City of Long Beach
Working Together to Serve

Memorandum

Date: June 4, 2015

To: Mayor and Members of the City Council

From: Patrick H. West, City Manager
Kevin L. Wattier, General Manager, Long Beach Water Department

Subject: **Water Conservation Requirements and Compliance**

At its April 21, 2015 meeting, the City Council requested the City Manager to report back to the City Council at a Council meeting on the measures the City is taking to meet the new water conservation requirements. The City Council also requested the Long Beach Water Department (LBWD) to report on what additional measures it is implementing for residents and businesses. A presentation on this subject will be scheduled within the next few weeks. In the interim, this memorandum provides a general overview of the water conservation requirements and the City's efforts to comply with them.

Background

On April 25, 2015, Governor Brown issued an Executive Order on water conservation with the intention to reduce statewide water usage by 25 percent. The State Water Resources Control Board (SWRCB) officially adopted these mandatory regulations on May 5, 2015, though they have been in effect since March 27, 2015. The regulations will be in effect through February 2016 (or for 270 days) unless extended by the SWRCB. It should be noted that the regulations/restrictions apply only to potable water. Reclaimed water use is not affected, though the supply is limited.

Among other things, the Executive Order directs State and local governments to streamline drought response, and invest in new technologies that can aid in water conservation. The majority of the directives are focused on urban use and do have an impact on the City of Long Beach. Urban water agencies, including the Long Beach Water Department, were issued water conservation targets based on existing levels of conservation. Due to the fact that Long Beach had already reduced its usage by 6 percent in 2014 and 7 percent in 2013, Long Beach is in Tier 3 and is being required to reduce usage by only 16 percent across all customers. Some urban water agencies are required to reduce by as much as 36 percent.

LBWD generally estimates that potable water is consumed in roughly equal parts by three categories of users: single family residences, multi-family residences such as apartments and condos, and commercial/ industrial. The City of Long Beach (as an agency) falls within the commercial/industrial category. The majority of the City's use of potable water is devoted to irrigation. The Parks, Recreation

and Marine Department (PRM) irrigates approximately 1,275 acres of parks and street medians, of which approximately 46 percent use potable water (see attached map). Prior to the adoption of the regulations, PRM was using between 503 million and 803 million gallons of potable water annually for irrigation in areas of the city supported by the General Fund.

Restrictions

As the water supplier to the City, LBWD has the responsibility for implementing the water conservation regulations. To that end, the Board of Water Commissioners enacted certain restrictions on the use of potable water, including the following:

- All customers may only irrigate landscape on Tuesdays and Saturdays;
- All customers may only irrigate landscape 10 minutes per station per watering day, or 20 minutes if using water-efficient rotating nozzles;
- All customers may only irrigate landscape before 9:00 a.m. or after 4:00 p.m.;
- Residents cannot fill swimming pools and spas with potable water;
- Restaurants cannot serve water to customers without the customer requesting it;
- No customers may irrigate the landscape beyond saturation, causing significant runoff;
- No customers may hose down hardscape with a hose, unless using a pressurized cleaning device;
- Residents may not wash a vehicle with a hose unless it has a water shut-off nozzle or device attached to the hose;
- No customers may waste water due to breaks, leaks or other malfunctions in the plumbing or distribution system; and
- Hotels and motels must post signs to notify patrons they can choose not to have linens and towels washed daily.

In addition to the restrictions above, Governor Brown's Executive Order includes a directive geared specifically to public agencies – the irrigation of ornamental turf (grass) on public street medians with potable water is <u>prohibited</u>.

Compliance with Restrictions

The City is complying with all restrictions identified above, with some allowable modifications. With the approval of LBWD, PRM is currently adhering to a watering schedule of two times a week, Sunday night into Monday morning and Thursday night into Friday morning, in all areas. This alternate watering schedule is intended to limit the impact on park patrons, particularly on the weekend. Residents may see park irrigation in use outside of these two days for several reasons:

- Athletic fields under renovation and newly planted areas (seed or vegetation) require saturation until roots are established;
- Manually irrigated areas, such as the City Cemetery and Heartwell Park, take extensive time to operate the irrigation system. In the case of Heartwell Park, it takes a crew approximately one week to irrigate the entire park, just once; and
- On occasion, it may be necessary to test irrigation systems for a short period of time after the repair of a line break.

