



**CITY OF BEVERLY HILLS**  
**PUBLIC WORKS DEPARTMENT**  
**MEMORANDUM**

**TO:** PUBLIC WORKS COMMISSION

**FROM:** Debby Figoni, Water Conservation Administrator  
Michelle Tse, Planning & Research Analyst

**DATE:** October 13, 2016

**SUBJECT:** WATER CONSERVATION UPDATE & WATER USE REGULATIONS

**ATTACHMENTS:**

1. Monthly Consumption Report to Date
2. Metropolitan Water District – Water Device Rebate Program
3. Metropolitan Water District – Turf Removal Rebate Program

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This report provides an update on staff activities related to the City's water conservation policy, programs and outreach efforts.

**City Water Conservation Outreach and Enforcement Efforts**

The Water Conservation Team (Team) continues to focus their efforts on customers with continuous flow issues, calling residents and sending letters. Letters are also being sent to customers watering on the wrong day. Even with the heatwave in September and the continued suspension of penalty surcharges, the City achieved a 20% reduction in September.

Over the next few months, the Team will start to concentrate efforts on working with homeowners associations (HOA's) and getting them to fix leaky toilets and other issues that are wasting hundreds of gallons per hour. In addition, landscape audits will be offered for excessive water users. Finally, school outreach will be targeted so the community's youth can educate their parents on finding leaks and irrigating efficiently.

During the month of September, the Team conducted 12 site visits with residential high water users, customers with potential leaks and residents requesting landscape and irrigation assistance. The team sent letters and/or called 114 customers with continuous flow issues. Almost 40 letters sent out included information on excessive watering and/or watering on the wrong day. Staff worked with 26 customers on penalty surcharge appeals issues, conservation standards, and other questions.

In September, no outdoor water conservation cases were reported by the public. No Notices of Violation (NOV) were issued this past month. Please note that a NOV is a prerequisite to the issuance of a criminal misdemeanor citation (used for continued violations). Staff continues to enforce all outdoor watering regulations as prescribed in Stage D.

## **Public Education Programs and Outreach**

In September, the Water Conservation Administrator met with the Beverly Hills Unified School District (BHUSD) Parents Teachers Association (PTA) at the district office. She had the opportunity to present to the group and meet with the Principals of all the BHUSD schools. After the presentation, she was asked to present to another PTA and assist with the water wise landscapes at two of the elementary schools.

Staff met with East Bay Municipal Water District (EBMUD) to discuss their experience with Water Tracker and customer participation. EBMUD found Beverly Hills' program to be impressive and proactive, especially the systematic communication staff has implemented to work with the top 100 customers with continuous flow issues.

Additionally, staff is looking to partner with Robinson Gardens to promote water wise landscapes and efficient irrigation.

The Water Conservation Bureau continues to inform and educate the community on water efficiency measures and encourages all customers to sign up for Water Tracker. Staff also continues to promote and remind water customers to adjust their irrigation schedules accordingly, given the anticipated cooler months.

## **City Water Usage Reductions for September 2016**

The following table shows water consumption for the City during the last several months. For the month of September, the City used approximately 923.4 Acre Feet ("AF") compared to 1,156.0 AF in 2013. For comparison purposes, the table below shows the average AF of water used daily each month.

Table 1 below shows the City's water usage by volume from May 2015 to present compared to water usage in 2013. For 2016, the City has maintained a 22-percent average reduction.

**Table 1: Summary of Beverly Hills Water Use Reductions Submitted to the State Water Resources Control Board**

<b>Month</b>	<b>2013 Usage (AF)</b>	<b>2015/16 &amp; 16/17 Usage (AF)</b>	<b>2013 Average Usage Per Day (AF)</b>	<b>2015/16 Average Usage Per Day (AF)</b>	<b>Percentage Reduction Compared to 2013</b>
<b>May-15</b>	1047.3	869.6	33.8	28.1	17.0%
<b>Jun-15</b>	1077.4	841.7	35.9	28.1	21.9%
<b>Jul-15</b>	1185.5	929.0	38.2	30.0	21.6%
<b>Aug-15</b>	1184.4	976.6	38.2	31.5	17.5%
<b>Sep-15</b>	1156.0	918.8	38.5	30.6	20.5%
<b>Oct-15</b>	1105.5	897.4	35.7	28.9	22.2%
<b>Nov-15</b>	939.2	814.7	31.3	27.2	13.3%
<b>Dec-15</b>	888.6	779.3	28.7	25.1	12.3%

