



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

**TO:** PUBLIC WORKS COMMISSION

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

**DATE:** November 10, 2016

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

**ATTACHMENTS:**

1. Monthly Report to State Water Resources Control Board – September 2016
2. Water Consumption Report to Date
3. Metropolitan Water District – Water Device Rebate Program
4. 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 City of Beverly Hills continues to do a great job conserving water even without the State's extreme drought regulations and the City's drought penalty surcharges. On November 1, 2016, the L.A. Times reported that many water providers had increased their water use compared to their 2015 usage. Beverly Hills is in the top 7% of water providers that actually saved more water this past summer compared to the summer of 2015.

The Water Conservation Team's (Team) outreach efforts, programs and enforcement efforts have kept our customers caring and conserving. The Team continues to focus on residential and commercial continuous water flow and excessive irrigation issues. The Team has started working with homeowners associations (HOA's) educating them on the importance of checking and fixing leaky toilets which can waste hundreds of gallons per hour.

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 131 letters to customers with continuous flow issues. An additional 35 letters sent out included information on excessive watering and/or watering on the wrong day. The team spoke to almost 200 customers regarding water issues, 27 of which were penalty surcharge appeals educational calls. Finally, 54 continuous flow issues were fixed.

In October, no outdoor water conservation cases were reported by the public. No Notices of Violation (NOV) were issued this past month. Debby Figoni, The Water Conservation Administrator, met with Nestor Otaza, the City's Code Enforcement Manager, to begin laying out the process to issue citations to customers that will not fix their continuous water flow issues and/or continue to water excessively. 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.

While there have been a series of storms in Northern California totaling rainfall in the northern Sierra Nevada at 12.6 inches, it is hard to know what will happen the rest of the rain year in Northern and in Southern California. This unknown, combined with reduced conservation, has prompted the State to consider reenacting conservation targets again in early 2017.

**Public Education & Outreach Programs**

In October, Debby Figoni presented to the Parents Teachers Students Association (PTSA) at Beverly Hills High School. The teachers expressed interest in educating their students on various water conservation topics. Figoni also met with education staff at Metropolitan Water District to obtain the tools to start promoting conservation to all classrooms in the Beverly Hills Unified School District.

A new fall campaign is about to launch reminding residents to turn back their clock as well as the days and minutes on their sprinkler controller.

**City Water Usage Reductions for October 2016**

The following table shows water consumption for the City during the last several months. For the month of October, the City used approximately 846.2 Acre Feet (“AF”) compared to 1,105.5 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**

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
May-15	1047.3	869.6	33.8	28.1	17.0%
Jun-15	1077.4	841.7	35.9	28.1	21.9%
Jul-15	1185.5	929.0	38.2	30.0	21.6%
Aug-15	1184.4	976.6	38.2	31.5	17.5%
Sep-15	1156.0	918.8	38.5	30.6	20.5%
Oct-15	1105.5	897.4	35.7	28.9	22.2%
Nov-15	939.2	814.7	31.3	27.2	13.3%
Dec-15	888.6	779.3	28.7	25.1	12.3%
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%

<b>May-16</b>	1047.3	798.7	33.8	25.7	23.8%
<b>June-16</b>	1077.4	862.6	35.9	28.8	20.0%
<b>July-16</b>	1185.5	932.3	38.2	30.1	21.4%
<b>Aug-16</b>	1184.4	952.7	38.2	30.7	19.5%
<b>Sept-16</b>	1156.0	923.4	38.5	29.8	20.1%
<b>Oct-16</b>	1105.5	846.2	35.7	27.3	23.5%

The chart below is from the L.A. Times on-line, dated November 1, 2016. Note that the City has surpassed the State average in July, August and September of this year.

### Statewide water savings

Percentage decrease in usage compared with the same month in 2013



Source: State Water Resources Control Board

@latimesgraph/cs

By Matt Stevens

The Table below shows the City's water usage in acre-feet every month from 2012 to present. This past October had lower water use than the 4 prior years.

	2012	2013	2014	2015	2016
<b>Jan</b>	810.5	717.6	865.5	769.7	638.8
<b>Feb</b>	717.7	669.2	736.8	775.8	663.6
<b>Mar</b>	852.5	821.7	781.4	895.9	706.9
<b>Apr</b>	842.7	962.9	929.0	920.8	742.0
<b>May</b>	962.8	1047.3	1155.9	869.6	798.7
<b>Jun</b>	969.2	1020.8	1038.6	841.7	862.6
<b>Jul</b>	1031.3	1185.5	1210.6	929.0	932.3
<b>Aug</b>	1207.5	1184.4	1169.6	976.6	952.7
<b>Sep</b>	1138.6	1060.6	1089.9	918.8	923.4
<b>Oct</b>	984.3	1006.1	1037.5	897.4	846.2
<b>Nov</b>	892.0	865.7	878.7	814.7	*
<b>Dec</b>	621.0	822.5	632.2	779.3	*
<b>TOTAL AF/YR</b>	13,042.1	13,377.3	13,539.7	12,404.0	9,661.2*

\* Temporarily using same water consumption as November and December of 2015

### Long-Term Water Use Efficiency Policy

The Public Works Water Conservation Subcommittee (Subcommittee) and staff met in October to continue the discussion of the Excessive Water Use Policy. Staff is working with the Subcommittee to finalize the proposed policies and will be presenting to the item to the City Council during a Study Session in December 2016.

