



CITY OF BEVERLY HILLS

PUBLIC WORKS SERVICES DEPARTMENT

MEMORANDUM

TO: PUBLIC WORKS COMMISSION

FROM: Debby Figoni, Conservation Administrator
 Josette Descalzo, Environmental Compliance & Sustainability Programs Manager
 Michelle Tse, Planning and Research Analyst

DATE: May 12, 2016

SUBJECT: UPDATE ON WATER CONSERVATION EFFORTS AND PENALTY SURCHARGE APPEALS PROCESS

ATTACHMENT:

1. State Water Resources Control Board Monthly Report – March 2016
2. Monthly Consumption Report
3. Metropolitan Water District – Water Device Rebate Program
4. Metropolitan Water District – Turf Removal Rebate Program

This report is to provide an update on the staff activities related to the City’s Water Conservation and Outreach efforts.

City Water Usage Reductions for April 2016 (preliminary)

The following table shows water consumption for the City during the last several months. In April 2016, the City used 742.5 Acre Feet (“AF”) compared to 969 AF in April 2013; this equates to a 23.4% reduction. For comparison purposes, the table also shows the average water AF usage per day during each month.

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

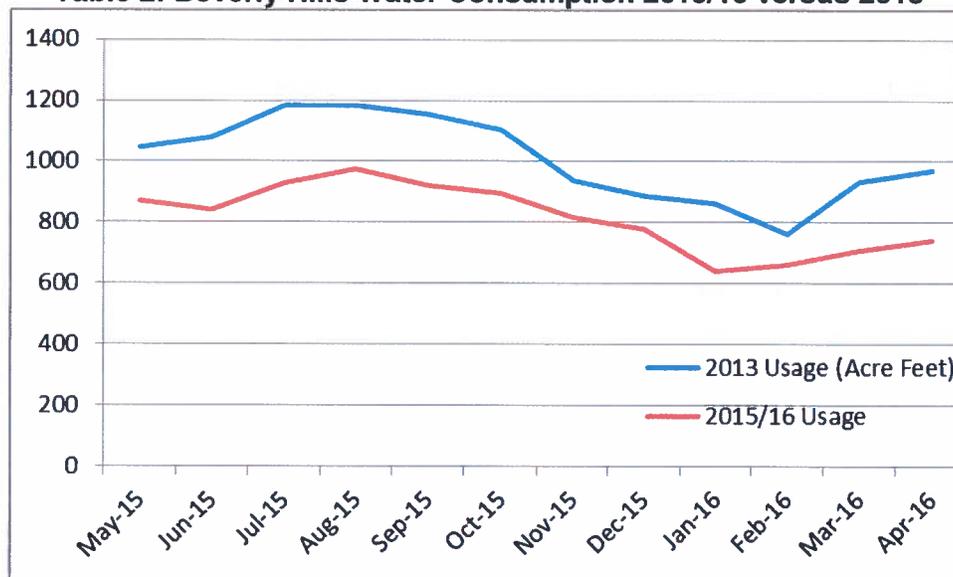
Month	2013 Usage (Acre Feet)	2015/16 Usage (Acre Feet)	2013 Average Usage Per Day (Acre Feet)	2015/16 Average Usage Per Day (Acre Feet)	Percentage Reduction Compared to 2013
May-15	1047.3	869.6	33.78	28.1	17.0%
Jun-15	1077.4	841.7	35.91	28.1	21.9%
Jul-15	1185.5	929.0	38.24	30.0	21.6%
Aug-15	1184.4	976.6	38.21	31.5	17.5%
Sep-15	1156.0	918.8	38.53	30.6	20.5%

Table 1: Summary of Beverly Hills Water Use Reductions Submitted to the State Resources Control Board (cont.)

Month	2013 Usage (Acre Feet)	2015/16 Usage (Acre Feet)	2013 Average Usage Per Day (Acre Feet)	2015/16 Average Usage Per Day (Acre Feet)	Percentage Reduction
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%

Table 2 shows the City's water usage trend by volume during the last several months compared to Year 2013. Although the City has not achieved the mandated 32% reduction target, the City has generally reduced its water usage (by volume) each month when compared to the Year 2013 baseline.

