

# **General Manager's Proposed Budget & Rates FY 2016 and FY 2017**

Board Workshop #2  
April 14, 2015

# Workshop Agenda



- Infrastructure replacement
- Rate sensitivity analysis
- Conservation activities
- Financial impact of 20% reductions
- Excessive use penalty

# Infrastructure Replacement



1. Expand pipeline replacement economic analysis
  - Consider pipe replacement occurring at intermediate points, not “time zero” but sooner than 60 years
  - Explain other assumptions
2. Provide information on KPI selection for various asset classes
3. Discuss changes to CIP with more or less funding

# Economic Analysis Assumptions

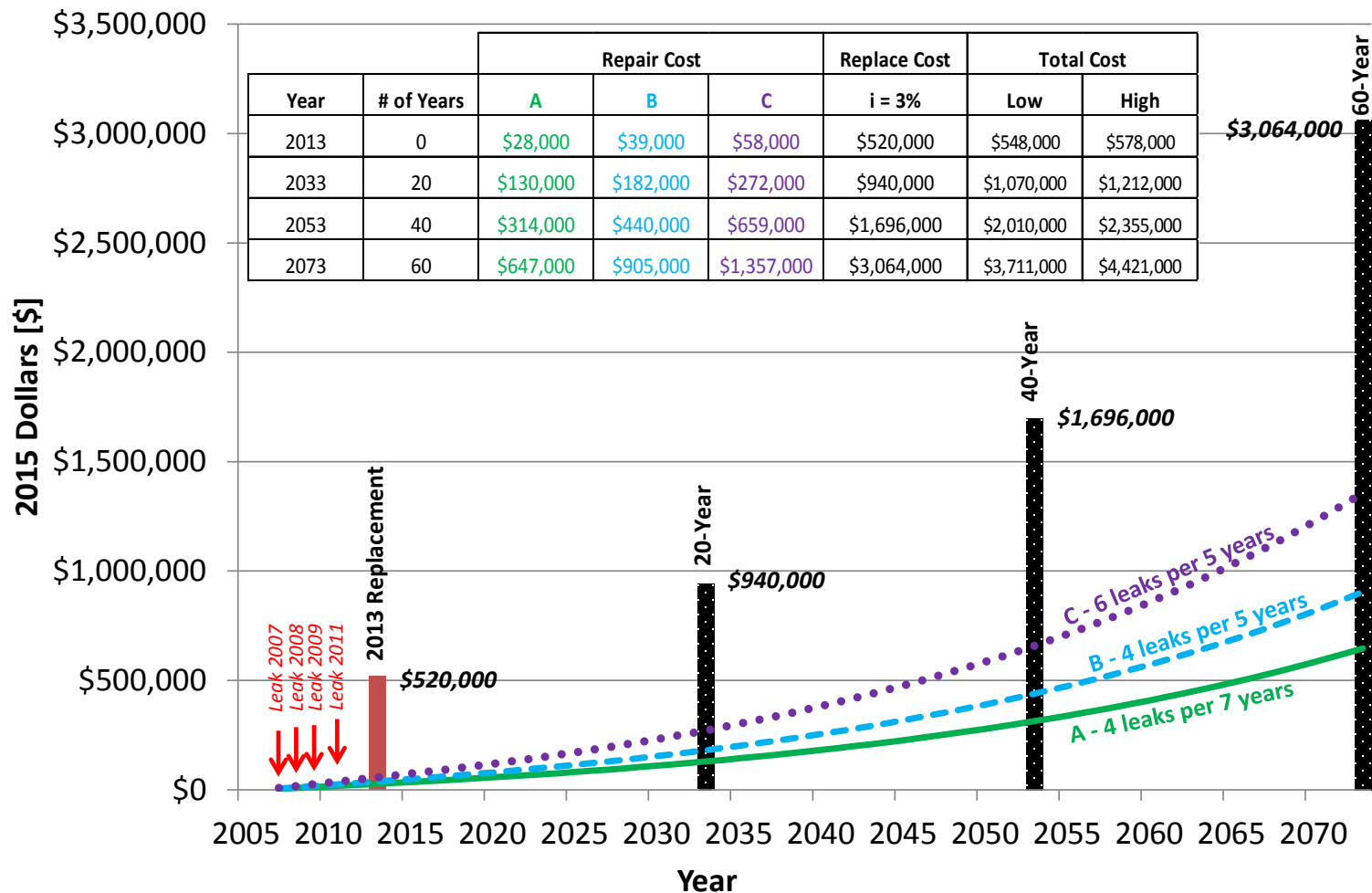


1. Past break rate is a good predictor of future break rate
  - This basic relationship has been observed for many years
  - As more data analyzed, it appears break rates tend not to remain constant but to grow over time; this strengthens the case for prompt replacement
2. Effective interest rate = 3%
  - Unit cost growth for infrastructure has outpaced inflation, growing in recent years at about 8%/yr
  - Borrowing cost is 5%/yr
  - Effective rate is the difference, 3%
3. A new pipe will have few or no breaks for many years after installation

# Cost-Effectiveness Example, Refined and Expanded



**Best Ave, Oakland - Repair Cost vs. Replacement Cost Summary  
20, 40, and 60-Year Increments**



# Current KPI's



- Replace 10 miles of pipe per year
- Recoat, replace or remove 3 steel tanks per year
- Rehabilitate or replace 3 pumping plants per year

# KPI Logic



For each asset, Long-term KPI depends on:

- Inventory (mileage or count) of asset
- Average life of asset in years between rehab or replacement
- $KPI = \text{Inventory} / \text{Average life}$
- However in the short term, appropriate rate may vary. Our pipes have not yet reached their expected average life so current KPI of 10 is much lower than long-term value of 40.

