

This presentation premiered at WaterSmart Innovations

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Water Cops and Robbers: Policing Unreasonable Water Use in L.A.

Damon Turney

Putting Customers First 

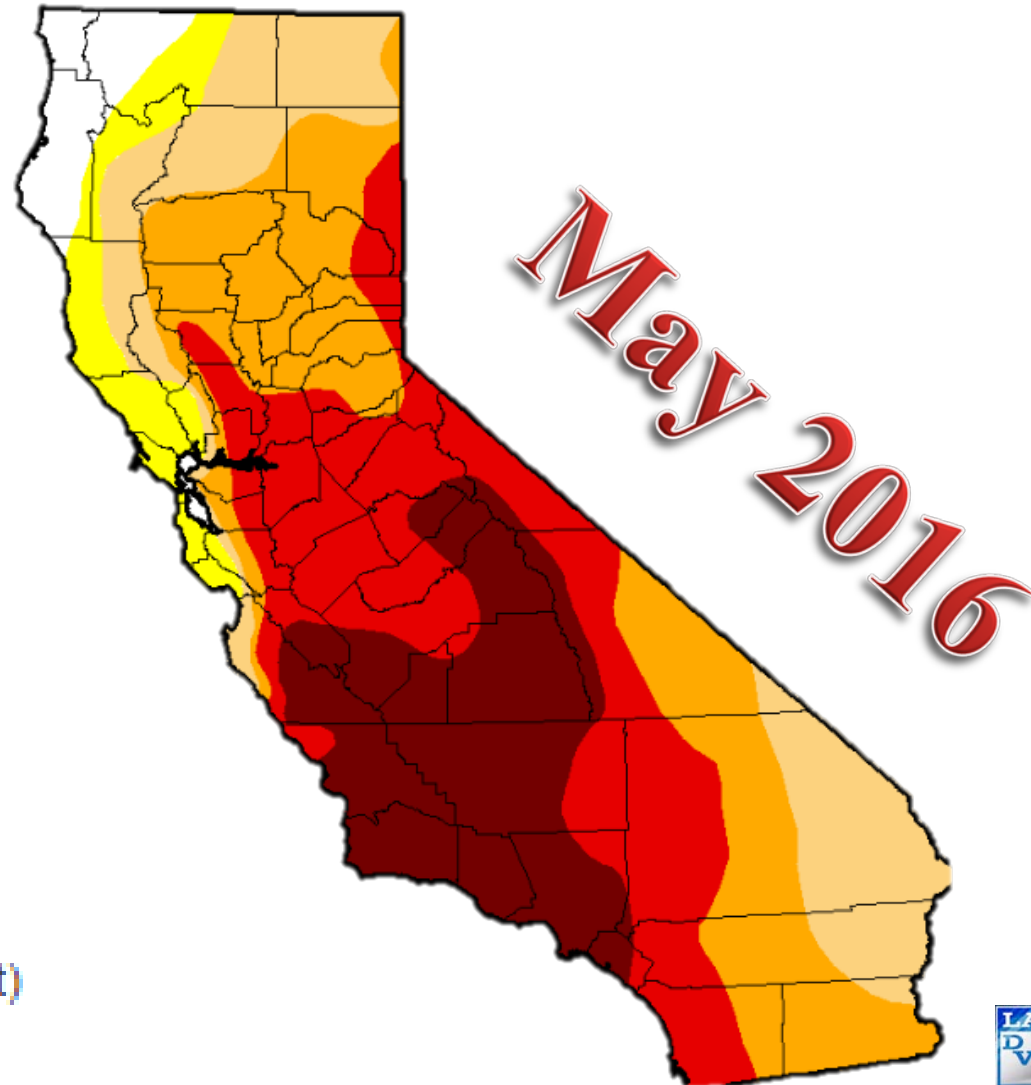
Overview

- The Drought and the Water CRU
- Ordinance Reporting and Enforcement
- Unreasonable Water Use Program Background
- Program Selection Process
- Desktop Audit
- Water Budget
- Water Use Determined “Unreasonable”
- Working with Customers
- Compliance
- Our Results
- Video!!