Table 2: Beverly Hills Water Consumption 2015/16 versus 2013



City's Water Conservation Outreach and Enforcement Efforts

Staff has been focusing efforts on notifying customers of potential leaks on their properties, conducting site visits, and working with customers with surcharge issues. On a regular basis, City staff sends out letters to customers with the highest continuous water flow. The letter provides information on the potential leak and now contains a list of where leaks might be. The City's Water Conservation Administrator calls the customers with the largest flow, typically

anything over 1 gallon a minute, most of whom are unaware of their leak. The most common reasons for continuous water flow are running toilets, broken sprinkler valves, leaking water heaters, broken service lines or auto fillers for pools, ponds and fountains. Both residents and businesses continue to promptly resolve their water issues.

Dedicated, one-on-one outreach to the customers who have the highest continuous flow has resulted in an impressive decrease in water waste. When the Water Conservation Administrator started in late January, there were 19 continuous flows over 1 gallon a minute, with the average being 1.9 gallons per minute. As of April 28, there are only four flows over 1 gallon a minute with the average being 1.8 gallons a minute. This is an 80% reduction or savings of 2,538,576 gallons of water per billing cycle.

Due to staff assistance, one single family home that was on the City's top 25 highest users a few months ago, was removed from this list and is presently not even on the City's 100 top users list. By repairing their leaks and watering wisely, this customer has reduced their water consumption by 70% compared to their 2013 usage.

During the month of April, the Water Conservation Administrator conducted 21 site visits with residential high water users, customers with potential leaks and residents requesting landscape and irrigation assistance. She also communicated with 52 potentially large leak customers. The vast majority of these leaks have been repaired and the balance is in progress for repair. Additionally, the Water Conservation Administrator has worked with dozens and dozens of residents and businesses working through the appeal process, educating them on how to use water wisely while waiting for their appeal to be reviewed. While outreach efforts continue to be focused on residential customers, water audits were also performed this past month at restaurants, hotels and large buildings. Staff is currently developing additional programs that are more suitable to address the unique circumstances of multifamily and commercial customers.

Additionally, a total of eight outdoor water conservation cases were reported from March to April 2016. No Notice of Violation (NOV) were issued this past month. Please note that a NOV is pre-requisite to the issuance of a criminal misdemeanor citation (used for continued violations).

Public Education Programs and Outreach

In April, staff presented to residents at the City of West Hollywood and at Metropolitan Water District's Spring Expo event.

Staff is working with representatives from the Beverly Hills Unified School District to develop and promote a 48-Hour Challenge promoting ways to "Conserve In Style". This contest is for all grades and offers students the option of creating a water message campaign via a poster, a video or through music.

Penalty Surcharges and Appeals Process Update

The Conservation Subcommittee (Chair Aronberg and Vice Chair Wolfe) continues to work with staff to re-evaluate the penalty surcharge appeals process and next steps for conservation programs.

Additionally, a request for funding appropriation is agendaized for the May 17, 2016 City Council meeting. It is recommended that funds collected via penalty surcharge assessments will be used to further support the City's conservation program. The penalty surcharge framework was developed to cover three expenses: (1) MWD Tier 2 water rates if the City did not reduce water

use; (2) State fines for not achieving the mandated 32% conservation target; and (3) costs associated with accelerating City conservation programs.

The Conservation Subcommittee (Chair Aronberg and Vice Chair Wolfe) of the Public Works Commission are in support of augmenting resources to support conservation efforts. The funds would cover expenses related to the establishment of an augmented customer service team, field audit team, Senior Management Analyst, and an interim project manager.

The following outlines the augmented resources:

- A Conservation customer service team will be specifically devoted to handling conservation inquiries, review customer water use patterns, and develop action plans to assist customers.
- Staff resources for Utility Billing to better streamline the processing of water penalty surcharge appeals and adjusting customer accounts accordingly.
- The field audit team to meet with customers on-site to analyze water use both inside and outside the property to assist with conservation efforts.
- A Senior Management Analyst to focus efforts on managing and administering the penalty surcharge process and related appeal applications.
- An interim project manager is needed to oversee water data management related to operations and Water Tracker, the online tool currently available for customers to track and monitor water usage. The water data management component requires specialized skills that are beyond the scope of existing City staff.