Month	2013 Usage (AF)	2015/16 & 16/17 Usage (AF)	2013 Average Usage Per Day (AF)	2015/16 Average Usage Per Day (AF)	Percentage Reduction Compared to 2013
Jan-16	862.2	638.8	27.8	20.6	25.9%
Feb-16	762.9	663.6	27.3	22.9	13.0%
Mar-16	932.4	707.0	30.1	22.8	24.2%
Apr-16	969.0	742.5	32.3	24.8	23.4%
May-16	1047.3	798.7	33.8	25.7	23.8%
June-16	1077.4	862.6	35.9	28.8	20.0%
July-16	1185.5	932.3	38.2	30.1	21.4%
Aug-16	1184.4	952.7	38.2	30.7	19.5%
Sept-16	1156.0	923.4	38.5	29.8	20.1%

The Table below shows the City's water usage in acre-feet every month from 2012 to present.

	2012	2013	2014	2015	2016
Jan	810.5	717.6	865.5	769.7	638.8
Feb	717.7	669.2	736.8	775.8	663.6
Mar	852.5	821.7	781.4	895.9	706.9
Apr	842.7	962.9	929.0	920.8	742.0
May	962.8	1047.3	1155.9	869.6	798.7
Jun	969.2	1020.8	1038.6	841.7	862.6
Jul	1031.3	1185.5	1210.6	929.0	932.3
Aug	1207.5	1184.4	1169.6	976.6	952.7
Sep	1138.6	1060.6	1089.9	918.8	923.4
Oct	984.3	1006.1	1037.5	897.4	-
Nov	892.0	865.7	878.7	814.7	-
Dec	621.0	822.5	632.2	779.3	-
<b>TOTAL AF/YR</b>	13042.1	13377.3	13539.7	12404.0	TBD

### **Long-Term Water Use Efficiency Policy**

The Public Works Water Conservation Subcommittee (Subcommittee) and staff met with the Public Works Commission Liaisons on September 12, 2016. Vice Mayor Krasne and Councilmember Gold were supportive of the recommended long term permanent water efficiency measures but questioned if it would be better in the long run not to include the State's measures in the City's Code since the State may modify them in the future. An example of this would be not allowing City medians containing turf to be irrigated with potable water. The Liaisons were supportive of the excessive water use framework which is intended to promote water conservation and efficiency in lieu of penalty surcharge assessments. Finally, the Liaisons were supportive moving from Stage D to Stage C, with a corresponding move to a 20% reduction Citywide conservation goal and a two days per week outdoor watering schedule.

### **Program Implementation and Future Drought Stage Adoption**

The Subcommittee and staff held a conference call with Max Gomberg, Climate and Conservation Manager for the State Water Resources Control Board. Mr. Gomberg assists Felicia Marcus, Chair of the State Water Resources Control Board on water policy issues. Mr. Gomberg informed staff of the suggested water conservation modifications the State may be implementing in early 2017. The City's plan to implement a Long-Term Water Use Efficiency Policy framework was explained in detail to Mr. Gomberg who stated the City was on the right track with the State's upcoming changes and their goal to look at water conservation policies and mandates effecting water use goals until the year 2025.

Based on direction received from the Public Works Commission Liaisons and information received from the State Water Resources Control Board, staff is working with the Conservation Subcommittee to finalize the proposed policies and will be presenting to the item to the City Council during a Study Session In November 2016.

## All Accounts, Volume Consumed

Table 1, below, details total volume of consumption per month for the past calendar year for every account in the entire Beverly Hills and West Hollywood service area, comparing the prior calendar year to a 2013 baseline. The percent change is calculated to show increases or decreases in consumption per account type. A negative percentage indicates a reduction in consumption whereas a positive percentage indicates an increase. Volume is represented in acre feet units.