The Drought

Drought Severity

-  D0 (Abnormally Dry)
-  D1 (Moderate Drought)
-  D2 (Severe Drought)
-  D3 (Extreme Drought)
-  D4 (Exceptional Drought)



Water Conservation Response Unit



Water Waste Reporting

WATERWASTE@LADWP.COM



Water Shaming & Speculations

Who is the Wet Prince of Bel Air? Here are the likely culprits

Jerrold Perenchio

Report: California Homeowner Dubbed 'Wet Prince of Bel Air' Used 11.8M Gallons of Water in 1 Year

By ABC NEWS · Sep 22, 2016, 8:39 AM ET

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The suspect list narrows: Who is the 'Wet Prince of Bel-Air'?

Reveal

from The Center for Investigative Reporting

Program Background

- Per the Emergency Water Conservation Plan article of the Los Angeles Municipal Code, it is unlawful for any customer to waste, or engage in the unreasonable use of water.
- LADWP began enforcement in 2016
- Those who are fined are subject to CPRA
- Opportunity to educate our largest users
- Promote investment in efficient equipment

Program Selection Process

- Tier 4 List
- Desktop audits
- Budgeting
- Over/under

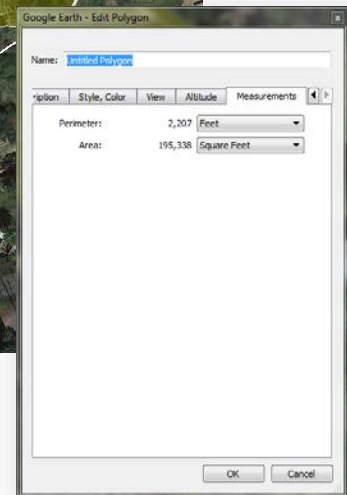
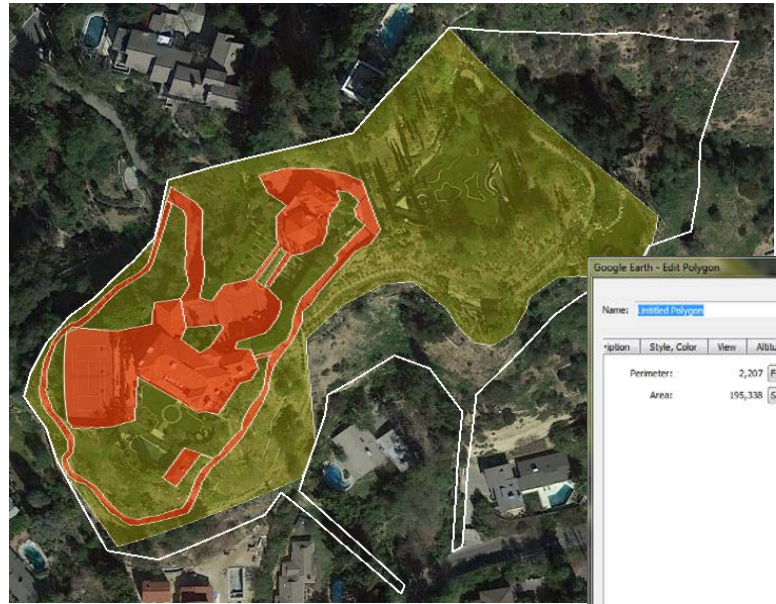
Program Selection Process

- Raw Data
 - Includes only Tier 4 customers
 - Nearly 50,000 accounts!
 - Vetted to get usable data – i.e. remove cancelled bills
 - Weed out non-residential accounts
 - Sorted by Daily HCF
 - Comparison done during highest ET period
 - Easier to collect data
 - Most generous budgeting period

Desktop Audit

- Measurement

Use Zimas, NavigateLADWP, and Google to locate property boundaries and assess what area is irrigated (No credit for non-irrigated areas.)

