



CITY OF BEVERLY HILLS
PUBLIC WORKS DEPARTMENT

MEMORANDUM

TO: PUBLIC WORKS COMMISSION

FROM: Debby Figoni, Water Conservation Administrator *DF*
Erick Lee, Deputy Director of Public Works
Michelle Tse, Planning & Research Analyst

DATE: September 8, 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
4. August 11, 2016, Public Works Commission Report:
Water Conservation

This report provides an update on staff activities related to the City's water conservation policy, programs and outreach efforts. Staff is also seeking the Commission's recommendation regarding permanent water use restrictions to promote the City's long-term water efficiency efforts.

City Water Conservation Outreach and Enforcement Efforts

The Water Conservation Team continues to focus efforts on customers with continuous flow issues, calling residents and sending letters. Staff is creating a flyer that will provide our customers with the information they need to help locate their continuous flow issue(s) and know when it has been repaired.

This past month, staff helped bring awareness of massively flowing toilets to several large homeowners associations, a few businesses and over a dozen residents. One leaky toilet can waste up to 200 gallons of water an hour!

The Water Tracker program has proven to be a water saver for many. Customers are quickly notified of excessive use or continuous flows just by setting their thresholds in the settings section of Water Tracker.

During the month of August, the Water Conservation Administrator and her staff conducted nine site visits with residential high water users, customers with potential leaks and residents requesting landscape and irrigation assistance. The team also reached out to 93 potentially large leak customers and 37 customers with appeals, conservation or surcharge questions.

In August, no outdoor water conservation cases were reported by the public. Thirty-three residents were notified for irrigating on the wrong irrigation day. 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 State D.

Public Education Programs and Outreach

In August, the Water Conservation Administrator taught the last two Water Wise Landscaping Workshops focusing on drought tolerant plants. Feedback on the classes was excellent and more and more residents are interested in attending future workshops. Staff participated in the National Night Out events in Beverly Hills and West Hollywood via informational booths to distribute information promoting water conservation and answering customer questions.

The Water Conservation Bureau continues to educate everyone they communicate with. The continuous push to sign up for Water Tracker still exists. The most recent campaign is reminding residents to turn back the watering time on their irrigation controller this Fall. There is more outdoor water waste in the Fall and early Winter from water that is not needed due to the cooler weather and shorter days.

Staff will be using the City’s annual Metropolitan Water District (MWD) Member Agency Administered funds for large landscape water audits. These audits will help our larger residential customers irrigate their landscapes more efficiently. The cost of the audits will be shared by MWD, the City’s Water Conservation program and by the resident.

City Water Usage Reductions for August 2016

The following table shows water consumption for the City during the last several months. For the month of August, the City used approximately 945.1 Acre Feet (“AF”) compared to 1,184.4 AF in 2013. Note that this report was completed on August 30, 2016, before month end; therefore, the final consumption for August was estimated. The final usage will be reflected in next month’s report.* 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	33.78	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%
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%
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
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%
May-16	1047.3	798.7	33.8	25.7	23.8%
June-16	1077.0	862.6	34.7	28.8	20.0%
July-16	1185.5	932.3	38.24	30.1	21.4%
Aug-16*	1184.4	945.1*	38.21	30.5*	20.2%*

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	945.1*
Sep	1138.6	1060.6	1089.9	918.5	-
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	-
TOTAL AF/YR	13042.1	13377.3	13539.7	12404.0	7360.9

Penalty Surcharges and Appeals Process Update

All of the approximately 1,817 Level 1 appeals have been processed, except for four, which are pending due to further research.

Staff continues to work with the Hearing Officer to review the Level 2 appeals. Currently, there are over 350 Level 2 applications that are either pending review, in the process of being notified, and/or pending a hearing. Hearings are currently being scheduled for customers who have requested in-person meetings. Staff anticipates the Level 2 appeals will be completed by no later than October 2016.

