



Information Item

Date: July 12, 2016

To: Mayor and City Council
From: Dean Kubani, Chief Sustainability Officer
Subject: Update on Drought Response

Introduction

This report provides an update on the State's Drought Emergency Water Conservation regulations, local drought conditions, and the City's Stage 2 Water Supply Shortage implementation.

Background

Faced with the threat of continued drought, uncertain local and imported water supplies and increasing resident and day-time populations, City Council declared a Stage 2 Water Shortage on August 12, 2014, requiring mandatory water allocations and a 20% reduction in water use. Council reaffirmed this action on January 13, 2015. On January 17, 2015, Governor Brown issued statewide Drought Emergency Regulations which required a 20% reduction in water use for Santa Monica.

On May 18, 2016, the State Water Resources Control Board updated the Drought Emergency Water Conservation regulations in recognition of persistent yet less severe drought conditions in parts of California. This update extends the regulations through January 2017 but allows water agencies to define a customized water conservation standard based on their specific circumstances, thus replacing the percentage reduction-based water conservation standard established by the State in January 2015.

The new standards require local water agencies to ensure at least a three-year supply of water to their customers under drought conditions similar to those the state experienced from 2012 to 2015. Water agencies whose water supply calculations using the new methodology show shortages in dry years will be required to meet a conservation standard equal to the amount of shortage. In addition to these changes, Governor Edmund G. Brown Jr. in Executive Order B-37-16 made additional water conservation requirements for local agencies, some of which will become permanent. This executive order also requires the development of new water use targets for urban water agencies to build upon the state law (referred to as SBx7-7), requiring a statewide 20% reduction in urban water use by 2020.

Prior to the drought, City Council adopted a goal to be water self-sufficient by 2020 by maximizing local groundwater, alternate water supplies, and water conservation. On October 28, 2014 Council adopted the Sustainable Water Master Plan (SWMP) which outlined a roadmap to water resilience, including a 20% reduction in water use citywide. This plan included the expansion of water conservation programs and rebates, as well as the installation of additional groundwater wells, and greywater and rainwater harvesting systems to increase local water supplies. This plan is currently being implemented, and staff will return to Council with an update in November 2016.

The City's drought response policies and programs build upon the programs and projects outlined in the SWMP. These coordinated efforts are achieving water use reductions while creating a sustainable water portfolio. Since June 2015 citywide water use has been reduced 19.7% compared to 2013 water usage.

Discussion

State Water Supply Reliability Certification and Data Submission

The new State reporting requirements allow a water agency to self-certify its water conservation standard using water supply conditions in 2013 and 2014 as the baseline for water demand and water years 2012/2013 through 2014/2015 for projected supplies. The water year runs from October 1 through September 30. Using this methodology, staff projects sufficient local supplies and MWD has projected sufficient imported supplies to meet demand during this time period. The City submitted the Water Supply Reliability Certification and Data Submission Form to the State Water Resources Control Board on June 22, 2016 with a zero percent conservation standard, indicating that projected local and imported water supplies can meet demand for the three water years 2017 through 2019. Staff will continue to monitor water supplies and demands and report monthly to the State Water Resources Control Board using its online system. The Water Supply Reliability Certification and Water Supply Assessment table below shows the total water supply available in 2017 through 2019, excluding recycled water and the total water demand, excluding water conservation. Water demand and supply are shown in acre-feet. One acre foot is equal to 325,851 gallons which is enough water to supply three water-efficient homes for a year.

Water Supply Reliability and Water Supply Assessment			
Total Potable Use Demand			
Potable Water Production in 2013 14,078 AF			
Potable Water Production in 2014 13,987 AF			
Total Potable Water Demand, average of two years = $(14,078+13,987)/2$ 14,033 AF			
Total Potable Water Supply			
Potable Water Supply	2017	2018	2019
Local Groundwater	9,000 AF	9,000 AF	9,000 AF
Imported Water	5,033 AF	5,033 AF	5,033 AF
Total Potable Water Supply	14,033 AF	14,033 AF	14,033 AF
Calculate Conservation Standard			
Total Potable Water Demand			14,033 AF
Total Potable Water Supply			14,033 AF
Shortfall (Demand –Supply)			0 AF
Self-Certification Standard (Mandatory Conservation Standard)			0%
(Supply Shortfall as a percent of total Demand)			

City's Continuing Plan for Water Self-Sufficiency

Notwithstanding the reported zero percent for the State's self-certification report, assuming projected local and imported water supplies are sufficient, the City's proactive conservation plan to attain water self-sufficiency is still in effect. Although reservoirs in northern California are near or at full capacity due to heavy rains and snow in that part of the state, the drought is not over. Only five inches of rain fell in the Santa Monica area during the 2015-2016 rainy season, which was significantly below the 14 inch average for the region and the 30 inches of rain that was anticipated due to El Niño conditions. Santa Monica currently relies on its local groundwater aquifers for approximately 80% of its water supply. These aquifers are naturally recharged by percolation of rain water. Forecasters are projecting a dry winter in 2016-2017 which could deepen the existing drought in the southern half of the state and further affect the recharge of the aquifers.