# **Attachment 1**

**Monthly Consumption Report Submitted to the State Water Resources Control Board  
September 2016**

Reporter	Debby Figoni
Urban Water Supplier/Number	Beverly Hills City of (640)
Reporting Month	0916
Stage/Mandatory	Stage D Yes
Days Outside Irrigation	2
Total Potable Water Production	923.4 AF
2013 Same Month Production	1156 AF
CII Water	221.5 AF
Commercial Agricultural Water	0 AF
Commercial Agricultural Water 2013	0 AF
Recycled Water	0 AF
Non-revenue Water	64.6 AF
Residential Use Percentage	69 %
Population	51403
Estimated R-GPCD	164.2
Number Complaints	2
Number Follow-ups	114
Number Warnings	40
Rate Penalties	0
Other Penalties	0

Enforcement Actions	<p>During the month of September, there were 2 public complaints. There were 40 cases of watering on the wrong day or excessive watering. Additionally, the Water Conservation Administrator and her team conducted 12 site visits with residential high water users, customers with potential leaks and residents requesting landscape and irrigation assistance. They also communicated with 145 customers with potential water leaks. Consistently, about ninety-percent of these leaks are immediately repaired and the additional 10% are in progress for repair. There were no notices of violation issues in September 2016. Due to the City's self-certified 0%, the City no longer has surcharges associated with our customer's water use. A new excessive water use policy with fines is in the process of being developed as are new, aggressive outreach</p>
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efforts.

Actions Taken

Raised rates, Instituted surcharges, Reduced allowed outdoor irrigation days, Restricted allowed outdoor irrigation times, Instituted new prohibitions on specific water uses, Instituted stricter prohibitions on specific water uses, Instituted use of behavioral modification programs, Instituted use of SmartMeters for data tracking and enforcement, Increased penalties for water waste, Increased leak detection and repair actions, Increased conservation personnel ,Increased conservation program budget, Increased conservation program scope

Implementation  
Comments

The City is in the process of creating an excessive water use policy as well as updating and expanding our water efficiency ordinance. We continue to disseminate outreach materials educating our customers on water efficiency, how to find leaks, water trees, and efficiency irrigation lawn. These flyers are available all around the City and on our website. We continue to offer irrigation and landscape audits. A top priority is contacting customers with continuous flow issues through our personalize and aggressive program. Upcoming program to find and fix continuous flows in HOA's. Recent article in the City's quarterly newsletter on finding and repairing leaks. Water conservation team working hard to help all water customers use water efficiently through conservation programs, education and outreach.

Qualification

Monthly production is calculated from local production and Metropolitan Water District (MWD) purchases. The percentage of residential use is calculated using the volume of water consumed by residential accounts compared to monthly production. Because the City of Beverly Hills uses a 60-day billing cycle, percentage of residential use reflects consumption based on the July 2015 ratio. Commercial, industrial, and institutional use is calculated as a percentage of monthly production, using the formula  $100 - [\text{Percent Residential Use in August 2015}] - [\text{Percent Non-Revenue Water}]$ . Non-revenue water is estimated to be 7% of total monthly production. This percent residential use estimate will be updated once September 2016 data becomes available.

# **Attachment 2**

## 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: 10/25/2016
Accounts	Year	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	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	475.6	476.5	449.9	432.6	394.0	328.0	
	% Change	-13%	-23%	-29%	-28%	-28%	-25%	-23%	-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	169.2	189.5	184.0	188.5	174.2	175.8	
	% Change	-16%	-15%	-20%	-23%	-24%	-22%	-24%	-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	187.1	209.9	199.7	198.7	168.4	162.4	
	% Change	-4%	-3%	-7%	-10%	-13%	-13%	-12%	-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	29.8	29.9	28.9	29.3	24.8	21.9	
	% Change	-22%	-36%	-46%	-49%	-45%	-42%	-39%	-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	1.2	1.0	0.9	0.9	1.0	1.0	
	% Change	N/A	N/A	468%	47%	36%	58%	61%	-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	66.1	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: 10/25/2016			
Accounts	Year	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	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%	51%	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%	18%	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%	20%	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%	0.1%	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%	7%	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.

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

		<i>Water Consumption by Account Type</i>							Units: AF					Prepared: 10/25/2016				
Accounts	Year	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15					
City of Beverly Hills	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					
Accounts	2015/16	11.5	9.5	11.6	12.8	15.5	17.8	20.8	20.7	19.4	19.7	16.4	14.1					
	% Change	-32%	-50%	-58%	-59%	-52%	-47%	-44%	-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

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

# **Attachment 3**



# **Attachment 4**