ATTACHMENT 1

Monthly Consumption Report Submitted to the State Water Resources Control Board – March 2016

Report made on Apr 14 2016 4:42PM by Debby Figoni
 Supplier Beverly Hills City of (640)
 Reporting Month 0316
 Stage/Mandatory Stage D Yes
 Days Outside Irrigation 2
 Number Complaints 9
 Number Follow-ups 90
 Number Warnings 9
 Number Penalties 0

Enforcement Comments During the month of March, there were 9 public complaints. There were 20 reported cases of water waste. Additionally, the Water Conservation Administrator conducted 24 site visits with residential high water users, customers with potential leaks and residents requesting landscape and irrigation assistance. She also communicated with 46 large potential leak customers. Ninety-percent of these leaks have been repaired and the additional 10% are in progress for repair. These numbers are included in the contact-follow up section, totaling 90. There were no notices of violation issues in March 2016, but the City had 9 written warnings (mailed letters and/or door hangers).

Water Production in 0316 706.9 AF
 2013 Same Month Production 932.4 AF
 CII Water 159.7 AF
 Commercial Water Agricultural 0 AF
 Commercial Water 2013 Agricultural 0 AF
 Non-revenue Water 49.5 AF
 Residential Use Percentage 70 %

Qualification Comments 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 March 2015 ratio. Commercial, industrial, and institutional use is calculated as a percentage of monthly production, using the formula $100 - [\text{Percent Residential Use in March 2015}] - [\text{Percent Non-Revenue Water}]$. Non-revenue water is estimated to be 7% of total monthly production. This percent residential use estimate will be updated once March 2016 data becomes available.

Population 42157
 Estimated R-GPCD 124.1

Implementation Comments Created educational outreach flyers. Posted 125 water conservation light pole banners on major streets including Wilshire Boulevard and Rodeo Drive. Increased calls to customers with continuous water flow issues. Water Loss Issues: (1) Hydrant issue, 158,700 gallons lost; (2) Reservoir draining for repair, 115,000 gallons.

Recycled Water 0 AF

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

		<i>Water Consumption by Account Type</i>											Units: AF	Prepared: 5/5/2016
Accounts	Year	Jan-16	Feb-15	Mar-15	Apr-15	May-15	Jun-15	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	361.6	436.1	449.2	454.9	435.1	456.9	476.5	449.9	432.6	394.0	328.0	
	% Change	-13%	0%	-2%	-9%	-18%	-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	174.3	194.7	186.8	186.3	177.4	186.2	189.5	184.0	188.5	174.2	175.8	
	% Change	-16%	-6%	-7%	-9%	-13%	-16%	-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	169.3	192.6	186.3	188.3	182.6	201.9	209.9	199.7	198.7	168.4	162.4	
	% Change	-4%	6%	6%	4%	-4%	-8%	-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	24.0	28.3	28.2	27.4	25.3	28.0	29.9	28.9	29.3	24.8	21.9	
	% Change	-22%	-11%	-22%	-30%	-36%	-43%	-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	1.3	1.4	1.7	1.7	1.8	1.8	1.0	0.9	0.9	1.0	1.0	
	% Change	N/A	N/A	787%	169%	126%	142%	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	51.6	42.8	68.6	11.0	19.5	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	782.0	895.9	920.8	869.6	841.7	929.0	976.6	918.5	897.4	814.7	779.3	
	% Change	-26%	3%	-4%	-5%	-17%	-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

		<i>Water Consumption by Account Type</i>												Units: AF	Prepared: 5/5/2016
Accounts	Year	Jan-16	Feb-15	Mar-15	Apr-15	May-15	Jun-15	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%	46%	49%	49%	52%	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%	22%	22%	20%	21%	21%	20%	19%	20%	21%	21%	23%		
Commercial Accounts	2013	20%	21%	19%	18%	19%	18%	18%	18%	17%	18%	19%	20%		
	2015/16	26%	22%	21%	20%	22%	22%	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%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%		
	2015/16	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	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%	7%	5%	7%	1%	2%	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.

