

Los Angeles



Department of Water & Power

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General Manager

January 31, 2014

The Honorable City Council
c/o Office of the City Clerk
Room 395, City Hall
Mail Stop 160

Attention: Councilmember Felipe Fuentes
Chair, Energy and Environment Committee

Honorable Members:

Subject: Council File No. 14-0078 – Water Conservation Programs/Efforts to Increase
Local Water Resources/Department of Water and Power

In response to the Los Angeles City (City) Council Motion 14-0078 (Council File enclosed)
adopted January 21, 2014, requesting the Los Angeles Department of Water and Power
(LADWP) and Bureau of Sanitation (BOS) to report on status of the following:

1. Response to Governor's Dry-Year Declaration
2. Water Conservation Programs
3. Efforts to Increase Local Water Resources

1. Responses to Governor's Dry-Year Declaration

Every five-years as part of its Urban Water Management Plan (UWMP) process, LADWP develops and submits to the State of California the City's water shortage contingency plan. The Los Angeles City Municipal Code Chapter XII, Article I, Emergency Water Conservation Plan Ordinance is the City's water shortage contingency plan. As set forth in this Ordinance, the City has conservation phases and actions that can be implemented in response to dry-year conditions causing water supply shortages. Below is a summary of the conservation phase and associated actions that the City is currently taking in response to the Governor's dry-year declaration:

Los Angeles Aqueduct Centennial Celebrating 100 Years of Water 1913-2013

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Telephone: (213) 367-4211 www.LADWP.com

The City is currently in Phase II of its Water Conservation Ordinance (Ordinance). Phase II incorporates prohibited uses of water and restrictions on outdoor watering. Prohibited uses of water are intended to eliminate waste, increase awareness of the need to conserve water, and are in effect at all times. Prohibited uses include:

- Water leaks unattended.
- Outdoor irrigation between the hours of 9:00 a.m. to 4:00 p.m.
- Outdoor irrigation that results in excess water flow leaving the property.
- Outdoor irrigation during rain events.
- Car washing with a hose, unless an automatic shut-off device is attached.
- Water served to customers in eating establishments, unless requested.
- Outdoor irrigation with non-conserving nozzle sprinkler systems for more than one 8 minute cycle per watering day.
- Outdoor irrigation with conserving nozzle sprinkler systems for more than two 15-minute cycles per watering day.
- Large landscape irrigation systems without automatic shutoff rain sensors.
- Washing paved surfaces (sidewalks, walkways, driveways, or parking areas) unless using an LADWP-approved water conserving spray cleaning device.
- Water for decorative fountains, ponds, or lakes unless the water is part of a recirculating system.
- Installation of single-pass cooling systems in buildings requesting new water service.
- Installation of non-recirculating systems in new commercial laundry facilities.
- Installation of non-recirculating systems in new conveyor car washes.
- Daily towel and linen service, unless requested by hotel and motel guests.

In addition to the prohibitions above, Phase II bans landscape irrigation on days other than Monday, Wednesday, or Friday for odd-numbered street addresses and Tuesday, Thursday, or Sunday for even-numbers street addresses.

With Phase II in place, the City is already ahead of where most other cities in the southland are in responding to dry-year conditions. LADWP customers have maintained reductions in their water use by over 17-percent since the prior dry period of 2007.

To ensure customers are aware of and follow the Ordinance, LADWP is ramping up its active enforcement of the City's Water Conservation Ordinance Phase II restrictions with a primary focus on educating customers on prohibited uses and outdoor watering restrictions. However, citations will be given to customers that continue to waste water after LADWP has reached out to them. Under enforcement, failure to comply would be

subject to penalties, which can range from a written warning for a first violation to monetary fines and water service shutoff for continued non-compliance. At this time, LADWP does not anticipate the need to ramp up the emergency conservation ordinance to Phase III.

Additional Water Conservation Actions - Beyond implementing and enforcing the City Water Conservation Ordinance, LADWP is taking the following additional actions to respond to the dry-year conditions and further reduce water demands.