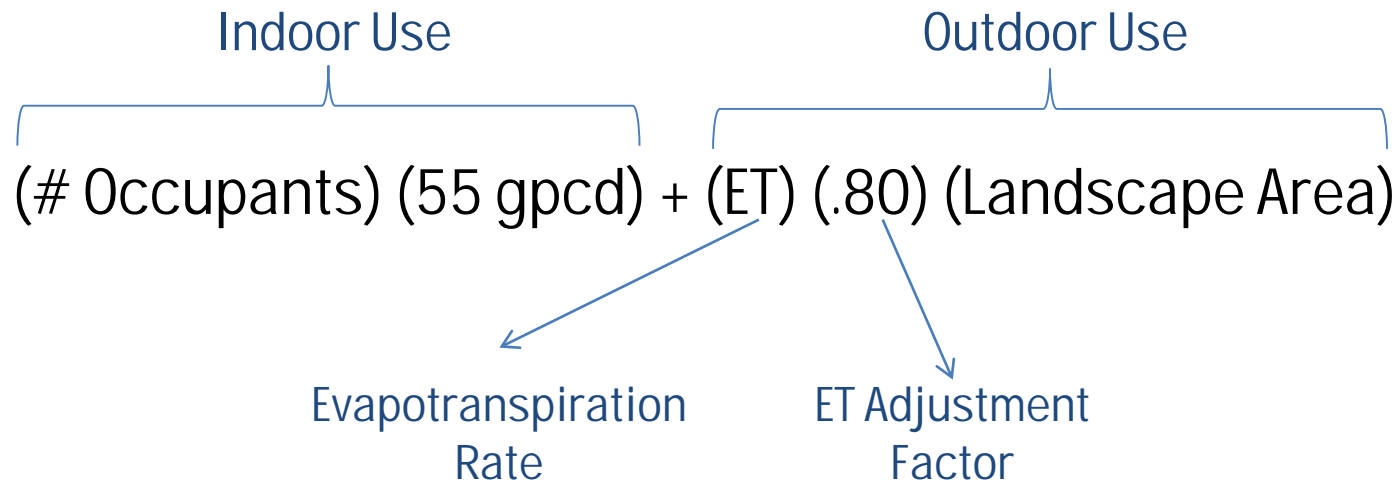


- Lot sizes are verified or corrected for our records
- Google Earth records the area of the different color layers
- Area measurements are entered into Excel template

Desktop Water Budget

Using Industry Standard Methodologies

- Indoor Budget: 55 gallons per person per day (SBx7-7)
- Outdoor Budget: State Model Water Efficiency Landscape Ordinance

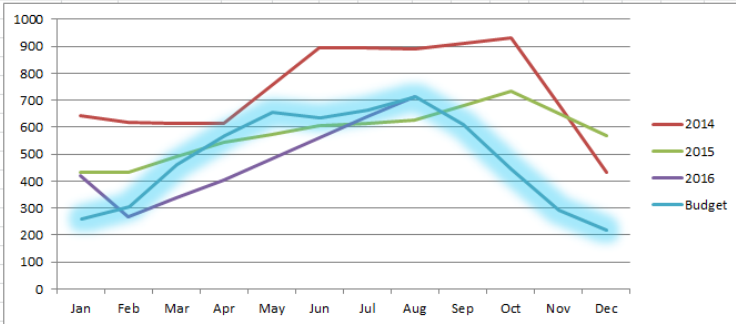


Water Budget

- Consumption Report

- 3 year consumption history from all services is recorded from CCB and compared to seasonality curve based on lot size, ET, and household size

Consumption												Consumption 2722 Roscomare														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
2013		292.5	431	570	677.75	786	830	875	902.5	931	799	668	2013		333		709		976		1097		1153		795	
2014	642.25	617	614.8	613	754.25	896	894	892	911.5	931	682	434	2014		755		756		1128		1128		1226		491	
2015	433.5	433.5	488.5	544	574.25	605	616	626	679.5	733	652	571	2015		530		675		854		843		1016		759	
2016	419.75	269	336.8	405	483.25	562	638	715					2016		401		527		739		941					
Budget	262	307	461	571	657	636	664	716	613	445	292	220														
yearly budget	5845			daily	16	avg daily for last 12 months						8.07														