Long-Term Water Use Efficiency Policy

The Conservation Subcommittee continues to work with staff to develop a policy for permanent water efficiency measures and a program to identify and educate excessive water users. This excessive water use approach is intended to promote water conservation and efficiency in lieu of penalty surcharge assessments. The City will continue to advocate for water efficiency and conservation practices to maintain the City's efforts conservation (i.e. a 20% reduction from baseline year 2013), but measure its efforts collectively as a water utility and not mandated reductions for each individual customer.

In order to address water use efficiency, updates to the Beverly Hills Municipal Code titled "Water Regulations, Title 9, Chapter 4, Article 3" will include permanent water efficiency measures and changes in the City's watering rules and violations. The updated ordinance will be called the "Water Efficiency and Water Supply Shortage Response Plan".

Proposed changes to the City's municipal code outline the following water use restrictions and will be in effect at all times, except for health and safety exceptions:

1. It is unlawful:

- a) to use spray irrigation anytime other than the scheduled hours of 5 p.m. to 9 a.m. Additional irrigation is allowed for thirty days following the installation of new plants, trees or grass if needed to prevent the landscape from dying with written permission from the Director of Public Works.
- b) to allow watering or irrigating of any lawn, landscape or other vegetated area in a manner that causes or allows excessive water flow or runoff onto an adjoining sidewalk, driveway, street, alley, gutter, ditch or adjacent property is prohibited.
- c) to irrigate ornamental turf on public street medians with potable water.
- d) to apply potable water to outdoor landscapes during and within 48 hours after measurable rainfall.
- e) to use potable water in decorative water features that do not recirculate the water.
- f) to allow loss of water through breaks, leaks or other malfunctions in the water user's plumbing or distribution system. After such escape of water has been identified, it shall be corrected as soon as possible, and no longer than 21 days of receiving notice from the Director of Public Works or his or her designee.
- g) to serve drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased.
- h) for restaurants, cafes and cafeterias not to use water-conserving dish wash spray valves.
- i) to install a Single Pass Cooling System. Installation of single pass cooling systems is prohibited in buildings requesting new water service.
- j) to irrigate with potable water landscapes of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission.
- k) for operators of hotels and motels not to provide guests with the option of choosing whether or not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guestroom using clear and easily understood language.
- l) for water customers to use more than two times their Maximum Applied Water Allowance (MAWA) and their allotted indoor water allowance.

- m) for public restrooms throughout the City and private bathrooms in hotels not to notify patrons and employees of water conservation goals.

2. It is legal to allow:

- a) exterior wash-down of vehicles in residential areas with the use of a low-volume, high-pressure nozzle or water efficient nozzle equipped with a shutoff valve; with a waterless commercial car product; or with an alternative plan that promotes water conservation and is approved in writing by the director of public works or his or her designee.
- b) exterior wash-down of vehicles for commercial enterprises with the use of a reclaimed water system which is defined as a system that collects wash water, treats and reuses it for further vehicle cleaning; with a waterless commercial car product; with an alternative plan that promotes water conservation and achieves at least a 20% reduction of water consumption and is approved in writing by the Director of Public Works or his or her designee; or is required by health and safety regulations, such as the cleaning of garbage trucks and vehicles to transport food.
- c) exterior wash-down of residential buildings shall be permitted with the use of a low-volume, high-pressure nozzle or water efficient nozzle equipped with a shutoff valve; with a commercial glass and window cleaner; or with a reclaimed water system. Wash-down can be performed no more than four times a year.
- d) exterior wash-down of commercial buildings shall be permitted with the use of a low-volume, high-pressure nozzle or water efficient nozzle equipped with a shutoff valve; with a commercial glass or window cleaner; or with a reclaimed water system. Wash-down can be performed no more than two times per month for retail, office and commercial building frontages, and no more than necessary to comply with health and safety laws and regulations for the building frontages of food service users.
- e) exterior wash-down of sidewalks for retail, office, and commercial buildings shall be permitted with the use of a low-volume, high-pressure nozzle or water efficient nozzle equipped with a shutoff valve; or use of a reclaimed water system. Wash-down can be performed no more than two times per month, or than necessary to comply with health and safety laws and regulations.
- f) exterior wash-down of sidewalks and pavement of outdoor food establishment areas shall be permitted with the use of a low-volume, high-pressure nozzle or water efficient nozzle equipped with a shutoff valve; or use of a reclaimed water system. Wash-down can be performed no more than necessary to comply with health and safety laws and regulations.
- g) exterior wash-down of residential sidewalks, walkways, driveways, parking areas, tennis courts, patios, and alleys are prohibited except where necessary to alleviate health and safety hazards, and then only with a low-volume, high-pressure nozzle or water efficient nozzle equipped with a shutoff valve; or by use of a hand-held bucket or similar container.