- **Media Campaign** – In Fall 2013, LADWP launched an extensive Media Campaign that reminded customers about the ongoing three-day per week outdoor landscape irrigation restrictions and promoted LADWP’s new incentive for the California Friendly Landscape Program, our “Cash-in –Your-Lawn” program. LADWP increased the incentive to \$2.00 per square feet (sq ft) for grass removed and replaced with California Friendly low water using landscape. Since this media campaign started, we have seen a ten-fold increase in customer applications. We are continuing our media campaign investment, and our spring campaign will be launched in March. LADWP will continue to use a variety of media including TV ads, bus signage, movie theater ads, traditional radio spots, print ads, social media such as Facebook/Twitter along with on-camera interviews and other free media. In addition to these current media outlets, LADWP is now looking into using billboard advertisements. The messaging will focus on and inform customers about the current and projected dry year conditions, and the City’s prohibited uses and outdoor landscape watering restrictions. We will also encourage customers to voluntarily further reduce outdoor water use and modify their water use behavior. On a statewide level, LADWP is working with Department of Water Resources (DWR) and other organizations to develop a simple graphic to show current water supply conditions for statewide messaging.
- **New Contracts** – LADWP is in the process of finalizing two new contracts to assist with the water conservation programs. The first contract is for a pilot study of customized customer water use reports along with an associated web portal. These will graphically show customers how much water they use in comparison to neighboring water efficient customers, and provide customized tips on how to reduce use. The second contract will assist in development of a new interactive Web site which will assist customers in designing their California Friendly landscapes.

2. Water Conservation Programs

Partnerships with Other Agencies - LADWP assists other City Departments and other public agencies in leveraging incentive funds to retrofit their facilities with water efficient hardware. Significant accomplishments include the following highlights:

- In an effort to reduce water waste and identify areas of potential water conservation, LADWP provided on-site water audit training for City of Los Angeles Department of General Services Plumbers, City of Los Angeles Department of Recreation and Parks (RAP) landscapers and Port of Los Angeles (POLA) staff, and conducted nearly 500 facility audits.
- A Memorandum of Understanding (MOU) was signed between LADWP and GSD to install 875 water-efficient urinals and 325 high efficiency toilets in City facilities.
- Ten high-use City facilities have been retrofitted with water efficient toilets, urinals, and faucets saving approximately 23 acre-feet per year (AFY). Locations include City Hall, City Hall East, Pershing Square, and LADWP headquarters.
- Utilizing a \$3 million per year grant from LADWP, RAP installed 155 smart controllers at 67 parks, resulting in a savings of 12 percent of normal water usage. Additionally, this MOU has funded water use efficiency improvements at 18 park facilities saving over 400 AFY.

Extending Outreach Efforts - Over the last several years, LADWP has expanded conservation outreach and education. Some activities to promote conservation include: increased communication with ratepayers through Twitter, Facebook, newspapers, radio, and television, among other types of media; outreach to Homeowner Associations and Neighborhood Councils; distribution of hotel towel door hangers and restaurant table tent cards; and ramping up marketing of expanded water conservation incentive and rebate programs.

Encouraging Regional Conservation Measures - LADWP has worked with the Metropolitan Water District of Southern California (MWD) to expand their conservation incentives program and to encourage all water agencies in the region to promote water conservation and adopt water conservation ordinances which include prohibited uses and enforcement. One recent accomplishment, MWD now provides a \$75 incentive for residential customers to install a rain barrel on their property.

Conservation Rebates and Incentives - LADWP is continuing to expand rebates and incentives for homeowners and business owners to encourage them to purchase water-saving technology. Rebate and incentive programs include the following:

Commercial Rebate Program, Residential Rebate Program, and Technical Assistance Program. In addition, as part of the City's ongoing effort to encourage customers to adopt active water conservation measures (i.e., measures that can help customers conserve water on a daily basis without thinking about it) in their homes and businesses, LADWP continues to distribute water-saving bathroom and kitchen faucet aerators and shower heads free-of-charge. In an effort to reduce outdoor water use, LADWP launched the California Friendly Landscape Incentive Program. This Program currently pays customers up to \$2.00 per sq ft of turf removed and replaced with low water using plants, mulch, and permeable hardscapes or artificial turf.