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

		<i>Water Consumption by Account Type</i>											Units: AF	Prepared: 5/5/2016
Accounts	Year	Jan-16	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	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	11.5	15.2	18.7	19.5	19.1	17.9	19.9	20.7	19.4	19.7	16.4	14.1	
	% Change	-32%	-20%	-32%	-37%	-41%	-47%	-47%	-47%	-46%	-39%	-34%	-36%	

Volume Consumed: Example with Star/Aclara Data

Table 4, below, demonstrates the total volume of consumption per month for prior months where billing data is not yet available. Unfortunately, estimates do not reliably describe consumption. These estimates rely on Total Consumption Reports in the Star Database, which does not include data for all accounts and may also include erroneous data that skews consumption.

For example, Star Total Consumption Reports exclude consumption for any meter that has had at least one missed-read, which means a variable number of accounts report data. The "# ACCTS" row indicates the number of accounts for which data was provided, which varies depending on the number of missed reads. This results in distorted estimates by account type. For example in January 2016 only 5,982 single-family residential accounts reported data whereas 6,679 reported data during April. Furthermore, one account that reports an erroneous read could potentially skew the entire data set. The volume consumed in April, 405.7 acre-feet, is one example of a potentially skewed set.

Table 4, All Accounts

		Water Consumption by Account Type				Units: AF	Prepared: 5/5/2016						
Accounts	Type	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16
Single-Family Residential Accounts	VOLUME (AF)	248.6	284.8	232.3	405.7	-	-	-	-	-	-	-	-
	# ACCTS	5,982	6,255	6,604	6,679	-	-	-	-	-	-	-	-
Multi-Family Residential Accounts	VOLUME (AF)	179.9	152.5	147.1	99.0	-	-	-	-	-	-	-	-
	# ACCTS	1,733	1,759	1,827	1,863	-	-	-	-	-	-	-	-
Commercial Accounts	VOLUME (AF)	146.3	158.2	254.1	157.1	-	-	-	-	-	-	-	-
	# ACCTS	1,224	1,250	1,341	1,357								
Municipal Accounts	VOLUME (AF)	14.7	16.1	17.7	21.1	-	-	-	-	-	-	-	-
	# ACCTS	189	196	206	213	-	-	-	-	-	-	-	-
Fire Service Accounts	VOLUME (AF)	1.4	1.2	2.2	3.0	-	-	-	-	-	-	-	-
	# ACCTS	727	737	758	769	-	-	-	-	-	-	-	-
No Designation in Star	VOLUME (AF)	3.2	4.3	3.9	4.4	-	-	-	-	-	-	-	-
	# ACCTS	246	248	264	265	-	-	-	-	-	-	-	-
Estimated Non-Revenue Water	VOLUME (AF)	44.7	46.5	49.5	51.9	-	-	-	-	-	-	-	-
Total	VOLUME (AF)	638.8	663.6	706.9	742.1	-	-	-	-	-	-	-	-

Total Water Consumption, Purchased and Produced

Table 5, 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 5. 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	742.1	-23.44%	132.1

* February 2016, a 29-day period due to the leap year, is compared to February 2013, a 28-day period. The State Water Resources Control Board has indicated that the leap year will be taken into account, but has not yet provided the City with a revised conservation percentage. Adjusting for the leap year, the City estimates a 16.0% February 2016 conservation percentage.

** Data for April 2016 is preliminary until final invoices are received from Metropolitan Water District.

ATTACHMENT 3

ATTACHMENT 4

METROPOLITAN WATER DISTRICT - Beverly Hills

Turf Removal Rebate Program - April 2016

RESIDENTIAL	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16							Total
Pending Applications	25	29	18	10	5	5	3	2	1	3	2							103
Total SF of Projects	41,750	45,548	24,716	11,816	4,378	5,399	5,635	2035	1786	3531	1341							147,935
Building Type																		
Single Family Detached	23	27	16	10	5	5	3	2	0	3	2							96
Multi-tenant	2	2	2	0	0	0	0	0	1	0	0							7