Start Date	End Date	Days	Status	Current Amount	Payoff Amount	UOM	Billable Service Quantity	Average Daily Service Quantity
06-23-2016	08-22-2016	60	Frozen	\$6,726.68	\$6,726.68	Hundred Cubic Feet	941.000000	15.68
04-22-2016	06-23-2016	62	Frozen	\$5,501.67	\$5,501.67	Hundred Cubic Feet	739.000000	11.92
02-24-2016	04-22-2016	58	Frozen	\$3,354.52	\$3,354.52	Hundred Cubic Feet	527.000000	9.09
12-23-2015	02-24-2016	63	Frozen	\$2,448.43	\$2,448.43	Hundred Cubic Feet	401.000000	6.37
10-22-2015	12-23-2015	62	Frozen	\$4,594.62	\$4,594.62	Hundred Cubic Feet	759.000000	12.24
08-21-2015	10-22-2015	62	Frozen	\$6,177.35	\$6,177.35	Hundred Cubic Feet	1016.000000	16.39
06-23-2015	08-21-2015	59	Frozen	\$5,115.63	\$5,115.63	Hundred Cubic Feet	843.000000	14.29
04-23-2015	06-23-2015	61	Frozen	\$5,155.59	\$5,155.59	Hundred Cubic Feet	854.000000	14.00
02-25-2015	04-23-2015	57	Frozen	\$4,025.63	\$4,025.63	Hundred Cubic Feet	675.000000	11.84
12-23-2014	02-25-2015	64	Frozen	\$3,112.93	\$3,112.93	Hundred Cubic Feet	530.000000	8.28
10-22-2014	12-23-2014	62	Frozen	\$2,830.83	\$2,830.83	Hundred Cubic Feet	491.000000	7.92
08-21-2014	10-22-2014	62	Frozen	\$7,122.83	\$7,122.83	Hundred Cubic Feet	1226.000000	19.77
04-23-2014	08-21-2014	120	Frozen	\$13,037.85	\$13,037.85	Hundred Cubic Feet	2256.000000	18.80
04-23-2014	06-23-2014	61	Canceled	\$5,808.73	\$5,808.73	Hundred Cubic Feet	1009.000000	16.54
12-30-2013	04-23-2014	114	Frozen	\$8,645.74	\$8,645.74	Hundred Cubic Feet	1511.000000	13.25
10-25-2013	12-30-2013	66	Frozen	\$4,521.91	\$4,521.91	Hundred Cubic Feet	795.000000	12.05
08-21-2013	10-25-2013	65	Frozen	\$6,520.29	\$6,520.29	Hundred Cubic Feet	1153.000000	17.74
06-21-2013	08-21-2013	61	Frozen	\$0.00	\$0.00	Hundred Cubic Feet	1097.000000	17.98
04-23-2013	06-21-2013	59	Frozen	\$0.00	\$0.00	Hundred Cubic Feet	976.000000	16.54
02-22-2013	04-23-2013	60	Frozen	\$0.00	\$0.00	Hundred Cubic Feet	709.000000	11.82
12-21-2012	02-22-2013	63	Frozen	\$0.00	\$0.00	Hundred Cubic Feet	333.000000	5.29
10-22-2012	12-21-2012	60	Frozen	\$0.00	\$0.00	Hundred Cubic Feet	510.000000	8.50
08-21-2012	10-22-2012	62	Frozen	\$0.00	\$0.00	Hundred Cubic Feet	1061.000000	17.11
06-21-2012	08-21-2012	61	Frozen	\$0.00	\$0.00	Hundred Cubic Feet	1004.000000	16.46
04-23-2012	06-21-2012	59	Frozen	\$0.00	\$0.00	Hundred Cubic Feet	871.000000	14.76
02-23-2012	04-23-2012	60	Frozen	\$0.00	\$0.00	Hundred Cubic Feet	465.000000	7.75
12-22-2011	02-23-2012	63	Frozen	\$0.00	\$0.00	Hundred Cubic Feet	489.000000	7.76
10-21-2011	12-22-2011	62	Frozen	\$0.00	\$0.00	Hundred Cubic Feet	359.000000	5.79
08-22-2011	10-21-2011	60	Frozen	\$0.00	\$0.00	Hundred Cubic Feet	1017.000000	16.95
06-22-2011	08-22-2011	61	Frozen	\$0.00	\$0.00	Hundred Cubic Feet	1194.000000	19.57