Compliance with the City's Green Building Ordinance - LADWP works with the City's Green Building Team to pursue desired changes in City codes and standards to promote water efficiency in new construction projects and major building renovations. One of the significant accomplishments was the approval of the Water Efficiency Requirements Ordinance by the City Council, which modifies the City Municipal Code to establish new requirements for water conservation in construction of new buildings, and the installation of new plumbing fixtures in existing buildings to minimize the effects of any water shortages on the customers of the City.

Compliance with Low Impact Development (LID) Ordinances - The City also adopted the LID Ordinance, which is designed to help reduce off-site runoff, improve water quality, replenish groundwater supply, reduce heat island effects, stabilize natural streams, preserve natural resources, enhance habitats, and minimize downstream impacts while maintaining watershed characteristics and providing aesthetic features to the communities. The LID Ordinance amends and expands on the existing Standard Urban Stormwater Mitigation Plan (SUSMP) by requiring capture of the first ¼" of a storm event for on-site beneficial reuse.

Compliance with Water Supply Assessment (WSA) Code Requirement - LADWP also prepares a WSA for all major development and redevelopment projects in the City as required by the California Water Code. The California Water Code requires LADWP determine in a WSA if water demands associated with major projects are included in LADWP's most recently adopted UWMP, making a determination that there is an adequate 20-year water supply. As part of the WSA water demand analysis, LADWP verifies project compliance with all City ordinance requirements. In addition, LADWP works with each developer to encourage their commitment to implementation of additional voluntary conservation measures that go beyond current City requirements in order to maximize water conservation savings.

3. Efforts to Increase Local Water Resources

As part of the 2010 UWMP, LADWP sets ambitious goals to develop local water resources through Water Conservation, Water Recycling, and Stormwater Capture (discussed below). These goals for local water resource development will reduce LADWP's dependence on purchased supplemental water from MWD by 50 percent. The 2010 UWMP goals for these local water supplies were projected through year 2035. The 2010 UWMP also discusses the importance of remediating groundwater contamination in the San Fernando Basin (SFB), which is essential to providing needed storage for both stormwater and recycled water projects.

Water Conservation - Conservation has had a tremendous impact in reducing Los Angeles' water use, and is a cornerstone of the City's water resource management philosophy. Cumulative annual hardware savings since the inception of LADWP's conservation programs total more than 108,000 AFY. The 2010 UWMP promotes an aggressive approach to water conservation to ensure a sustainable supply for the future. It challenges City residents to change their behavior and attitudes relative to water consumption. The 2010 UWMP describes an approach to meeting California's SBx7-7 2020 mandate and includes a goal of reducing overall potable water demand by an additional 64,368 AFY by year 2035. In order to reach these ambitious water conservation goals, LADWP has focused its efforts in several key areas: education/outreach, local regulations, and customer rebates/incentives for water efficient devices.

The following highlights illustrate the broad scope of historical accomplishments from LADWP's water conservation programs:

- Through the Ultra-Low-Flush (ULF) Toilet Replacement program and High Efficiency Toilet (HET) Rebate program, over 1,400,000 ULF and HET toilets in the City have been installed, resulting in an estimated water savings of over 48,000 AFY (15.8 billion gallons/year).
- High Efficiency Washer Rebate Program has resulted in the purchase and installation of over 102,000 high efficiency machines that save water and energy.
- Over 1.8 million showerheads, 400,000 bathroom faucet and kitchen faucet aerators, have been distributed.
- LADWP's 100-percent volumetric tiered rate structure has been providing financial incentives to all customers for efficient water use since 1993.