Asset	Inventory	Average life (years)	Long-term KPI
Small-diameter pipe	4,000 miles	100	40
Steel tank coating	83	25	$3.3 = 3$
Pumping plants	136	40	$3.4 = 3$

# Rate Sensitivity Analysis



	FY16	FY17	Annual Change in Rate Revenue (\$M)	Five Year Change in Rate Revenue (\$M)
Proposed	8.0%	7.0%	-	-
1% Increase	8.0%	8.0%	\$4	\$16
1% Decrease	7.0%	7.0%	-\$4	-\$20

- *A 1% decrease would result in Debt Service Coverage Ratio below the Board's policy target.*
- *Would require additional \$4 million draw from Rate Stabilization Fund.*



# Impact on Capital Investment



- 1% Increase—potential CIP acceleration:
  - Water treatment plant improvements
  - Start Central Reservoir earlier
  - Rehab 4 reservoirs/yr instead of 3
- 1% Decrease—CIP deferral:
  - Mokelumne Aqueduct relining and-or Leland Reservoir replacement

# Water Conservation Activities



- State Drought Regulations
- Demand Reduction Goals—How We Get There
- Water Waste Reporting And Enforcement

# Governor's Executive Order

## April 1, 2015



### Call for SWRCB regulations:

- 25% mandatory reduction statewide thru February 28, 2016 (sliding scale by residential gpcd level).
- Restrictions for campuses, golf courses, cemeteries to reduce irrigation consistent with reduction targets.
- Prohibit irrigation of ornamental turf on public street medians with potable water.
- Prohibit potable water irrigation for newly constructed homes and buildings that is not drip or microspray.
- Direct urban water agencies to develop rate structures and pricing to maximize conservation
- Require urban water suppliers to provide monthly information on water use, conservation and enforcement

# Governor's Executive Order

## April 1, 2015 (cont.)



- DWR to update Model Water Efficient Landscape Ordinance:
  - new irrigation efficiency standards
  - promotion of graywater, stormwater capture
  - additional limits on ornamental turf
  - reporting on implementation and enforcement
- DWR to provide funding for 50 million sq. ft. of lawn replacement in underserved communities
- CEC and DWR to implement and provide funding for statewide appliance rebates
- CEC to adopt emergency standards for plumbing fixtures for new and existing buildings

# State Board Proposed Mandatory Reduction Levels



EBMUD  
84 →

Residential-GPCD*	# of Agencies Reporting	Proposed Mandatory Reduction Level**
<55	18	10%
55-110	126	20%
111-165	132	25%
>165	135	35%

\* As of Sept. 2014

\*\* Designed to achieve 25% statewide

# State Board Implementation Timeline

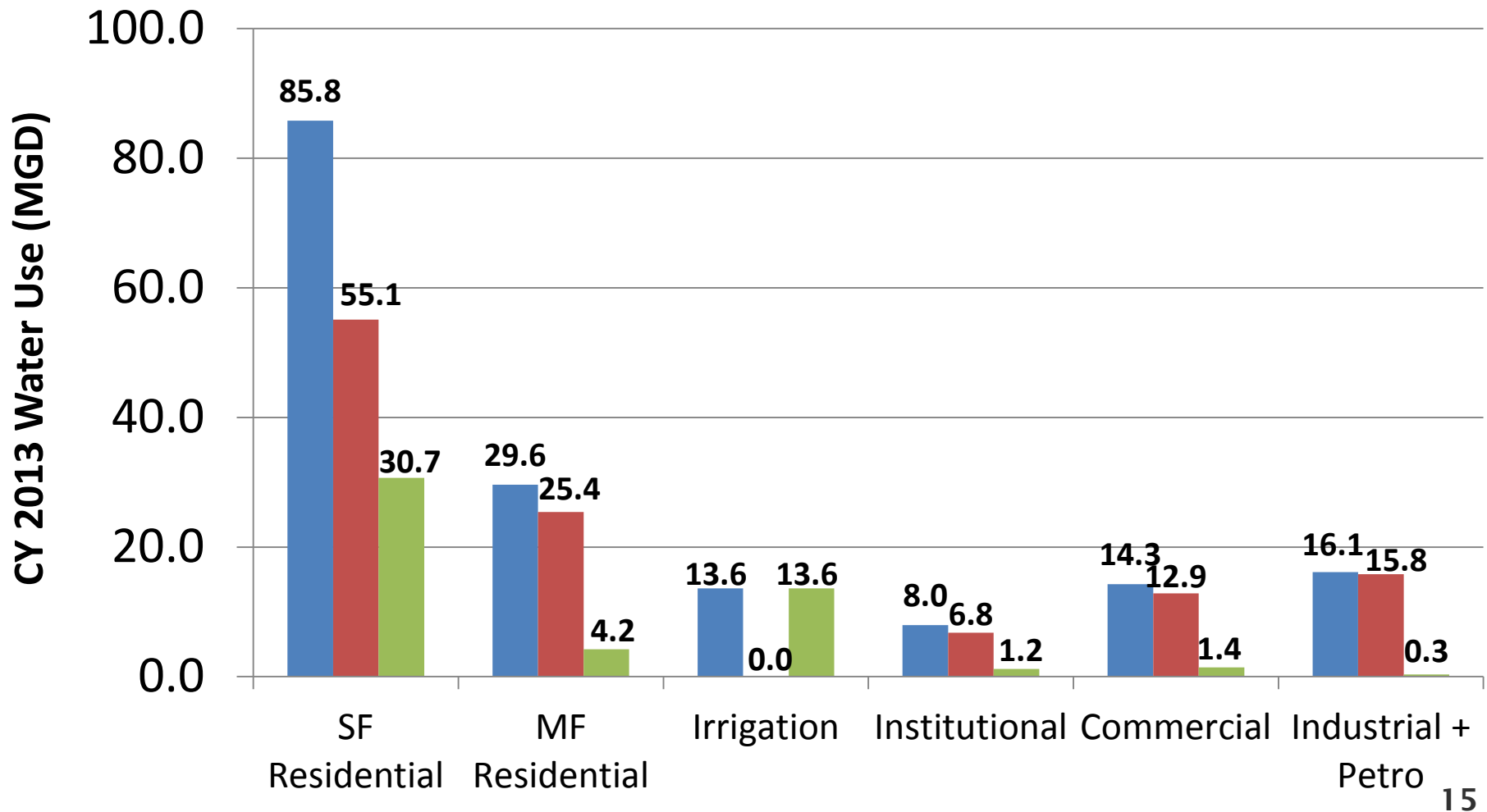


- Draft regulatory framework and request for public comment—April 7, 2015
- Release of draft regulation for informal public comment—April 17, 2015
- Emergency rulemaking formal notice—April 28, 2015
- Board hearing and adoption—May 5 or 6, 2015