- History shows efficient and inefficient periods and spikes in usage

Water Use Determined "Unreasonable"

- The Desktop Audit – Over Budget

Street Address					
Zip Code	90210				
# of Occupants	3				
Estimated Actual Lot	73287				
Estimated Irrigated Area	112000				
Pool	1362				
Fountain	131				
Non irrigated area	32049				
Estimated Irrigated Area	81444				
ET ZONE	FACTOR				
Zone 2/MED	6.7				
Notes					
					
<p>Formula for Budget - Outside (Irrigated Landscape * Highest ET factor for high season * 2 * 0.8 adjustment factor * 0.62333 conversion factor) / 748 gallons per HCF / 62 days</p> <p>Formula for Budget - Inside (number of occupants * 55 gallons per day) / 748</p>					
Outdoor Budget	14.3127				
Indoor Budget	0.22				
High Season Budget, Round to closest HCF =	14.53	HCF per DAY =	886.5	HCF for July - August	
Current Usage =	26.26	HCF per DAY =	1602	HCF for July - August	
81%	OVER BUDGET				

Working with our Customers

- Outreach
 - Notification Letter
 - Email Updates
 - Phone calls
 - Home visits
 - Conservation Plan
 - Techniques, devices, and rebates to reduce water use.
Establish a reasonable timeline for results.

Working with our Customers

- Water Customer Conservation Plan
 - Water Use Analysis
 - Recommendations
 - Techniques, devices, and rebates to reduce water use.
 - Establish a reasonable timeline for results.

Recommendations & Required Actions:

Recommend a Weather Based Irrigation Controller: Even though the controller may not be changed on a regular basis, it will give you a daily adjustment on your watering schedule. Consider an indoor controller, along with moisture sensors, with a rain sensor for your lawn area. They also come with a rain sensor that will shut off automatically if there is a rain incident. Check with your contractor for controllers that would work best.

Indoor*	# of Devices	Efficient Y/N	Outdoor	# of Devices
Toilets	12	Not known	Irrigation Stations	many
Showerheads	9	Not known	Irrigation Controller	1
Faucets	Unknown	Not known	Sprinkler Heads	many
Dishwasher	Unknown		Drip Lines	1
Clothes Washer	1	Y	Fountain	Yes
Jacuzzi	1	n/a	Swimming Pool	1

Compliance

- Implement Conservation Plan
- Monthly Meter Reads
- Make Improvements
- Meet Budget
- Ongoing Monitoring