- A water meter replacement program has been responsible for the replacement of over 202,800 meters out of 660,400 total. This program provides customers with greater accuracy in metering water use, and a higher degree of accountability for water that is delivered by the City's distribution system.
- LADWP has invested in the RAP efficiency program, which also includes some financing provided by a grant from the Department of Water Resources. Additional Department of Water Resources grants have been awarded to LADWP for providing weather-based irrigation landscape controllers for our commercial and industrial customers.
- Technical Assistance Programs (TAP) for business and industry have been created to provide incentives for retrofitting water-intensive industrial equipment with high efficiency devices. A large effort is currently being expended using TAP to increase water-efficiency of commercial cooling towers, and expand the program for small business participation.
- The California Friendly Landscape Incentive Program has been expanded to provide \$2.00 per sq ft for removal of turf and replacement with California Friendly low water using plants, mulch, and permeable hardscapes or artificial grass.

Water Recycling - The LADWP 2010 UWMP identifies the goal of reusing 59,000 AFY of recycled water to off-set purchased imported water. This goal will increase the use of recycled water to offset potable demands in the City eight-fold. In order to achieve this goal, the City is taking the following steps:

- Recycled Water Master Plan (RWMP) - In 2012, LADWP completed a three-year RWMP. RWMP documents will guide near-term recycled water planning through 2035, as well as long-term recycled water planning for up to 50 years beyond the 2035 horizon. RWMP documents include an evaluation of recycling alternatives that integrate two strategies to increase recycling: groundwater replenishment and non-potable reuse. Non-potable projects will increase recycled water deliveries for irrigation and industrial customers throughout the City. The groundwater replenishment project will recharge the SFB with advance treated purified recycled water.
- Recycled Water Outreach - The City developed the RWMP documents with input from numerous stakeholders through ongoing outreach activities beginning in 2009, including the Recycled Water Advisory Group (RWAG), Recycled Water Forums for the general public, elected official briefings, outreach to Kindergarten-12 students, and presentations to Neighborhood Councils and community groups. RWAG is

made up of approximately 60 stakeholders, representing neighborhood councils, environmental groups, business organizations, civic groups, and other interests. They provide the City with input and ideas related to water recycling. RWAG has participated in a series of workshops, facility tours, and update sessions, and continues to provide insightful feedback to the City as projects are implemented.

- **Advance Treatment Pilot Studies** - A critically important part of the groundwater replenishment planning process was to operate a pilot project consisting of different purification technologies using the actual treated wastewater from the City's Donald C. Tillman Water Reclamation Plant (Tillman Plant). Purpose of the pilot project was to test alternative source waters available at the Tillman Plant and evaluate effectiveness of advanced water purification technologies on those specific waters. Testing results demonstrated that the proposed advanced water purification processes provide exceptional water quality that is safe for groundwater replenishment.
- **Groundwater Replenishment Environmental Documentation** - Environmental documentation for the Groundwater Replenishment Project was initiated in 2012.
- **Harbor Refineries Pipeline Project** - Of the project's 40,400 feet of recycled water piping, approximately 85 percent has already been installed in the Harbor Area that will convey recycled water to large industrial and irrigation customers. This project is anticipated to be completed in June 2014.

Stormwater Capture - The City's goal is to increase groundwater recharge by expanding and improving stormwater spreading basins, retrofitting large stormwater capture/flood control dams and completing other large-scale projects through cooperative partnerships with the Los Angeles County Flood Control District (LACFCD) and other agencies. LADWP is moving forward with several stormwater capture projects with the goal of increasing long-term groundwater recharge by a minimum of 25,000 AFY.

Following are a few large-scale centralized stormwater projects that are expected to be completed or in construction within the next few years:

- **Tujunga Spreading Grounds Enhancement Project** – Proposes to deepen the spreading basins, increase their storage capacity, replace existing diversion structure with two diversion structures, and add remote automation of the operating structures. This project will increase storage capacity to 790 acre-feet (AF) from its current level of 100 acre-feet and increase the intake capacity from 250 cubic feet

per second (CFS) to 450 CFS. The recharge volume will double from 8,000 to an estimated 16,000 AFY.