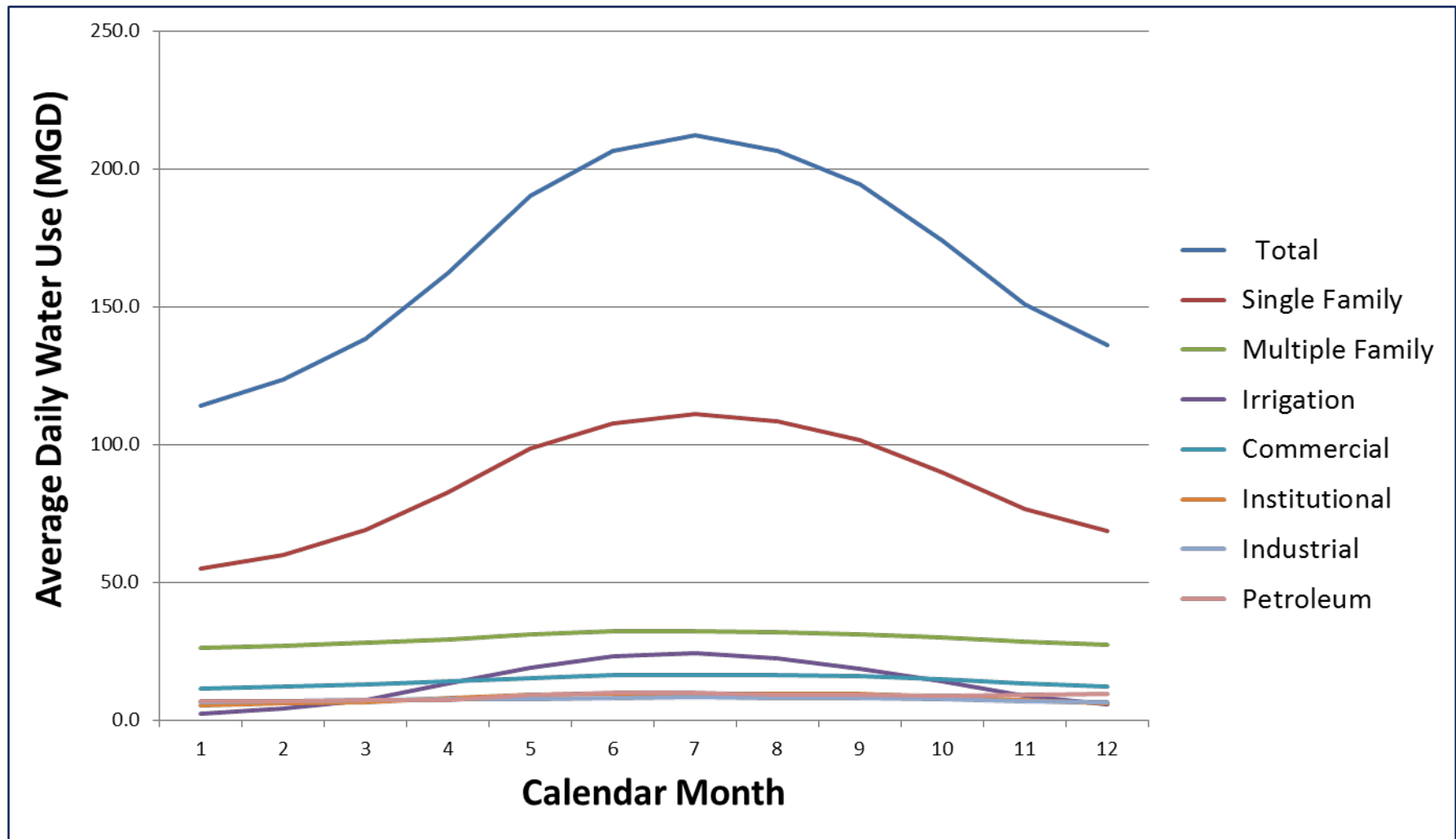
# CY 2013 Customer Water Use



■ CY2013 Total    ■ CY2013 Indoor Use    ■ CY2013 Outdoor Use

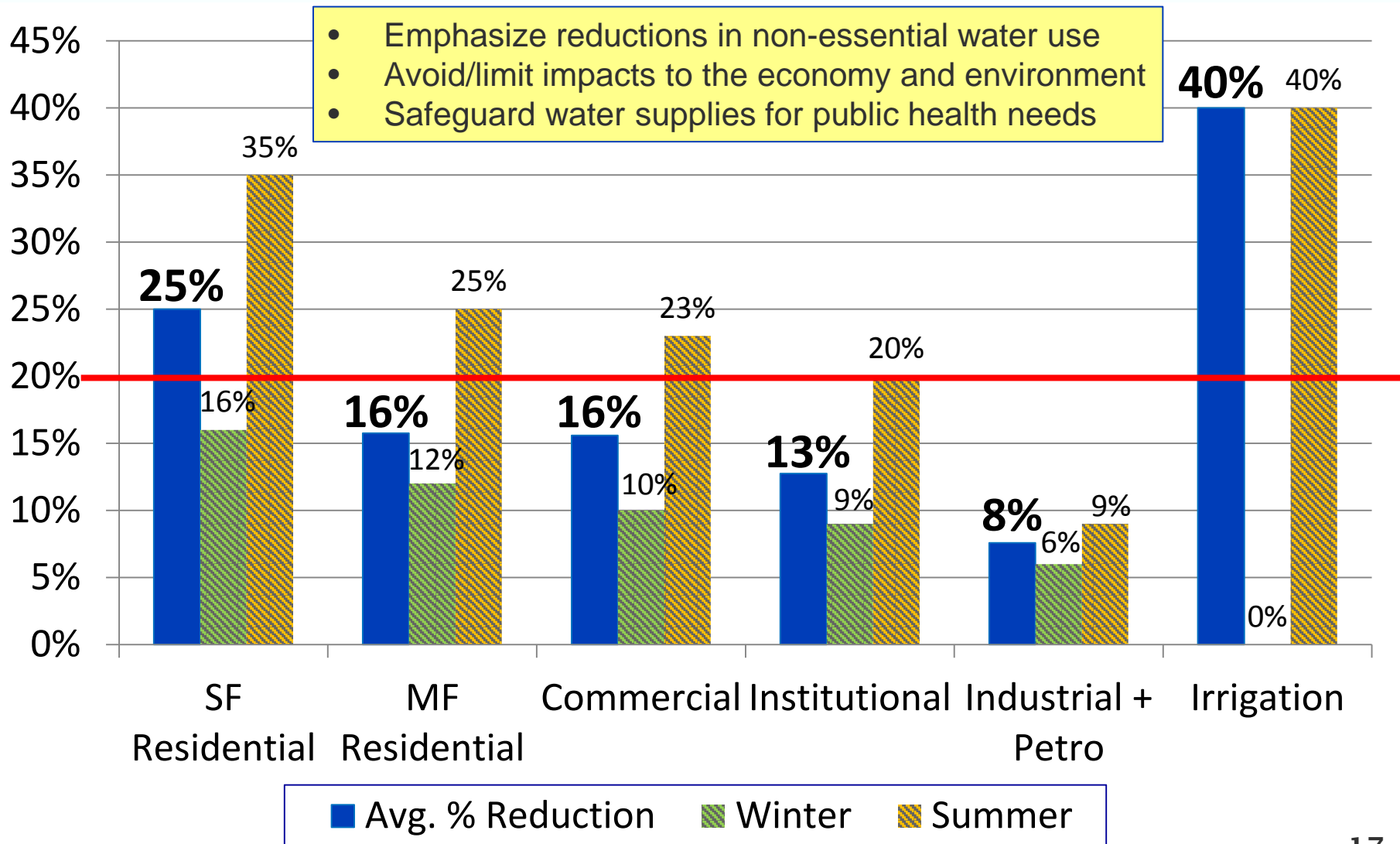


# CY2013 Seasonal Water Use by Customer Category

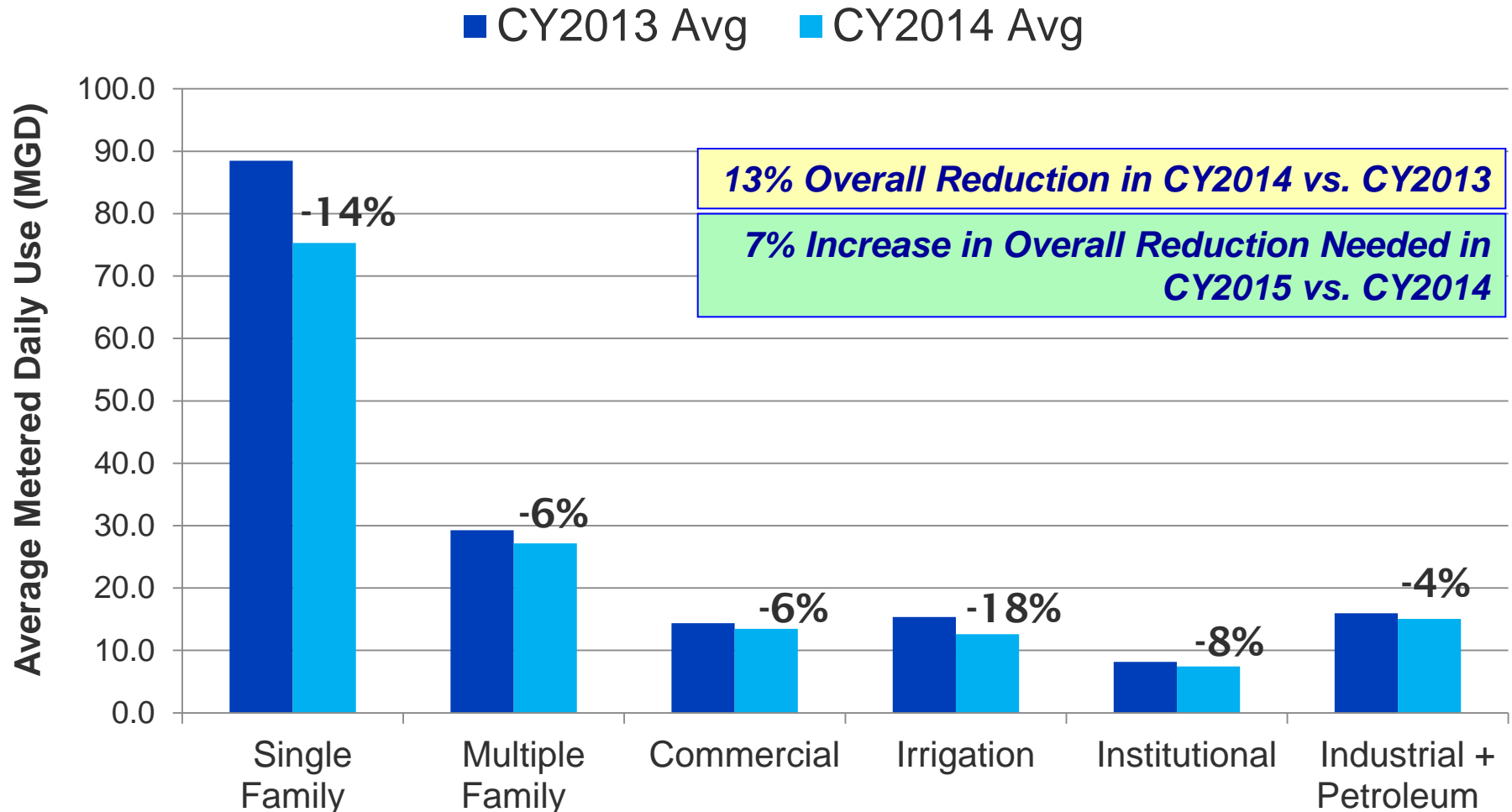




# Water Conservation Goals to Achieve 20% System-wide Reduction



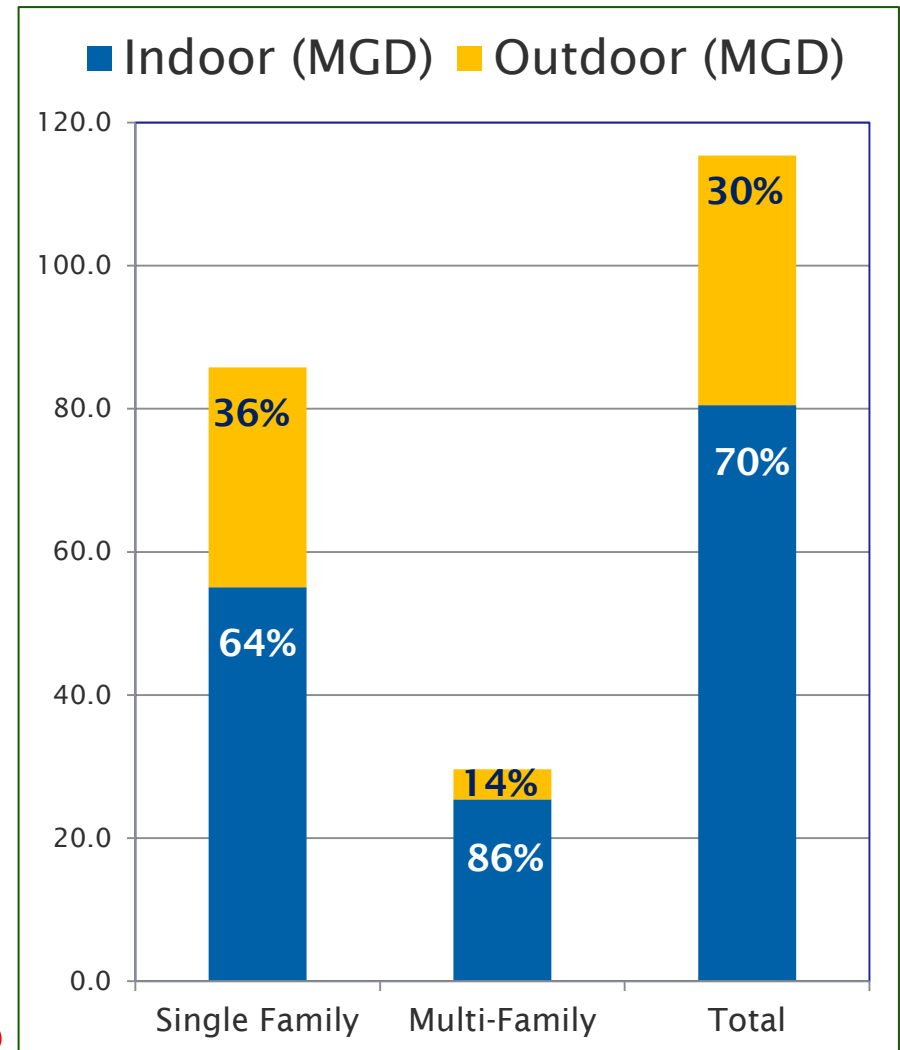
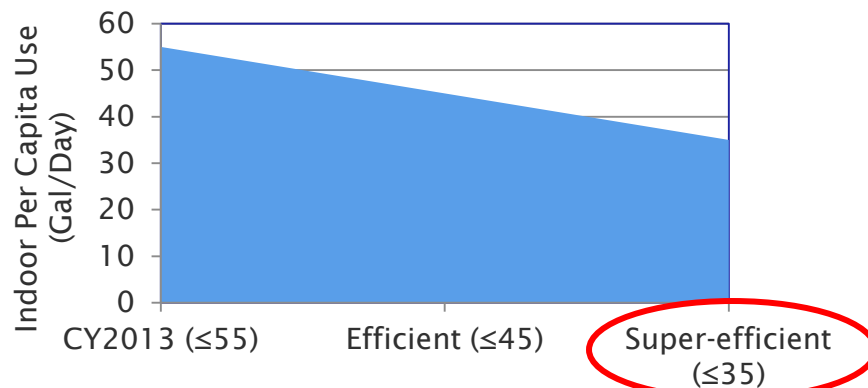
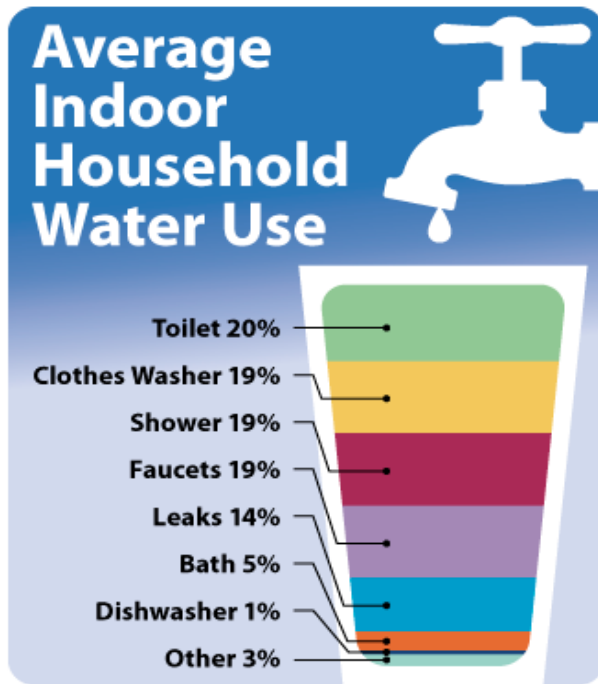
# Average Metered Customer Use CY2013 and CY2014



Notes:

(1) Feb data begins on the 11<sup>th</sup> when EBMUD voluntary water use reductions were adopted.

# Average Single-Family & Multi-Family Residential Use (2013)



# Large Irrigation Account 2013 Water Use Statistics



Customer Type	2013 CCF	% of Total	2013 Landscape Water Use (80% ET Target)
Cities	1,345,809	25%	87%
HOAs	1,674,803	31%	77%
Golf Courses	949,118	17%	59%
Offices	492,762	9%	62%
Schools	271,161	5%	85%
Cemeteries	228,197	4%	86%
Parks	111,395	2%	84%
Apartments	105,940	<2%	125%
Shopping Ctr.	105,298	<2%	201%
Medians	66,915	1%	207%
Counties	58,254	1%	84%
State Bldgs.	19,654	<1%	84%
Hotels	18,714	<1%	202%
<b>Total</b>	<b>5,448,020</b>	<b>96%</b>	<b>76%</b>

# Irrigation Account Landscape Water Use Reduction Scenarios



Existing Use	Target Use	Target % Reduction
≥100%	55%	≥40%
80%	55%	30%
70%	55%	20%
60%	55%	10%
55%	55%	0%



# Water Waste Reporting and Enforcement



**Water  
Waste  
Reported**

**First  
courtesy  
call or  
site visit**

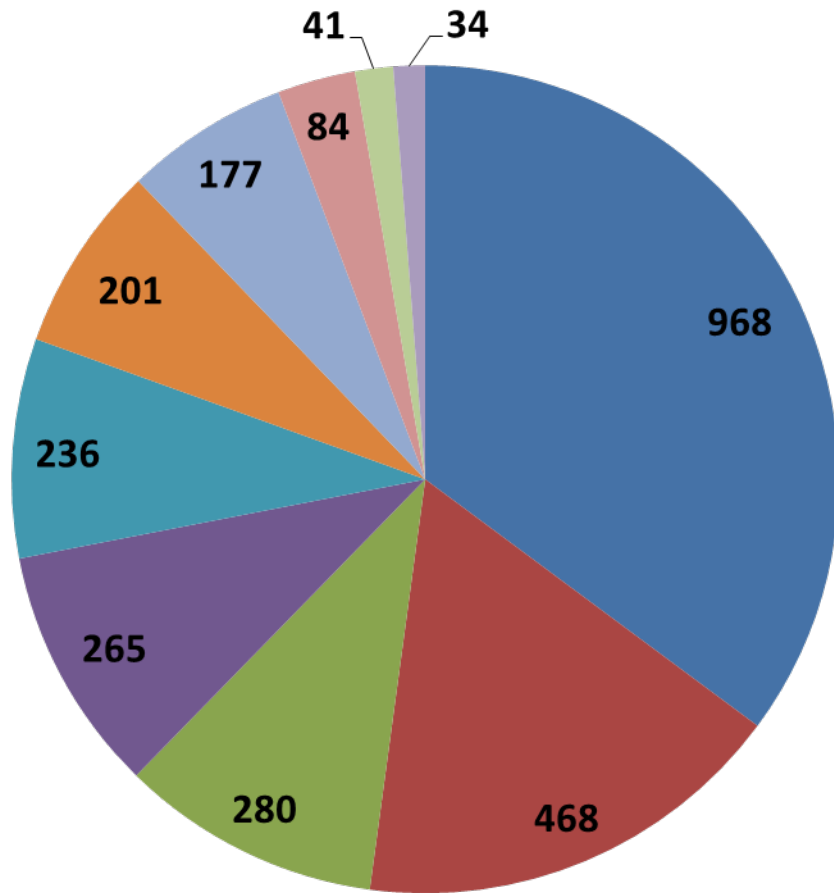
**1. Second  
courtesy  
call  
and/or  
written  
notice**