PRM is currently employing a number of best maintenance practices in order to conserve water. These include: repairing irrigation main and lateral line breaks, adjusting heads and nozzles, installing water saving heads and nozzles, installing pressure regulators, increasing turf aeration, and reprograming or resetting irrigation controller clocks as needed.

Resident compliance with the irrigation restrictions varies from one extreme to the other. Some residents have abandoned their lawns altogether, while others continue to water frequently, sometimes daily. LBWD continues its outreach efforts to elicit compliance with the restrictions. If significant non-compliance continues, the City, through the Water Department, is authorized by ordinance to issue citations to the violator. Violations are punishable by fines that vary depending on the water shortage stage at the time of the violation and the number of times the customer had been cited for the same violation.

Permanent Conservation Solutions

The City has already implemented a number of permanent conversation solutions to reduce its water usage. PRM has stopped irrigating turf medians with potable water. If trees are present on these medians, water is being delivered to the trees only, and then only on the prescribed days. In addition, recognizing that water line breaks can be the cause of significant water loss, the City has added "park – running water" to the list of issues in its Go Long Beach app. PRM reports that 45 notifications have been made to date.

Several departments have converted turf landscaping to drought tolerant landscaping outside of their facilities, including multiple Fire stations, Long Beach Gas and Oil (LBGO) headquarters, Long Beach Airport, and the Emergency Communications and Operations Center. Additionally, a number of departments have converted to low-flow or waterless fixtures in their restrooms, including City Hall, the Airport, and the Emergency Communications and Operations Center. The changeover in City Hall, alone, will save an estimated 310,000 gallons of water per year.

PRM has a number of permanent conservation solutions in the works. These include:

<u>Conversion of Turf Street Medians</u>: A Request for Proposals (RFP) to convert all turf street medians to drought tolerant landscaping is in the final stages of preparation. The conversion will include refitting the medians with new, more efficient irrigation systems. The design of the medians has already been completed, and the conversion will begin once funding has been secured and a contract has been awarded. The Department

estimates that it can save an additional 2.4 percent of its total potable water use through the conversion of the medians.

Approximately 22 percent of street medians with turf are irrigated with reclaimed water, and, thus, are technically exempt from some of the restrictions. However, as there is a limited supply of reclaimed water, the City will proceed to convert these medians to drought tolerant landscaping as well.

Conversion of Turf Areas in Parks: As part of the replacement of antiquated irrigation systems noted above, staff has been evaluating the potential for converting inaccessible or underutilized areas of turf in parks into drought tolerant landscaping. For example, a conceptual plan prepared for Stearns Park identified the potential to convert 200,000 square feet of turf to drought tolerant landscaping. Additionally, staff is pursuing a demonstration project to convert a portion of the turf area located at the terminus of the 710 Freeway south of the Broadway exit to drought tolerant landscaping through the LBWD/MWD rebate program.

Golf Course Turf Reduction: American Golf Corporation (AGC) submitted plans to the Metropolitan Water District's (MWD) for the latter's Turf Reduction Rebate Program (Turf Program) that proposed removing approximately 52 acres of turf on four Long Beach golf courses. AGC and PRM staff will continue to evaluate MWD's evolving Turf Program parameters to ensure we will be able to complete this important project and determine the viability of reapplying in the future for significantly smaller turf reduction projects that would not negatively impact the popularity of the Long Beach golf courses. It is important to note that all of the City's golf courses are irrigated with reclaimed water.

Replacement of Antiquated Irrigation Systems: Planning is underway to replace antiquated irrigation systems, namely the manual irrigation systems at Heartwell and Stearns Park. One-time funding was provided for this purpose in FY 14 and FY 15.