- Pacoima Spreading Grounds Enhancement Project –Proposes to deepen the spreading basins, increase their storage capacity, replace existing diversion structure, and add remote automation of the operating structures. Storage capacity will be increased from 530 to 1,197 AF by deepening and combining basins. Average stormwater capture and recharge increase of 10,500 AFY in a wet year.
- Lopez Spreading Grounds Enhancement Project – Proposes to expand and deepen the five shallow spreading basins that would increase storage capacity from 24 AF to a total of 73 AF. The flashboard system at the diversion structure that diverts water from the dam into the intake canal will be replaced with a gate system. Sediment in the intake canal will be removed to restore its original depth of three feet. The intake canal will then be lined with gunite to prevent further sedimentation and maintain its capacity of 25 CFS. Improving Lopez Spreading Grounds would yield an annual recharge benefit of approximately 1,350 AF of water per wet year.
- Branford Spreading Basin Project – Most of the water tributary to the spreading basin is urban runoff from Branford Street Channel. Total wetted area of the spreading grounds is 7 acres with a maximum intake of 1540 CFS and storage capacity of 137 AF. Average annual recharge for the facility is approximately 552 AF. This project proposes to install a pump at the spreading basin, a pipeline bridge across the Tujunga Wash Channel, and an outlet into Tujunga Spreading Grounds. These changes will improve groundwater recharge, flood protection, and water quality.
- Rory M. Shaw Wetlands Park Project – Consists of constructing stormwater capture and treatment facilities within the bounds of a 46-acre site formerly used as a gravel pit. This project will construct detention ponds and wetlands to store and treat stormwater runoff. Treated flows will then be pumped to the adjacent Sun Valley Park for infiltration in the underground basins. In addition to increased groundwater recharge, flood protection, and water quality improvements, the project will include habitat restoration and recreational opportunities.

Following are few examples of neighborhood and residential distributed stormwater recharge projects that are expected to be completed or in construction within the next few years:

- Woodman Avenue Multi-Beneficial Stormwater Capture Project – Will help recharge the SFB, improve water quality, and alleviate local flooding. The Project will capture

surface runoff from approximately 80 acres that currently runs along street gutters to storm drains, through the Tujunga Wash and the Los Angeles River and into the ocean. The project will direct the flows through pre-treatment devices and into a vegetated swale and an underground retention system for infiltration. The infiltration swale and underground retention system will replace an existing 16-foot wide, 3,500-foot long concrete median. Additional benefits include the creation of community open space enhancements such as improved aesthetics and pedestrian access, passive recreation, educational opportunities, and restoration of native habitat.

- North Hollywood Alley Retrofit BMP Demonstration Project – Retrofits three alleyway segments for a total of 775 feet of alley improvements in the San Fernando Valley. These improvements will create pervious surfaces in the drainage lines of the alleys to allow for stormwater infiltrating where it falls. In addition, seven catch basins will be installed in streets intersecting the alleys increasing the alleyway tributary drainage areas. These alleyway projects will demonstrate the ability to infiltrate stormwater nearer its origin which will help to recharge the SFB, improve water quality in the Los Angeles River, and reduce flooding.
- Rain Barrels Rebate – Collecting and re-using rainwater from gutters and downspouts for lawns and gardens minimizes the amount of water flowing into storm drains, sewer systems and local waterways. Plants and microbes prefer rainwater because it is naturally “soft” and free of chlorine, fluoride and other chemicals. Rebates start at \$75 per barrel, minimum size is 50 gallons and maximum of four rain barrels per home.
- Rain Garden Rebate – Provides financial assistance to property owners in high-infiltration areas within the City who install rain gardens on their property. Capturing stormwater reduces runoff from their properties, improves water quality, augments the local water supply, as well as improves the landscaping at their homes. Homeowners receive a rebate of up to \$500 in labor and materials to create a rain garden sized to capture and infiltrate a minimum of 500 sq ft of roof area. Maximum rebate is \$1,000 per household, for homeowners that have larger landscape areas that can accommodate two rain gardens.
- LADWP’s Distributed Recharge Efforts – Across the San Fernando Valley, urban stormwater runoff from impervious surfaces enters the storm drain system and eventually flows into the ocean. LADWP is exploring partnerships, projects, and programs that promote infiltration of rainfall runoff close to its point of origin. Several partnerships that LADWP continues to develop are with the City of Los Angeles

Department of Public Works, the LACFCD, the MWD, TreePeople, Council for Watershed Health, Los Angeles Beautification Team (LABT), and The River Project. Some of the projects and programs being developed include facility retrofits, neighborhood retrofits, and local recharge projects such as along medians, rain gardens, power line easements, and parkways.

