areas of unincorporated County to have significant losses from both types of fires.

The study estimated future changes in the two fire regimes with the assumption that the wildland-urban interface (WUI) remained unchanged within Southern California. The WUI is the area where development borders or intermingles with forestland and wildland areas.

As the study concludes, predicting future housing density and its spatial pattern is a critical next step for understanding economic losses to SA fires, although, it also indicates that climate change will affect non-SA fires the most. The increased risk of either fire regime onto development continues to increase by the effects of climate change. The economic impacts continue to be felt at the WUI for both types of fire. To conclude whether fire abatement or suppression strategies are most economical for our region will require additional research as both fire regimes are very different in behavior and the areas they impact are very distinct in various other factors.

WILDFIRE RELATED REGULATIONS AND POLICIES

The Department continues to address fire impacts through the management of the WUI. Proposed development within the unincorporated County is required to adhere to regulations and policies regarding development within Very High Fire Severity Zones (VHFSZs), which are areas mapped by the California Department of Forestry and Fire Protection (CAL FIRE). VHFSZs are areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors.

Fire related regulations are reviewed during the entitlement process of new development. Projects within VHFSZs are reviewed by the Fire Department and the Department of Public Works. Some of these regulations include:

- Access restrictions which require new development to have a paved access and limit the number of units which could be developed through one-means of access;
- Maximum distance from public streets to allow for fire suppression;
- Widths and distances of public and private streets which allow for fire equipment to safely access and maneuver an area;
- Structure setbacks which reduce the risk of fire movement; and
- Fire hydrant requirements.

Mr. Gary Gero
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The Department also implements goals and policies from the 2035 General Plan (General Plan) regarding development within VHFHSZs. General Plan goals and policies address the need for a development pattern which considers the surrounding natural environment, which acts as a buffer, and the ability for fire suppression strategies to be effective. Lastly, the General Plan goals and policies also include policies to help address effects of climate change. Goals and policies include the following:

- Discourage development in areas with high environmental resources and/or severe safety hazards;
- Ensure that subdivisions in VHFHSZs site have open space to minimize fire risks;
- Consider to the greatest extent feasible, the design of a project located within a Hillside Management Area, maintenance of large contiguous open areas that limit exposure to landslide, liquefaction, and fire hazards;
- Effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to fire hazards, by discouraging development of high density and intensity in VHFHSZs;
- Reduce the risk of wildland fire hazards through the use of regulations and performance standards, such as fire resistant building materials, vegetation management, fuel modification and other fire hazard reduction programs;
- Ensure adequate infrastructure for all projects located in VHFHSZs;
- Site and design developments located within VHFHSZs to reduce the wildfire risk;
- Support the retrofitting of existing structures in VHFHSZs to help reduce the risk of structural and human loss due to wildfire;
- Support efforts to incorporate systematic fire protection improvements for open space, including facilitation of safe fire suppression tactics, standards for adequate access for firefighting, fire mitigation planning with landowners and other stakeholders, and water sources for fire suppression;
- Implement plans and programs to address the impacts of climate change, including the implementation and maintenance of the County's Community Climate Action Plan and efforts to reduce energy and water consumption;
- Develop, implement, and maintain Countywide climate change adaptation strategies to ensure that the community and public services are resilient to climate change impacts; and
- Consider climate change implications in fire hazard reduction planning for VHFHSZs.

CLIMATE CHANGE RELATED EFFORTS

In collaboration with various County departments and community partners, the Department is working on several planning initiatives to help address local climate change effects. These efforts include, but are not limited to, the following:

- **Community Climate Action Plan**

Mr. Gary Gero
October 5, 2017
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The Community Climate Action Plan (CCAP) is a component of the General Plan 2035 which identifies greenhouse gas (GHG) emissions related to activities in the unincorporated areas, establishes a reduction target consistent with Assembly Bill 32, and provides a roadmap for successfully implementing actions selected by the County to reduce GHG emissions. The CCAP is available on the Department website at the following link: <http://planning.lacounty.gov/ccap/background> .