It is noted that these permanent water use regulations will complement the excessive water user policy that was previously presented to the Public Works Commission at its August 11, 2016, meeting. During the August meeting, the Commission was generally supportive of the framework, provided that the implementation details be further vetted by the Conservation Subcommittee and staff. For reference, a copy of the August 11, 2016, Commission report is included as Attachment 4.

The City's progressive stand on water efficiency promotes best management practices for the use of water at all times. The intent is that excessive water use customers will be notified and

provided educational materials to rectify their issues. Water customers that continuously exceed their water allowance will be subject to the City's enforcement measures. Measurement for excessive water use for water customers shall be tied to the State of California's Maximum Applied Water Allowance (MAWA) formula as well as assumptions for indoor water use. MAWA is an industry standard formula used to calculate reasonable outdoor water usage using various factors such as the evapotranspiration rate factor, evapotranspiration adjustment factor, landscaped area and a number converting square feet to gallons. For the purposes of helping to identify potential excessive water users, the City would apply the MAWA formula (for outdoor use) and assumptions for indoor use (i.e. a household of four would use 220 gallons per day). Note: the indoor baseline water use is 55 gallons per person per day derived from the State Water Resources Control Board. The City's assumptions for the water usage formula would fluctuate depending on the time of year and the City's drought stages. Identified customers failing to achieve their targeted usage may be subject to fines, which would vary depending on the drought stages enacted by the City Council.

Updates to the ordinance will still include Drought Stages A through E as part of the City's water shortage supply plan; however, the percentage reductions for each of the drought stages will be measured collectively as a City instead of individual water customers. In addition, the outdoor watering schedule (i.e. number of days) will vary in each of the drought stages and as determined by the Director of Public Works or his/her designee. The water usage factor and water use restrictions become more strict as the severity of the drought stage increases. If necessary, the Director of Public Works or his/her designee would also have the authority to adjust the indoor and outdoor water factor.*

Stage	Reduction % (Citywide, not per customer)	Indoor & Outdoor Water Factor *	Fine Amount	Other Comments
No Stage	-	200%	Administrative citation process	These are the permanent water restrictions, the new norm.
A	5%	175%	Administrative citation process	Include provisions to enact outdoor watering restrictions.
B	10%	150%	\$100	Include provisions to enact outdoor watering restrictions.
C	20%	125%	\$500	Include provisions to enact outdoor watering restrictions.
D	30%	100%	\$1000	Includes additional restrictions (i.e.: filling pools and stricter wash-down rules).
E			\$1000 and 6 months in jail	Catastrophic interruption of potable water supply declared by the city manager. Service interruption may occur to any customer to provide supply for health and safety needs.

Program Implementation and Future Drought Stage Adoption

Details related to the excessive water user program implementation are being finalized by staff and the Subcommittee. The basic framework will consist of reaching out to excessive water use

customers and providing proactive awareness and education. Staff will initially contact the customers who are preliminarily identified as excessive water users based on the water usage formula. A more comprehensive analysis will ensue, which could trigger educational outreach and professional water audits. Site visits and water conservation action plans will be provided to customers on an as-needed basis. In the interest of justice, excessive water use data for particular billing cycle(s) may be reviewed in the context of annual water usage to ensure customers are not unnecessarily penalized for anomalous usage. Violations may be given if a customer does not meet their allowed water usage and/or if their frequency of outdoor watering is in violation of the City's ordinance.