Groundwater Remediation - City's goal is to clean up the contaminated SFB to expand groundwater storage with recycled water, stormwater, or excess imported water and restore the City's access to its existing groundwater supplies. Result will be a reduction of imported water supply of up to 87,000 AFY – LADWP's current annual allocation of San Fernando Valley groundwater supplies. LADWP will also work to ensure that once remediated, the SFB remains a consistent, stable and reliable local water resource for years to come. The following actions are proposed to achieve this goal:

- Work with Regulatory Agencies and Governmental Officials – LADWP will continue to encourage the U.S. Environmental Protection Agency (USEPA) to develop a long-term, comprehensive solution for existing and emerging contamination issues in the SFB. In addition to the USEPA, LADWP will work with the Los Angeles Regional Water Quality Control Board and the California Department of Toxic Substances Control to find and hold polluters accountable for cleaning up their contamination of the SFB.
- Groundwater System Improvement Study (GSIS) – In February 2009, LADWP began a six-year Groundwater System Improvement Study in the SFB. The Study will provide vital information to evaluate the groundwater quality in the SFB and recommend treatment options to maximize the utility of the groundwater supply. As part of the GSIS, LADWP is installing approximately 26 new monitoring wells in the basin, which will provide vital water quality information necessary for the GSIS. LADWP is in the early stages of developing the Groundwater Treatment Complex for the SFB, with a design capacity of 122,900 AFY. Construction of the proposed Groundwater Treatment Complex will greatly reduce LADWP's reliance on purchased imported water supplies, and will complement LADWP's strategies for securing the City's future water supply through sustainable means. The anticipated in-service date for the Groundwater Treatment Complex is 2021.
- Wellhead Treatment - LADWP completed the installation of wellhead treatment for two wells in the Tujunga Wellfield in order to maintain groundwater pumping production. LADWP is currently considering expanding upon this effort to increase pumping of local groundwater supplies from the SFB at the Tujunga Wellfield.

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The City's dry-year Water Conservation Ordinance working together with a strong conservation and local supply program are projected to support the City in managing its supplies to meet demands during the current dry-year period. LADWP will continue to closely monitor hydrologic conditions such as precipitation, snowpack, and resulting runoff conditions in the Colorado River Basin and Sierra Nevada Mountains, as well as water demand conditions in the City and will take appropriate actions should any of these conditions change.

To increase the level of understanding of all the comprehensive efforts being undertaken to manage our water resources, LADWP is teaming with BOS to develop the City's One Water LA 2040 Plan. This guiding document is a continuation of the Water Integrated Resources Plan that will integrate the master planning efforts undertaken for wastewater, water conservation, recycled water and stormwater to ensure that the City's infrastructure is well equipped to handle the changes in growth, regulations and other triggers to maintain public safety and reliability through 2040 and beyond. We anticipate conducting a "One Water" Day at City Council with our City partners to present this information this Spring.

If you have any questions or require further information, please contact me at (213) 367-1338, or have a member of your staff contact Ms. Winifred J. Yancy, Director of Intergovernmental Affairs and Community Relations, at (213) 367-0025.

Sincerely,

A handwritten signature in black ink, appearing to read "Ronald O. Nichols". The signature is stylized and includes the letters "FOR" written below it.

Ronald O. Nichols
General Manager

Enclosures

c/enc: Councilmember Bob Blumenfield, Vice-Chair, Energy and Environment
Committee
Councilmember Tom LaBonge, Member
Councilmember Jose Huizar, Member
Councilmember Paul Koretz, Member
Mr. Adam R. Lid, Legislative Assistant
Mr. Miguel A. Santana, City Administrative Officer
Mr. Gerry F. Miller, Chief Legislative Analyst
Ms. Winifred J. Yancy