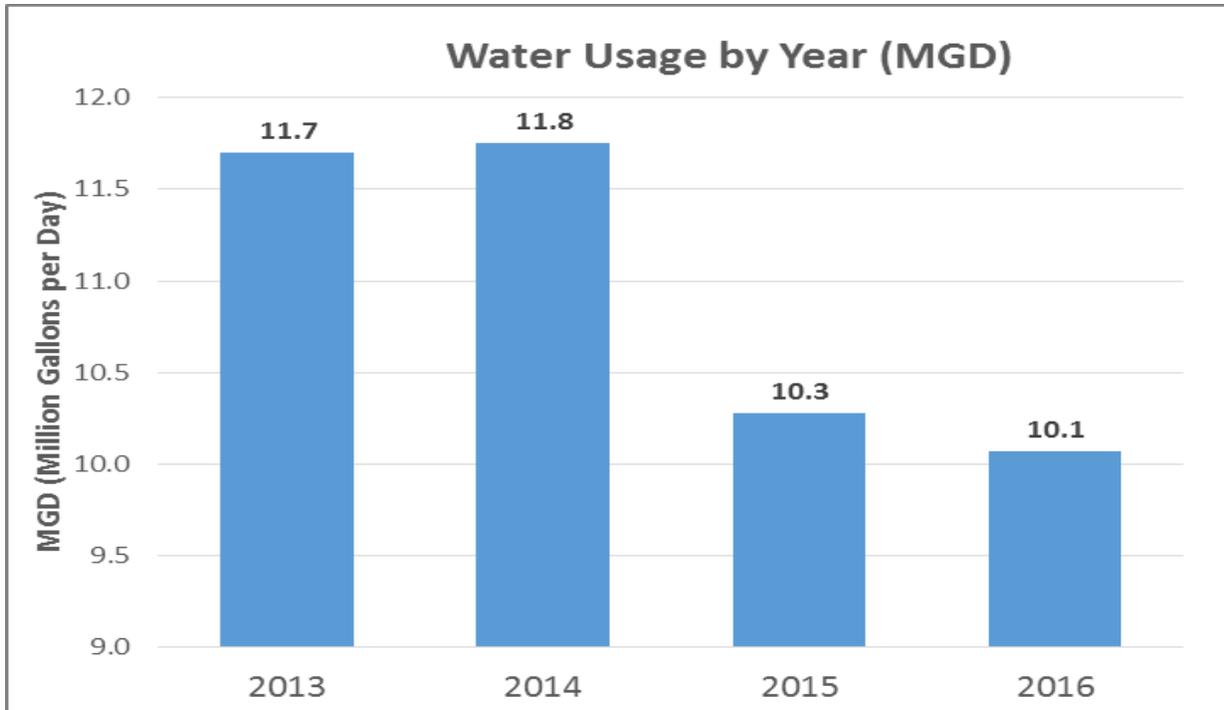
Changes in climate, water supply availability, and water demands make it imperative to take a long-range water management approach to ensure a resilient and healthy water supply portfolio. Santa Monica continues to implement policies and programs that will provide water to meet Santa Monica's growing demands, not just for the next year but for decades to come.

Continuing Enforcement of Water-Use Allowances and Penalties

As part of the Stage 2 Water Supply Shortage, Water Use Allowances and penalties have been implemented in addition to expanded landscape rebates, turn-key toilet installations, home and business water consultations, and a comprehensive outreach and marketing plan. To date, 76% of all water customers are within their water use allowance and are consistently near or at the number each month. The City's public landscape and facilities operations have cut water use by 25%. Penalties focused on high water users have been effective at encouraging these customers to reduce their water use. By the end of May 2016, staff issued 330 penalties to the highest water wasters and water usage among that group has been reduced as a result. Cumulatively, Santa Monica residents and businesses have cut their water use 20% over the ten months since reporting began in July 2015.