If a customer is not meeting their allowance, staff will monitor their use during subsequent billing cycles. If the customer appears to continuously exceed their water allowance, staff will provide additional outreach and assistance for the customer. An online tool will need to be created that allows customers to calculate their reasonable water use. Education and assistance is the main goal of this program. However, if the customer does not comply after ample assistance by staff, fines may be issued.

This general framework is currently under review by the City Attorney's office. Given the ongoing analysis, staff will provide an update regarding the City Attorney's findings and any other relevant information during the Public Work Commission's September 8, 2016, meeting.

Recommendation

The Staff and Conservation Subcommittee are seeking a Commission recommendation regarding permanent water use restrictions to be included in the City's municipal code.

The Conservation Subcommittee and Staff are also seeking a recommendation to reduce the City's Stage D drought declaration to Stage C (i.e. 20% citywide reduction compared to 2013), using a water usage factor of 175% to identify potential excessive water users, and instituting a two days per week watering schedule.

Based on the Commission's recommendation, staff will be presenting the overall conservation policy recommendation to the Public Work Liaisons for consideration on September 12, 2016. If directed by the liaisons, this item could be presented to the City Council at its Study Session on September 20, 2016.

Attachment 1

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. May 2016 estimates have been revised to reflect additional billing data and to correct an error in the 2015/16 total. June 2016 estimates will be available in October.

Table 1, All Accounts

		Water Consumption by Account Type					Units: AF	Prepared: 8/26/2016					
Accounts	Year	Jan-16	Feb-16	Mar-16	Apr-16	May-16	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	278.3	317.0	356.7	399.2	434.6	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	173.2	186.2	189.5	184.0	188.5	174.2	175.8
	% Change	-16%	-15%	-20%	-23%	-24%	-18%	-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	182.7	201.9	209.9	199.7	198.7	168.4	162.4
	% Change	-4%	-3%	-7%	-10%	-13%	-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	17.1	19.6	20.7	23.6	25.3	28.0	29.9	28.9	29.3	24.8	21.9
	% Change	-22%	-36%	-46%	-49%	-45%	-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	0.9	0.9	0.9	1.0	1.8	1.8	1.0	0.9	0.9	1.0	1.0
	% Change	N/A	N/A	468%	47%	36%	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	55.0	34.9	44.7	39.7	24.1	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. May 2016 estimates have been revised to reflect additional billing data and to correct an error in the 2015/16 total. June 2016 estimates will be available in October.

Table 2, All Accounts

		Water Consumption by Account Type					Units: AF	Prepared: 8/26/2016						
Accounts	Year	Jan-16	Feb-16	Mar-16	Apr-16	May-16	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%	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%	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%	23%	24%	22%	21%	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%	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%	0.2%	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%	8%	5%	6%	5%	3%	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. June 2016 estimates will be available in October.

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

		Water Consumption by Account Type					Units: AF	Prepared: 8/26/2016						
Accounts	Year	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-15	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	17.9	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

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

Attachment 2

Attachment 3

METROPOLITAN WATER DISTRICT - Beverly Hills

Turf Removal Rebate Program - August 2016

RESIDENTIAL	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16			Total
Pending Applications	25	29	18	10	5	5	3	2	1	3	2	0	5	1	1			110
Total SF of Projects	41,750	45,548	24,716	11,816	4,378	5,399	5,635	2035	1786	3531	1341	0	6287	440	785			155,447
Building Type																		
Single Family Detached	23	27	16	10	5	5	3	2	0	3	2	0	5	1	1			103
Multi-tenant	2	2	2	0	0	0	0	0	1	0	0	0	0	0	0			7

Attachment 4



CITY OF BEVERLY HILLS
PUBLIC WORKS DEPARTMENT

MEMORANDUM

TO: PUBLIC WORKS COMMISSION

FROM: Debby Figoni, Water Conservation Administrator
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DATE: August 11, 2016