**2. Field  
inspection  
and/or  
warning  
letter**

**3. Final  
notice and  
intent to  
restrict the  
flow of  
water**

**4.  
Discontinuation  
of service**

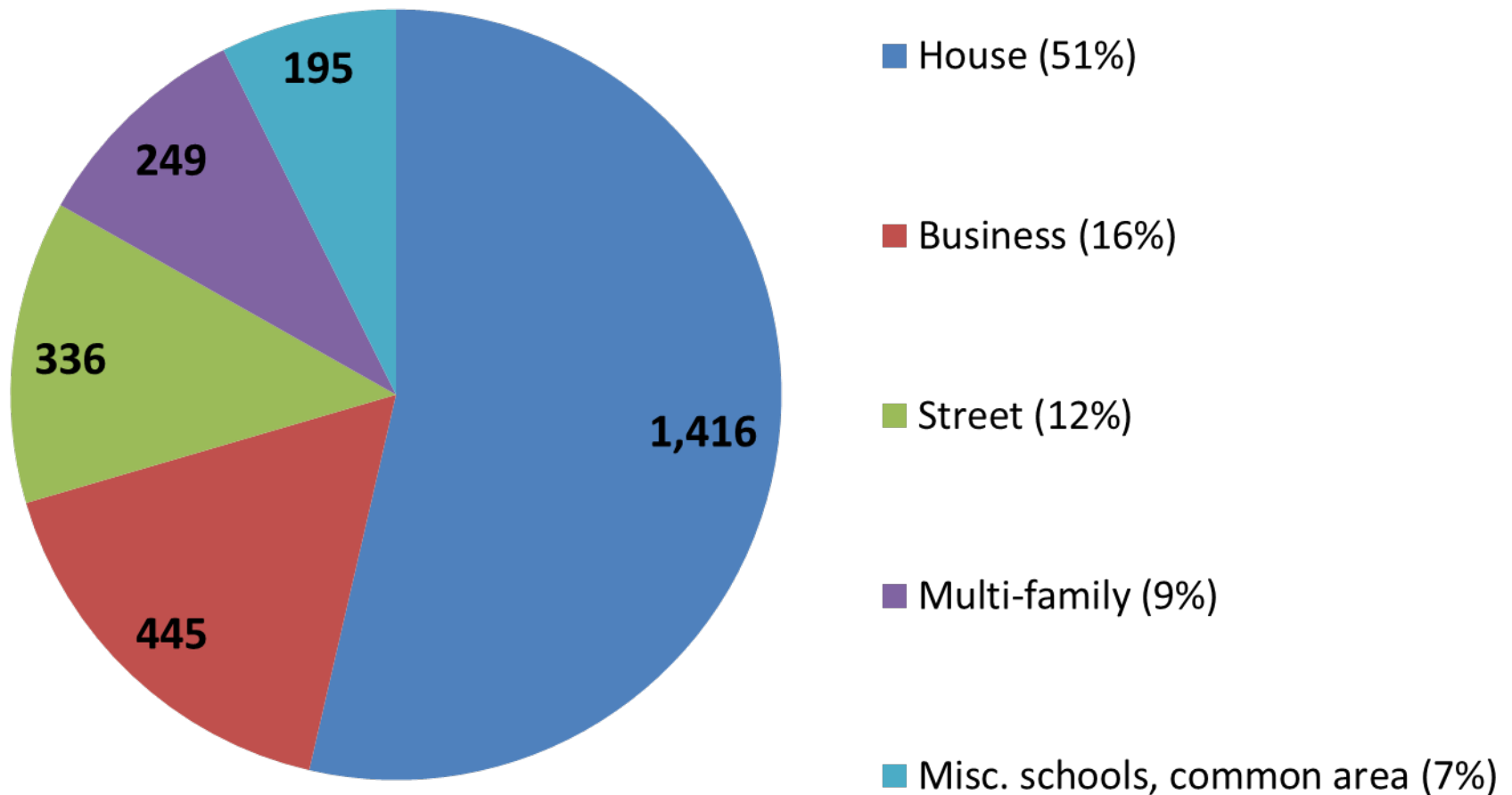
# Water Waste Reporting and Enforcement



- Overwatering (35%)
- Misc. (indoor, vehicle washing, etc.) (17%)
- Broken or misdirected sprinklers (10%)
- Seepage from ground (10%)
- Street flooding (9%)
- Meter leak (7%)
- Hosing down sidewalk/driveway (6%)
- Hydrant Leak (3%)
- Leaking outdoor faucet (1%)
- Hose without shutoff (1%)

Total of 2,754 (Feb. '14 – March '15)