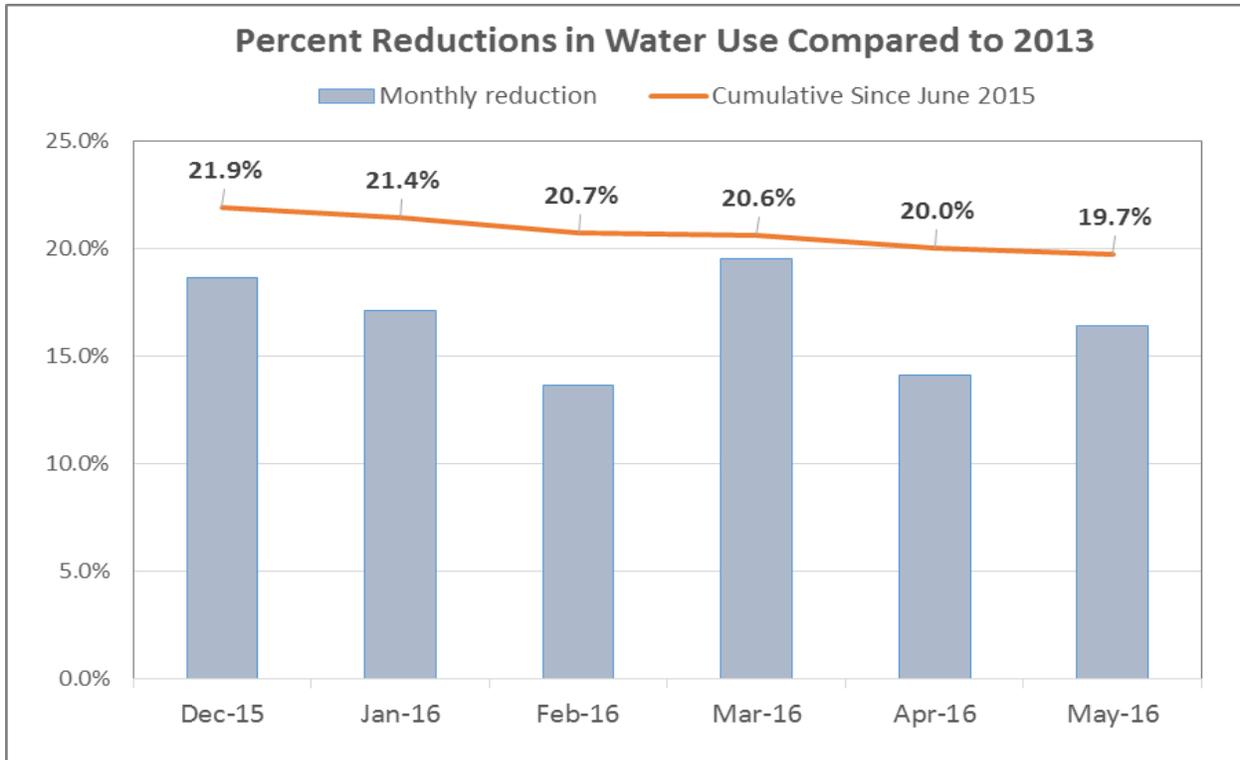
The chart below shows actual water sales in million gallons per day. These figures are different from the water demand numbers reported to the state each month which reflect estimated monthly water demand for all customers. Because the City reads meters bimonthly, the exact consumption for a segment of customers for a single month is not feasible.

Water Use by Calendar Year in Million Gallons per Day (MGD):



The City's significant investments in water conservation have helped to achieve this reduction, but it is uncertain how much of this is due to behavioral changes versus permanent water-efficiency measures. Although significant reductions in water use among all customer sectors have been made, water demand has increased in Santa Monica by 2.2% since December 2015. With the lifting of the statewide mandatory targets in May 2016 it is anticipated that this trend may continue. Therefore, staff is redoubling efforts to promote the need for continued conservation throughout the summer months. A new marketing campaign starts in early July including social media, bus ads, street banners, banners at parks, targeted outreach to high-water use customers, landscape workshops for professionals and homeowners, participation in the EPA's Sprinkler Spruce Up summer marketing campaign, outreach to City employees, the release of a new video featuring local water heroes, and outreach through Santa Monica Tourism and Travel, the Chamber of Commerce and the business districts.

The chart below represents the percent reduction in water demand per the state's reporting methodology. This shows the estimated monthly demand in comparison to the City's reduction target of 20%.



Santa Monica is nearly 80% reliant on its own local groundwater and is on its way to permanently achieving Council's directive for water self-sufficiency by 2020. Programs developed as part of the SWMP will continue in FY 2016/17 including the landscape rebates, landscape consultations, laundromat rebates, water use consultations, increased rebates for toilets and water-saving fixtures offered by Metropolitan Water District of Southern California's socialwatersmart.com program and free showerheads and faucet aerators. In FY 2015/16, more than 400 landscape rebates were issued and 11,000 water-saving products and plumbing fixture rebates were provided to residents and businesses.

With no end in sight to the drought, it is prudent to remain in a Stage 2 Water Supply Shortage until conditions significantly improve. This will help to prevent any potential for over-drafting groundwater and keep the City on course to meet its self-sufficiency goal. Any changes to the current Stage 2 Water Supply Shortage would require Council action. To further ensure our groundwater sustainability and facilitate water self-sufficiency, staff will return to Council in September 2016 with a water neutrality ordinance for Council adoption, which would require that additional water demands for new developments be offset on-site or in the community prior to a certificate of occupancy.

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