Table 1, All Accounts

		<b>Water Consumption by Account Type</b>						Units: AF		Prepared: 10/3/2016				
Accounts	Year	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	
Single-Family Residential Accounts	2013	345.6	362.4	446.6	496.1	556.7	579.2	620.3	637.2	603.2	556.3	483.3	456.5	
	2015/16	301.7	278.3	317.0	356.7	399.2	437.3	456.9	476.5	449.9	432.6	394.0	328.0	
	% Change	-13%	-23%	-29%	-28%	-28%	-25%	-26%	-25%	-25%	-22%	-18%	-28%	
Multi-Family Residential Accounts	2013	202.9	185.8	209.0	205.7	215.2	210.7	222.5	223.9	216.7	221.8	207.3	208.9	
	2015/16	169.5	157.0	166.3	158.3	164.3	165.1	186.2	189.5	184.0	188.5	174.2	175.8	
	% Change	-16%	-15%	-20%	-23%	-24%	-22%	-16%	-15%	-15%	-15%	-16%	-16%	
Commercial Accounts	2013	171.2	160.3	181.0	178.6	195.7	197.6	212.9	212.8	199.9	199.3	178.4	178.6	
	2015/16	164.0	155.3	168.2	160.7	170.9	172.0	201.9	209.9	199.7	198.7	168.4	162.4	
	% Change	-4%	-3%	-7%	-10%	-13%	-13%	-5%	-1%	0%	0%	-6%	-9%	
Municipal Accounts	2013	25.0	26.9	36.5	40.4	42.9	44.6	49.2	51.2	47.6	42.6	34.2	31.8	
	2015	19.3	17.1	19.6	20.7	23.6	25.9	28.0	29.9	28.9	29.3	24.8	21.9	
	% Change	-22%	-36%	-46%	-49%	-45%	-42%	-43%	-42%	-39%	-31%	-27%	-31%	
Fire Service Accounts	2013	-	-	0.2	0.6	0.7	0.7	0.8	1.1	1.3	1.4	1.4	1.3	
	2015/16	0.9	0.9	0.9	0.9	1.0	1.2	1.8	1.0	0.9	0.9	1.0	1.0	
	% Change	N/A	N/A	468%	47%	36%	58%	129%	-10%	-31%	-34%	-32%	-25%	
Estimated Non-Revenue Water	2013	117.6	27.6	59.2	47.8	36.1	44.4	79.9	58.1	87.1	80.1	34.6	11.4	
	2015	**16.7	55.0	34.9	44.7	39.7	40.2	54.3	69.8	55.1	47.3	52.3	90.1	
	*2013 Total	862.2	762.9	932.4	969.3	1,047.3	1,077.4	1,185.5	1,184.4	1,156.0	1,101.5	939.2	888.6	
	*2015/16 Total	638.8	663.6	706.9	742.0	798.7	841.7	929.0	976.6	918.5	897.4	814.7	779.3	
	% Change	-26%	-13%	-24%	-23%	-24%	-22%	-22%	-18%	-21%	-19%	-13%	-12%	

\*Data for final three rows do not come from City of Beverly Hills billing data, but rather Metropolitan Water District invoices. Aggregate data for State reporting and parsed data for internal system analysis rely on different sources and methodologies. As such, monthly totals by year in the bottom rows do not equal the sum of consumption in the rows above, that difference is determined to be non-revenue water.

\*This estimate indicates that more consumption took place in December and/or November. Due to the methodology used to parse 60-day rolling billing cycles into monthly estimates, there may be some months where estimated use is greater than the amount actually purchased or produced.

## All Accounts, Consumption by Customer Type as a Percentage of Total Consumption

Table 2, below, indicates consumption as a percentage of total per month for all accounts in the entire Beverly Hills and West Hollywood service area.

Table 2, All Accounts

		<b>Water Consumption by Account Type</b>						Units: AF		Prepared: 10/3/2016				
Accounts	Year	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	
Single-Family Residential Accounts	2013	40%	47%	48%	51%	53%	54%	52%	54%	52%	51%	51%	51%	
	2015/16	47%	42%	45%	48%	50%	52%	49%	49%	49%	48%	48%	42%	
Multi-Family Residential Accounts	2013	24%	24%	22%	21%	21%	20%	19%	19%	19%	20%	22%	24%	
	2015/16	27%	24%	24%	21%	21%	20%	20%	19%	20%	21%	21%	23%	
Commercial Accounts	2013	20%	21%	19%	18%	19%	18%	18%	18%	17%	18%	19%	20%	
	2015/16	26%	23%	24%	22%	21%	20%	22%	21%	22%	22%	21%	21%	
Municipal Accounts	2013	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	
	2015/16	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	
Fire Service Accounts	2013	0.0%	0.0%	0.0%	0.1%	0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	
	2015/16	0.1%	0.1%	0.1%	0.1%	0%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	
Estimated Non-Revenue Water	2013	14%	4%	6%	5%	3%	4%	7%	5%	8%	7%	4%	1%	
	2015/16	*-3%	8%	5%	6%	5%	5%	6%	7%	6%	5%	6%	12%	
	2013 Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	2015/16 Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	