SUBJECT: WATER CONSERVATION EFFORTS, PENALTY SURCHARGE APPEALS PROCESS AND LONG-TERM WATER USE EFFICIENCY PROGRAMS

ATTACHMENTS: 1. State Water Resources Control Board Monthly Report – July 2016
2. Monthly Consumption Report to Date
3. Metropolitan Water District – Water Device Rebate Program
4. Metropolitan Water District – Turf Removal Rebate Program

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 continues to focus on customers with continuous flow issues, calling residents and sending letters. The team is also targeting homeowners associations and apartment buildings. These continuous flow issues are more complex and challenging to pinpoint, but the payoff is often greater. Staff is ambitiously working their way down the living list to notify as many customers as possible. Staff has a process of calls and letters to notify customers of leaks and excessive irrigation. Outreach flyers continue to be great tools for those with continuous flow issues. The response from residents and businesses for the City's assistance is incredibly positive.

This past month, staff worked with several businesses and one of the City's large hotels to help them use water efficiently in their daily practices. Staff is tackling excessive watering by gardeners with calls and letters. Many residents are unaware that their gardener is not following the City's code of two day per week watering. Calls continue to trickle in asking if the City's two-day watering schedule will be increasing as LADWP and other water providers have done.

The Water Tracker program continues to be promoted and advertised. It has helped countless residents find their continuous flow issues within a matter of days. Presently, most customers are not aware that there are no longer surcharge fees. To help encourage water conservation efforts, other tools such as enhanced outreach will be used.

During the month of July, the Water Conservation Administrator and her staff conducted 14 site visits with residential high water users, customers with potential leaks and residents requesting landscape and irrigation assistance. The team also reached out to 118 potentially large leak customers and 34 customers with appeals, conservation or surcharge questions.

In July, a total of two outdoor water conservation cases were reported by the public. Furthermore, 76 residents irrigating on the wrong irrigation day were notified via a letter, including those staying within their 30% reduction target zone. 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 State D.

Public Education Programs and Outreach

In July, the Water Conservation Administrator taught two more Water Wise Landscaping Workshops focusing on drought tolerant plants. While the workshops were not packed with residents, the feedback on the classes was excellent. Two more workshops will take place in August. Ads promoting the workshops were placed in the Beverly Hills Weekly and The Beverly Hills Courier. To increase participation in the future, a partnership with Community Services is being considered.

The Water Conservation Team continues to educate everyone they communicate with. Our goal is to make our customers aware of water efficiency practices through entertaining and engaging education!

City Water Usage Reductions for July 2016

The following table shows water consumption for the City during the last several months. For the month of July, the City used 932.3 Acre Feet (“AF”) compared to 1,185.5 AF in 2013. For comparison purposes, the table below shows the average AF of water used daily each month.

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

The Table below shows the City’s water usage by volume (acre feet) from May 2015 to present compared to water usage in 2013. For 2016, the City has maintained a 22-percent average.

Month	2013 Usage (AF)	2015/16 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	33.78	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%
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%
Month	2013 Usage (AF)	2015/16 Usage (AF)	2013 Average Usage Per Day (AF)	2015/16 Average Usage Per Day (AF)	Percentage Reduction Compared to 2013
Apri-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	1077.0	862.6	34.7	28.8	20.0%
July-16	1185.5	932.3	38.24	30.1	21.4%

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	-
Sep	1138.6	1060.6	1089.9	918.5	-
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	-
TOTAL AF/YR	13042.1	13377.3	13539.7	12404.0	7360.9

The Chart below compares the City's monthly water usage every month from 2012 to present.

Water Use (AF) Per Month - Years 2012 - 2016



Penalty Surcharges and Appeals Process Update

With suspension of the penalty surcharges that went into effect on June 21, 2016, the City is no longer receiving Level 1 appeal applications. Staff has received approximately 1,817 Level 1 appeals, of which approximately 42 are in pending status.

There are approximately 712 Level 2 appeals that have been received, of which there are approximately 321 applications pending review. Staff has been working with the Hearing Officer to address this backlog. This backlog is attributed to pending modifications being made on Water Tracker’s functionality to view current usage versus historical water usage information on the “Penalty Surcharge” tab; this modification was completed and is currently being reviewed by Staff. It is anticipated that the Hearing Officer will be able to resume reviewing the Level 2 appeals later this month.