# Water Waste Reporting and Enforcement



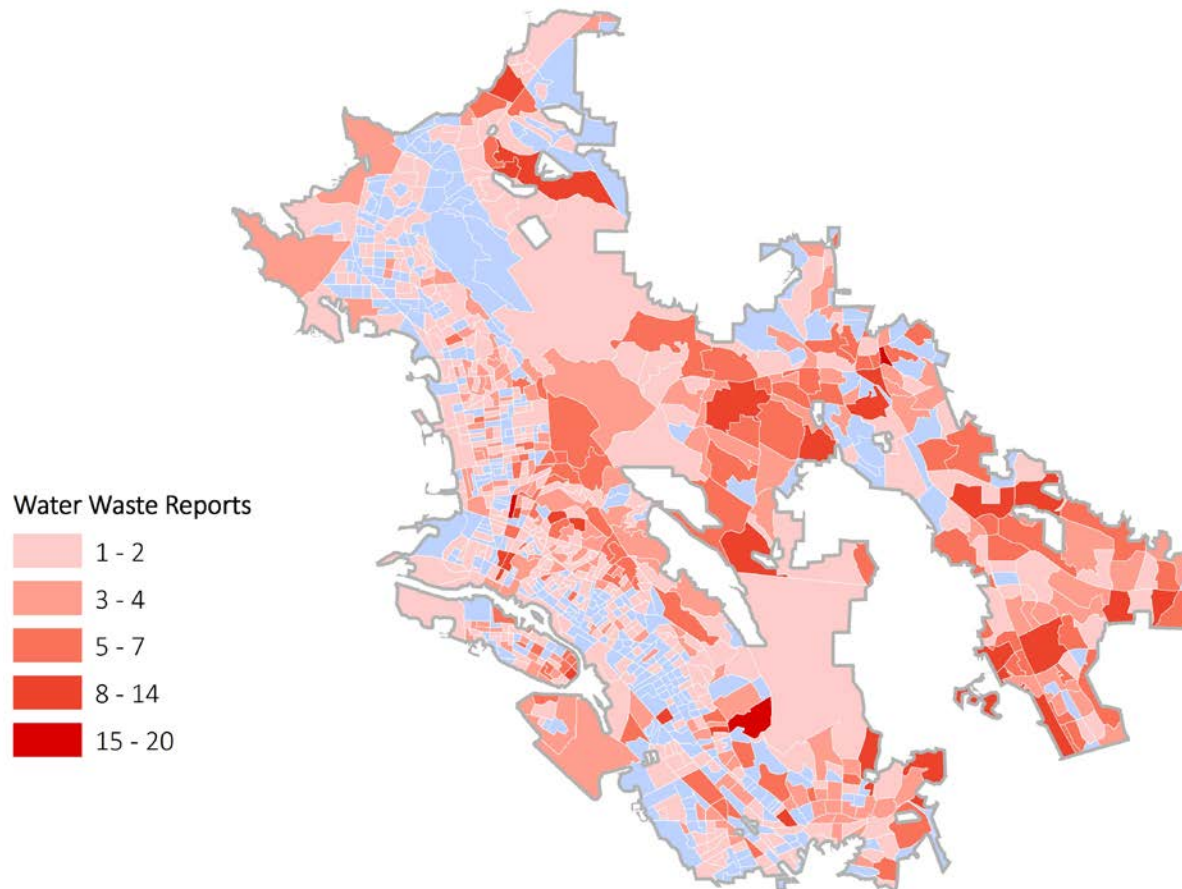
Total of 2,754 (Feb. '14 – March '15)



# Water Waste Report Distribution



EBMUD received Water Waster Reports by US Census Block (2014 to March 2015)



# Drought Resources



## DROUGHT HELP CENTER

- First Floor Admin. Bldg. Lobby – Franklin St. side
- Open 4.14.15 (8:00a.m.-4:30 p.m.)
- Self-help/periodically staffed conservation information, tips, rebate applications, devices
- Looped video of sustainable landscaping practices, low water use gardens, repairing leaks, etc.



# Financial Impact of 20% Reductions



Demand Reduction	Billed Water Sales (MGD)	Drought Costs (\$ M)	Lost Revenue (\$ M)	Total Costs (\$ M)	Drought Surcharge	Drought Surcharge Revenue (\$ M)	Use of Reserves (\$ M)
15%	146	\$65	\$10	\$75	25%	\$67	\$8
20%	137	\$65	\$29	\$94	25%	\$64	\$30

- *Moving from 15% to 20% reductions uses additional \$22 million in rate stabilization funds*
- *Consider increasing drought surcharge in FY17 if 20% reductions continue to be necessary*

# Mandatory Use Restrictions



- Mandatory use restrictions are designed to achieve District-wide 20% demand reduction
  - Includes specific prohibitions on water use—Section 28
  - Does not include individual allocations or customer-specific reduction targets

# Staged System of Drought Rates



- Staged system of drought rates adopted by the Board does not have mandatory cut-backs per customer
- Policy considerations in development of the system of drought rates were:
  - Easy to understand
  - Implementable and manageable
  - Encourage water use efficiency and provide economic incentive to conserve
  - Perceived as equitable
  - Conform with Cost of Service principles
- Staged system comprised of (1) drought surcharges, (2) excessive use penalty, (3) supersaver recognition