Synthetic Athletic Fields: Preparations continue for the conversion of three turf athletic fields into synthetic turf fields. This conversion will save up to two (2) million gallons of water annually. The conversion of these fields is funded. Additional fields will be converted as funding becomes available.

Artificial Turf: Staff is evaluating the potential for the use of artificial turf (non-athletic) for use in medians and small park areas. Considerations include cost, durability, and ecological factors.

Telemetry: Staff will soon be able to control the irrigation systems at 18 sites remotely through the use of CalSense controllers and communication technology. This will provide staff the ability to monitor water usage, make adjustments for weather, and identify problems.

Automated Meters: The Water Department has applied for partial funding for 800 additional "smart meters" through the Integrated Regional Water Management

program. If approved, many of these meters will be placed on City water accounts to enable the City to better manage water consumption on those sites.

Park Lakes: Staff is working with the California Department of Fish and Game to determine the feasibility of filling the lakes in El Dorado, Heartwell, and Scherer Parks with reclaimed water. The preliminary results from the biologists involved indicate that this may be possible without posing risks to wildlife or park patrons.

Two frequently asked questions are, "Why can't the reclaimed water system be expanded to the central and western portions of the city?" and, "Why is the City building new parks when there is a drought?" The answer to the first question is that, while it may be technically possible to do so, there is no more reclaimed water available during the summer months. It has all been allocated. The answer to the second question is that, the City needs to continue pursuing its open space goals, especially in areas of the city that are "park poor." That said, these new park areas are being designed with the drought in mind, and will include drought tolerant landscaping, grass varieties that require less water, and new irrigation technology to minimize water use.

Other Important Projects

There are several other notable conservation efforts underway by other City departments. The Long Beach Gas and Oil Department (LBGO) recently approved two major projects that, when complete, will reduce water use in oil fields by 308,000 gallons per day, or the equivalent amount of water used by about 5,500 Long Beach residents. LBGO is also investigating the possibility of utilizing reclaimed water instead of potable water at its SERRF facility. Lastly, the Public Works Department is proceeding with a feasibility study and design of the Long Beach Municipal Urban Stormwater Treatment (LBMUST) facility. This leading-edge facility would capture stormwater runoff, simultaneously improving water quality in the ocean and producing reclaimed water for irrigation of the City's parks.

Public Outreach

LBWD has a well-established water conservation campaign, and continues its efforts to reach the community. Other City departments will partner with the LBWD to increase awareness through social media, as well as to explain the noticeable changes in the appearance of street medians as a result of the conservation efforts. In addition, PRM staff will install signage on street medians informing the public the medians are being irrigated with reclaimed water and the City is not violating drought restrictions.

Future Funding

PRM and other City departments will rely heavily upon the LBWD and MWD rebate program to carry out its conversion solutions. A new round of rebate funding for turf replacement projects is expected to be available within the next several weeks. It is anticipated that, for public agencies, it will provide $3.50 per square foot of ornamental turf removed, up to 3,000 square feet per project per year, and $2.50 per square foot thereafter, up to a total of 50,000 square feet per project per year.