Compliance

- Failure to Comply
 - Per Ordinance, Escalating Penalties

Penalty Schedule B

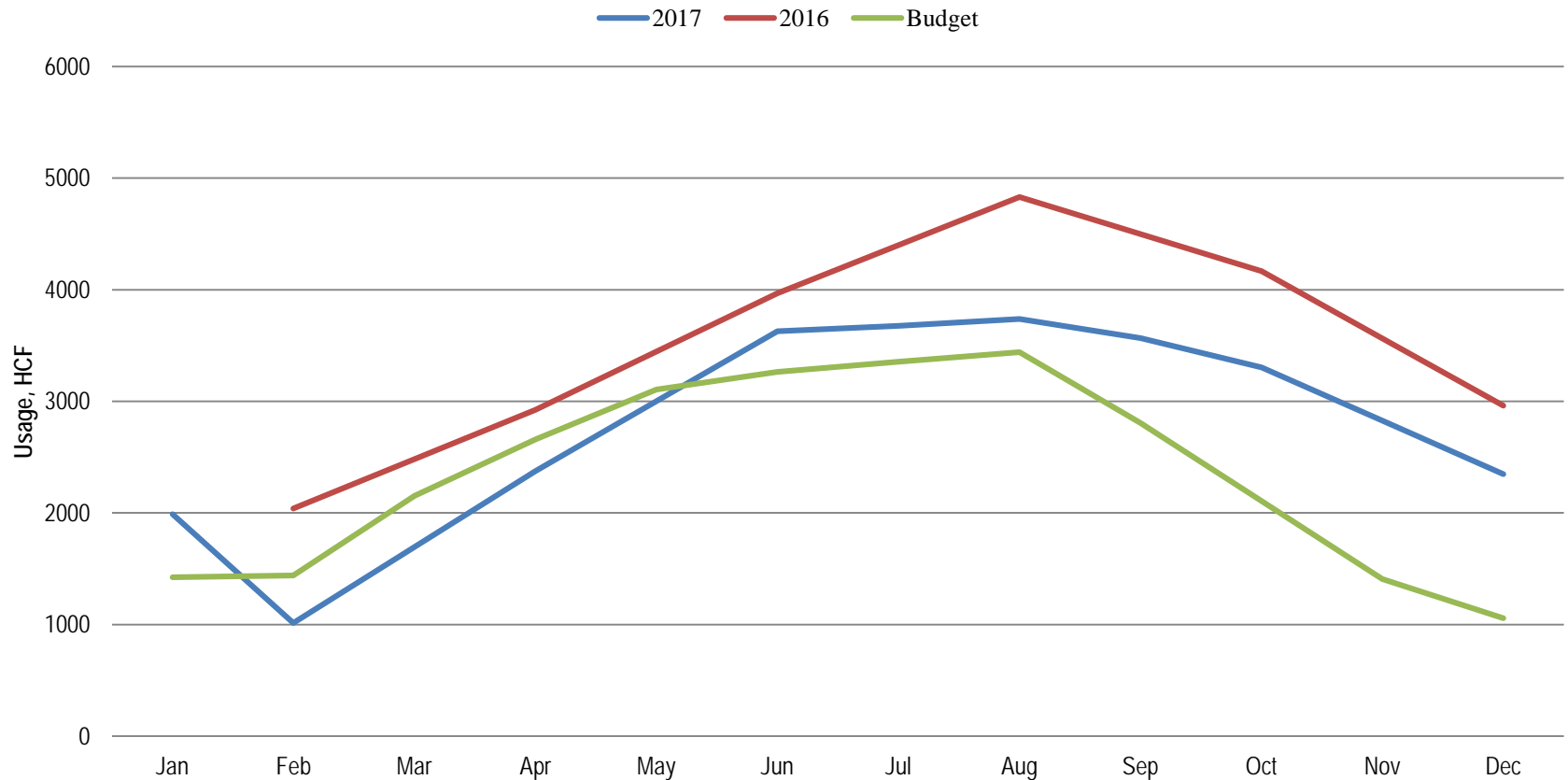
Number of Consecutive Months with Violation	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
Violation during months 1-5	N/A	\$1,000	\$2,000	\$5,000	\$10,000	Board Authority
Violation during months 6-11	N/A	\$2,000	\$4,000	\$10,000	\$20,000	Board Authority
Violation during months 12-17	N/A	\$3,000	\$6,000	\$15,000	\$30,000	Board Authority
Violation during months 18-23	N/A	\$4,000	\$8,000	\$20,000	\$40,000	Board Authority

Our Results

- Customer Responses
- Techniques Implemented
- Water Saved
- \$ Saved for Customer

Water Use is Down

Unreasonable Water Use Totals



Consumption is down 21% through August as compared to last year.
(3,711,015 gallons)

Projected 6,061,979 gallons for the year from only 5 customers!





JIMMY
Kimmel
LIVE!