Long-Term Water Use Efficiency Policy

The Conservation Subcommittee has been working with Staff to develop a policy, which includes a framework for identifying “excessive water users” based on a set of variables. This approach is intended to promote water efficiency and conservation in lieu of penalty surcharge assessments for excess water users.

As part of the policy development process, various water agencies were contacted, including Moulton Niguel Water District, Los Angeles Department of Water and Power, Las Virgenes Municipal Water District, and the City of Santa Monica to provide insight on their programs for identifying and assisting high water use customers. Some of these water agencies use a “budget-based” approach in which each customer is allocated a certain amount of water use based on various factors such as the number of people per household, the agency’s set gallons of water used per person per day, Geographic Information System (GIS) estimated landscaped area to be irrigated, and evapotranspiration rates. Customers with circumstances beyond the

base assumptions submit exemption forms to adjust their water use budget. While this may be the most personalized and appropriate way for developing a customized base budget for each customer, it took approximately 1.5 to 3 years and hundreds of thousands of dollars for these agencies to implement a “budget based” program. The water rates for budget-based are based on tiers, with tier 1 being indoor use, tier 2 for efficient outdoor use, and the upper tiers for inefficient or excessive water use. Please note that the two agencies that implemented a budget-based approach also have a billing system that is able to handle this type of a personalized billing structure.

Other water agencies, like the Los Angeles Department of Water and Power (LADWP), use more general assumptions to initially target excessive water users. They take into consideration the lot size and landscaped area to evaluate customers’ water usage. Customers considered “excessive water users” using this framework are subject to LADWP staff review, which could include site visits, landscape audits, and/or customized action plans detailing the items to implement to become more water efficient. Fine issuance would be the last resort to get customers to comply with water efficiency efforts.

The Conservation Subcommittee evaluated each of these programs. Given the complexities of a budget-based approach and extended implementation timeframe, the Conservation Subcommittee felt that the approach used by LADWP is both effective and feasible to implement within a reasonable timeframe in order to maintain the City’s conservation progress.

To determine an appropriate water allowance for indoor use, agencies typically use the State of California average of 55 to 60 gallons per person per day. The average number of people per household seems to vary from 3 to 5 people depending on the location of the water agency.

To determine an appropriate water allowance for outdoor use, agencies seem to use the industry-accepted formula called the “Maximum Applied Water Allowance” (MAWA) which includes the following items:

Calculation Item	Description
LA	Landscaped area measured in square feet
ET _o	Evapotranspiration rate factor is based on water loss from evaporation in the soil and plant transpiration; based on inches per year (Los Angeles’ is 50.1”)
0.7	ET Adjustment Factor = Based on the water needed for native plants and some turf
0.62	Conversion factor converting square feet to gallons

Staff has been running various models to come up with appropriate factors for each of these elements to better represent average indoor and outdoor water usage for Beverly Hills water customers.

The general framework currently being discussed related to the “excessive water user” policy is that water customers who exceed the MAWA formula by a certain factor (e.g. 50% more than MAWA) could be considered excessive water users. After verification of property characteristics, these customers would be strategically contacted by City Staff for an onsite-visit to help educate and modify their in and outdoor water use practices. In the event of a declared drought, the factor used to determine excessive water user could be adjusted accordingly. For example, an “excessive water user” under non-drought conditions may be defined as a customer who

exceeds their MAWA by 50%, while a customer's water use may be considered excessive if they exceed their MAWA by 25% during drought conditions. This general framework is currently under review by the City Attorney's office. Given the ongoing analysis, Staff will provide an update regarding the City Attorney's findings and any other relevant information during the Public Work Commission's August 11, 2016 meeting.

The Conservation Subcommittee is committed to developing a solid, long-term water efficiency policy by first developing a framework to identify "excessive water users" and subsequently, updating the City's municipal code to promote water efficiency as the norm by limiting water uses during non-drought conditions. It is anticipated that changes to the City's municipal code will be discussed with the Public Works Commission at its September meeting.