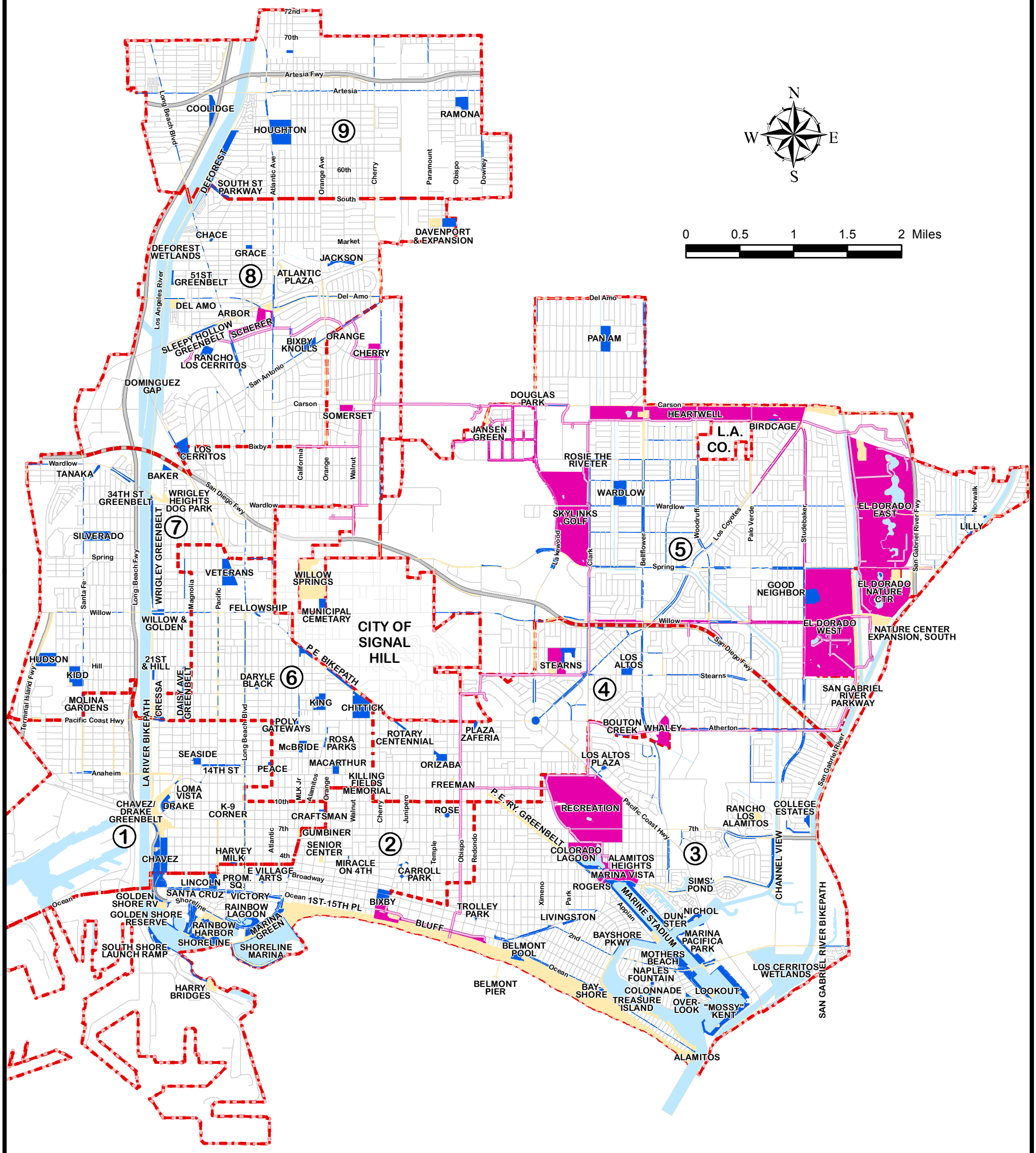
PRM staff is hopeful that some of the conversion work already completed will be eligible for reimbursement, thereby creating "seed" money for the street median turf conversion project. Once reimbursement is received, it will be used to fund another project, and so on. For the larger conservation solutions, such as LBMUST, staff will seek grant funding as it becomes available.

Please let me know if you require additional information.

PHW:GH

Attachment

cc. Charles Parkin, City Attorney
Laura L. Doud, City Auditor
Tom Modica, Assistant City Manager
Arturo Sanchez, Deputy City Manager
City Department Heads



LONG BEACH
PARKS • RECREATION • MARINE

Department of Parks, Recreation & Marine

Potable and Reclaimed Irrigation in Parks and Street Islands

Legend

- Potable Parks and Street Islands
- Reclaimed Parks, Golf Courses and Street Islands
- No/Negligible Irrigation or Responsibility of Others
- Reclaimed Water Main
- Council Districts

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