\*This estimate indicates that more consumption took place in December and/or November. Due to the methodology used to parse 60-day rolling billing cycles into monthly estimates, there may be some months where estimated use is greater than the amount actually purchased or produced.

**City of Beverly Hills Water Accounts, Volume Consumed and Percent Reduced**

Table 3, below, details the total volume of consumption per month for all accounts where the City of Beverly Hills is a customer, comparing the current year to a 2013 baseline. The percent change is calculated to show increases or decreases in consumption per account type. A negative percentage indicates a reduction in consumption whereas a positive percentage would indicate an increase. Volume is represented in acre feet units. May 2016 estimates have been revised to reflect additional billing data and to correct an error in the 2015/16 total.

Table 3, Accounts Where City of Beverly Hills is a Customer

		<b>Water Consumption by Account Type</b>						Units: AF		Prepared: 10/3/2016				
Accounts	Year	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	
City of Beverly Hills Accounts	2013	17.0	19.0	27.6	31.2	32.3	33.7	37.3	38.9	35.9	32.2	24.7	21.9	
	2015/16	11.5	9.5	11.6	12.8	15.5	17.8	19.9	20.7	19.4	19.7	16.4	14.1	
	% Change	-32%	-50%	-58%	-59%	-52%	-47%	-47%	-47%	-46%	-39%	-34%	-36%	

## Total Water Consumption, Purchased and Produced

Table 4, below, summarizes total consumption since January of 2013. Column 3, Percent Change Compared to Same Month 2013, compares 2015 and 2016 consumption data to a 2013 baseline. 2014 consumption data has been omitted in this report, but is available in the February 2016 Water Consumption Update. Negative percentages represent a reduction in consumption whereas positive percentages represent an increase. Volume is represented in acre feet units.

Table 4, Water Consumption Summary

<b>Date</b>	<b>Consumption (Acre Feet)</b>	<b>Percent Change Compared to Same Month 2013</b>	<b>Residential Gallons Per Day Per Capita</b>
<b>Jan 2013</b>	862.2		161.2
<b>Feb</b>	762.9		158
<b>Mar</b>	932.4		174.4
<b>Apr</b>	969.3		187.3
<b>May</b>	1047.3		185.4
<b>Jun</b>	1077.4		208.2
<b>Jul</b>	1185.5		221.7
<b>Aug</b>	1184.4		221.5
<b>Sep</b>	1156		223.4
<b>Oct</b>	1101.5		206
<b>Nov</b>	939.2		181.5
<b>Dec</b>	888.6		166.2
<b>Jan 2015</b>	806	-6.52%	142.7
<b>Feb</b>	782	2.50%	153.3
<b>Mar</b>	895.9	-3.91%	158.6
<b>Apr</b>	920.8	-5.00%	154.2
<b>May</b>	869.6	-16.97%	140.9
<b>Jun</b>	841.7	-21.88%	147.5
<b>Jul</b>	929	-21.64%	157.5
<b>Aug</b>	976.6	-17.54%	163.1
<b>Sep</b>	918.5	-20.54%	160.9
<b>Oct</b>	897.4	-18.53%	152.2
<b>Nov</b>	814.7	-13.26%	146.9
<b>Dec</b>	779.3	-12.30%	155.4
<b>Jan 2016</b>	633.8	-25.91%	106.7
<b>Feb</b>	663.6	-13.02%	122.0
<b>Mar</b>	706.9	-24.18%	124.1
<b>Apr</b>	742.0	-23.45%	132.1
<b>May</b>	798.7	-23.74%	146.8
<b>June</b>	862.6	-19.94%	161.7
<b>July</b>	932.3	-21.36%	160.9
<b>August</b>	952.7	-19.56%	162.0