- **Community Climate Action Plan Implementation Ordinances**

To implement the CCAP, the Department has proposed amendments to the existing Title 22 Los Angeles County Code (Zoning Code). The proposed ordinance amendments help to create compatibility between the Zoning Code and the use of cool roofs and cool pavement, electric vehicle infrastructure, vehicle idle reduction incentives, and secondary uses under high-voltage power lines within the unincorporated County.

- **Green Zones Program**

The Green Zones Program seeks to enhance public health and resiliency in disadvantaged unincorporated communities in the County that bear a disproportionate share of pollution impacts. The Green Zones Program is intended to prevent and mitigate toxic pollutant emissions from industrial uses located near sensitive uses through land use regulation and by providing necessary support to encourage business compliance. The program will consist of a toxic hotspots map, recommendations for new land use regulations and support programs for businesses, further implementation measures, and an ongoing environmental justice community engagement campaign.

- **Tree Planting Ordinance**

The Tree Planting Ordinance amended the Zoning Code to establish new tree planting requirements that will reduce air pollution, reduce urban run-off, and help to mitigate the urban heat island effect. This ordinance was adopted on March 29, 2016.

- **Other Sustainability Initiatives**

Other efforts underway in the Department address climate change through the promotion of active transportation strategies, natural resource management and promotion of sustainable development. These efforts include: the West Carson Transit Oriented District Specific Plan; the Willowbrook Transit Oriented District Specific Plan; and the West Athens-Westmont Transit Oriented Specific Plan; the Small Lot Subdivision Ordinance; the Significant Ecological Areas Ordinance update, and the Accessory Dwelling Unit Ordinance.

CONCLUSION

The study on wildfire discusses two types of fires which actively burn within areas of the unincorporated Los Angeles County. The study highlights how abatement and suppression efforts remain controversial as fire types are very distinct in behavior. Strategies used to improve the wildland-urban interface should be dependent on the specific area, fire behavior of the fire type it may be prone to, and general abatement strategies such as access and fuel modification.

Mr. Gary Gero
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The department continues to actively participate in the review process of new development proposed within these areas vulnerable to both types of fires. Along with County Code regulations, the General Plan goals and policies, continue to guide major planning initiatives which can help address changes felt from an increase in wildfires.

The study supports the Department's pending initiatives, and should be used to inform the County's critical next steps in addressing climate change. The Department looks forward to reviewing future climate studies as they are released.

Should you have any questions or concerns about any of these efforts, please contact Patricia Hachiya, Environmental Planning and Sustainability Section, at (213) 974-6461 or at phachiya@planning.lacounty.gov.

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c: Slavin
Child

AP_100517_BMR_CLIMATE_CHANGE



Marcia Mayeda
Director

County of Los Angeles
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Administrative Office
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October 19, 2017

Animal Care Center
(ACC) Locations

Downey Shelter
11258 S. Garfield Ave.
Downey, CA 90242
(562) 940-6898

Carson Shelter
216 W. Victoria St.
Gardena, CA 90248
(310) 523-9566

Baldwin Park Shelter
4275 N. Elton St.
Baldwin Park, CA 91706
(626) 962-3577

Lancaster Shelter
5210 W. Avenue I
Lancaster, CA 93536
(661) 940-4191

Castaic Shelter
31044 N. Charlie Cyn.
Road
Castaic, CA 91384
(661) 257-3191

Agoura Shelter
29525 Agoura Rd.
Agoura, CA 91301
(818) 991-0071

Palmdale ACC
38550 Sierra Highway
Palmdale, CA 93550
(661) 575-2888

TO: Gary Gero
Chief Sustainability Officer
Chief Executive Office

FROM: Marcia Mayeda
Director

RESPONSE TO CLIMATE CHANGE IN THE LOS ANGELES REGION

The Department of Animal Care and Control (DACC) is the County agency that acts as the lead for animal evacuation and sheltering during natural and manmade disasters under the unified command structure with Fire and Sheriff. In light of the increased risk and occurrences of major natural disasters such as wildfire and heavy rains due to climate change, DACC has taken several steps to improve our response capabilities. In addition to participating in OEM planning meetings, trainings, and exercises, DACC has focused on the following areas:

Vehicles. DACC maintains a fleet that includes horse trailers, Anisafe trailers, Animal Control vehicles, and four wheel drive trucks. "Anisafe" trailers have built in kennels and cages and can be used to create a mobile shelter for pets. Often these will be co-located with human sheltering in an effort to keep people and pets close together. (DACC works closely with the American Red Cross toward this end). DACC also has a mobile command unit trailer ready for action.

Equine Response. DACC established an active volunteer Equine Response Team (ERT) in 1998 and provides continued training and support to these volunteers, including training in specific horse and large animal handling techniques.

Department Leadership. A Lieutenant position (Animal Control Officer IV) has been assigned as the dedicated Emergency Operations Coordinator for DACC. Executives and staff are trained in NIMS, SEMS and ICS. A Department Public information Officer (PIO) also serves as part of the

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emergency response team, in line with the County's practice of adherence to the philosophy of "one voice" messaging.

Community Outreach. DACC educates pet owners about emergency preparation for pets at various community events including disaster preparedness fairs. DACC has also helped communities determine and construct safe areas for localized animal sheltering, reducing the need to evacuate animals.

Partnerships. DACC is prepared for a well-coordinated response to events. DACC has entered into negotiations and agreements with outside organizations to increase our capacity for sheltering large animals such as horses and livestock. We have Mutual Aid Agreements with 13 animal welfare agencies at both local and national levels; these include SPCALA, the ASPCA, Ventura County Animal Services, and the Pasadena Humane Society.

Identifying Gaps. When DACC looks to the future of increased emergency evacuation and sheltering needs, there is the likelihood that the resources on hand will need to be increased. The largest gap is in human resources. While all staff members are prepared to support emergency operations, with approximately 2,000 animals being regularly sheltered, fed, and cared for every day in County operated facilities, daily operations cannot be ceased during times of emergency. A good example of the growing need is our response to the "Sand Fire" of July 2016, which saw the largest animal evacuation and sheltering operation in Department history. Over 800 animals were housed throughout five sheltering sites, and three mutual aid partners were activated. These were not just dogs and cats, but horses, pigs, bulls, geese, and various other domestic and barnyard animals as well.

Daily and Long Term Impacts. DACC has considered other long term impacts of climate change beyond those that bring sudden calamity. Climate change can have a significant impact on the daily lives of domestic and wild animals that animal control agencies and resident pet owners alike should anticipate. Long term impacts of climate change in the Los Angeles Region are likely to include:

- Increased instances of wildlife entering populated areas in search of food and water.
- Extended periods when vectors such as fleas and parasites are actively impacting wildlife and domestic pets. In addition to causing illness to pets, this can increase human exposure to diseases transmitted by these vectors.

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- Increased risk of life-threatening injuries and conditions, including acute burns to skin and paw pads, heat exhaustion, or dehydration.

DACC is prepared to respond to these changes by educating pet owners regarding preventive measures, such as limiting easy access for wildlife to food, water and shelter on their properties; providing appropriate shelter for domestic animals; and using flea and parasite prevention products on their pets. DACC veterinarians are trained to respond to and treat acute burns and dehydration in animals that are brought to our animal care centers. Animal Control Officers take cases of reported animal neglect or suffering seriously and actively educate pet owners on keeping their pets safe and healthy. DACC also posts information about living with wildlife and protecting pets in extreme weather on its website.

In closing, DACC fully supports the Board of Supervisors' motion to prepare for Climate Change in the Los Angeles Region and stands at the ready to collaborate with the five key departments (Public Health, Public Works, Beaches and Harbors, Fire, and Regional Planning) identified.

If you have any questions, please contact me or Ann Marie Johansen, Administrative Deputy, at ajohansen@animalcare.lacounty.gov or (562) 256-2400.

MM:BW:AJ:mr
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