# Excessive Use Penalty

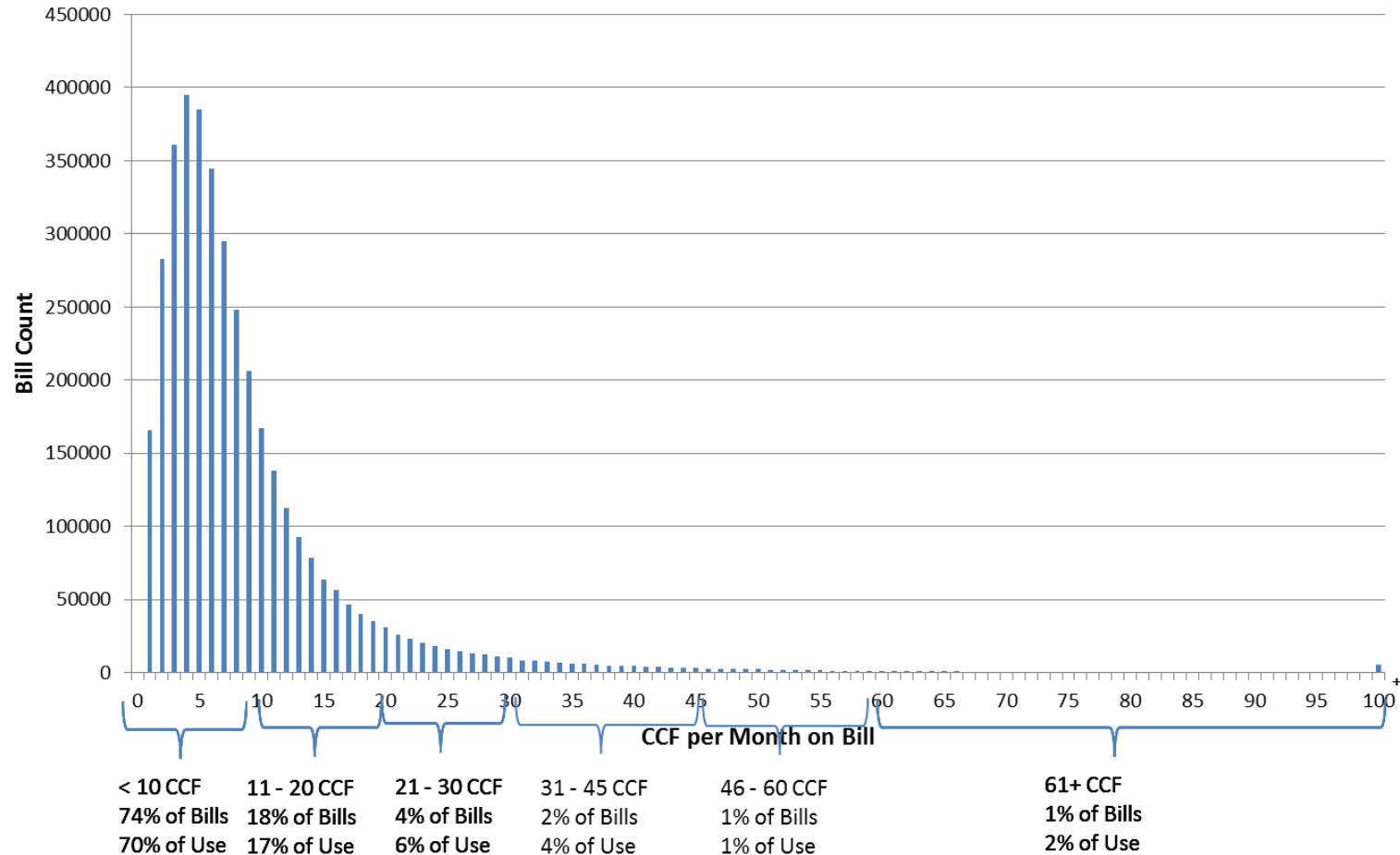


- Aimed at excessive SFR outdoor use
  - Uniform trigger level throughout District service area
    - Stage 3—60 Ccf/month
    - Stage 4—45 Ccf/month
  - \$2/unit in excess of monthly trigger level
- Penalty is different from rate or charge
  - Adopted by ordinance, not subject to Prop 218
  - Goal is to discourage use not collect revenue
  - Penalty must be in line with offense
  - Applies to all SFR customers equally

# District-Wide SFR Bill Distribution Annual



**Distribution of Bills by # of Billed Units per Month Calendar 2014**

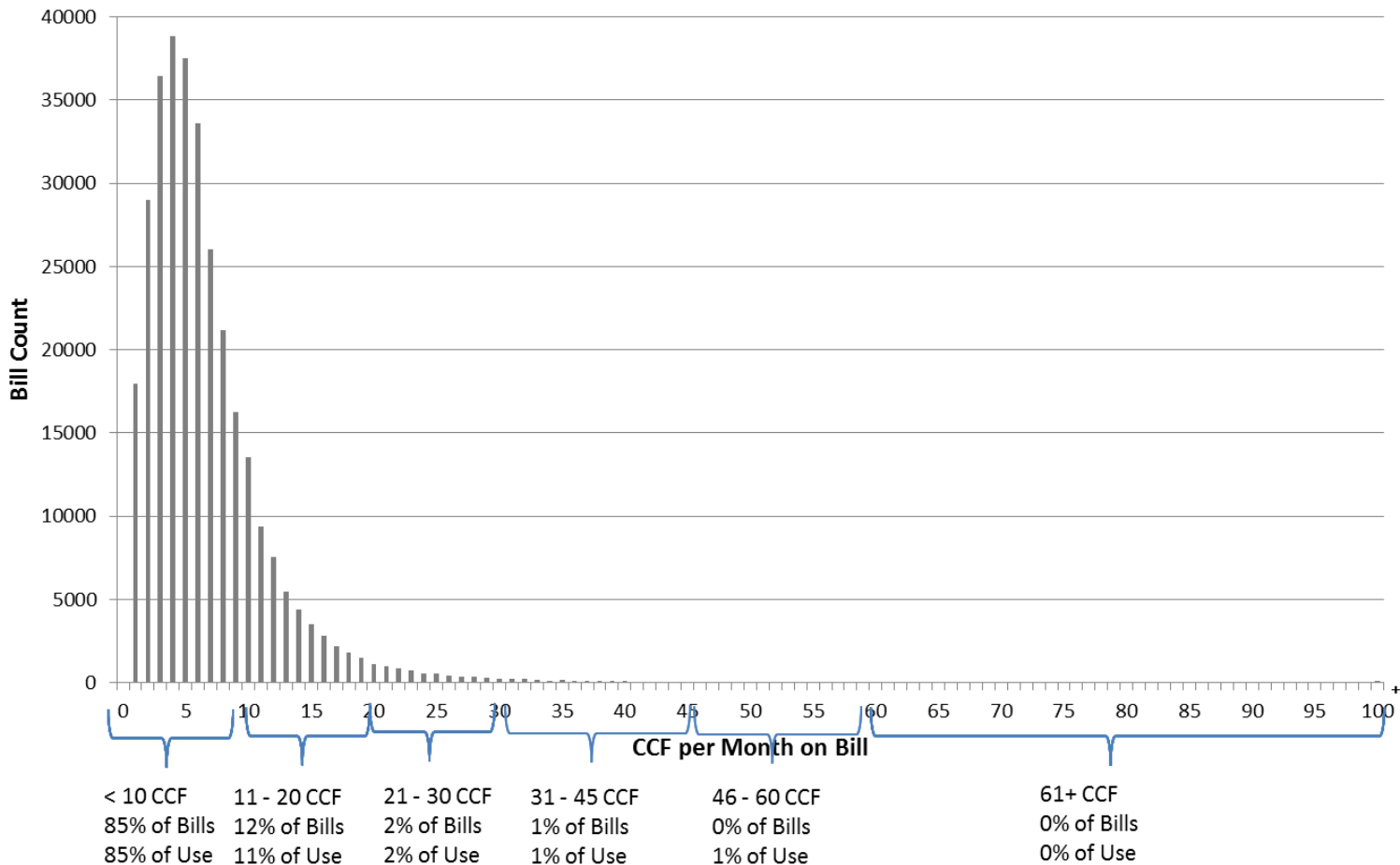


Monthly Consumption from 3.8 million bill months (1.9M actual bimonthly bills) for 320k SFR customers in CY14  
 % of Use is for "block" use (e.g. 70% of Use for <10 Ccf reflects 0-10 Ccf block use for All 320k Customers)

# District-Wide SFR Bill Distribution Winter



**Distribution of Bills by # of Billed Units per Month Winter 2014**



Monthly Consumption from for 320k SFR customers in December 2014

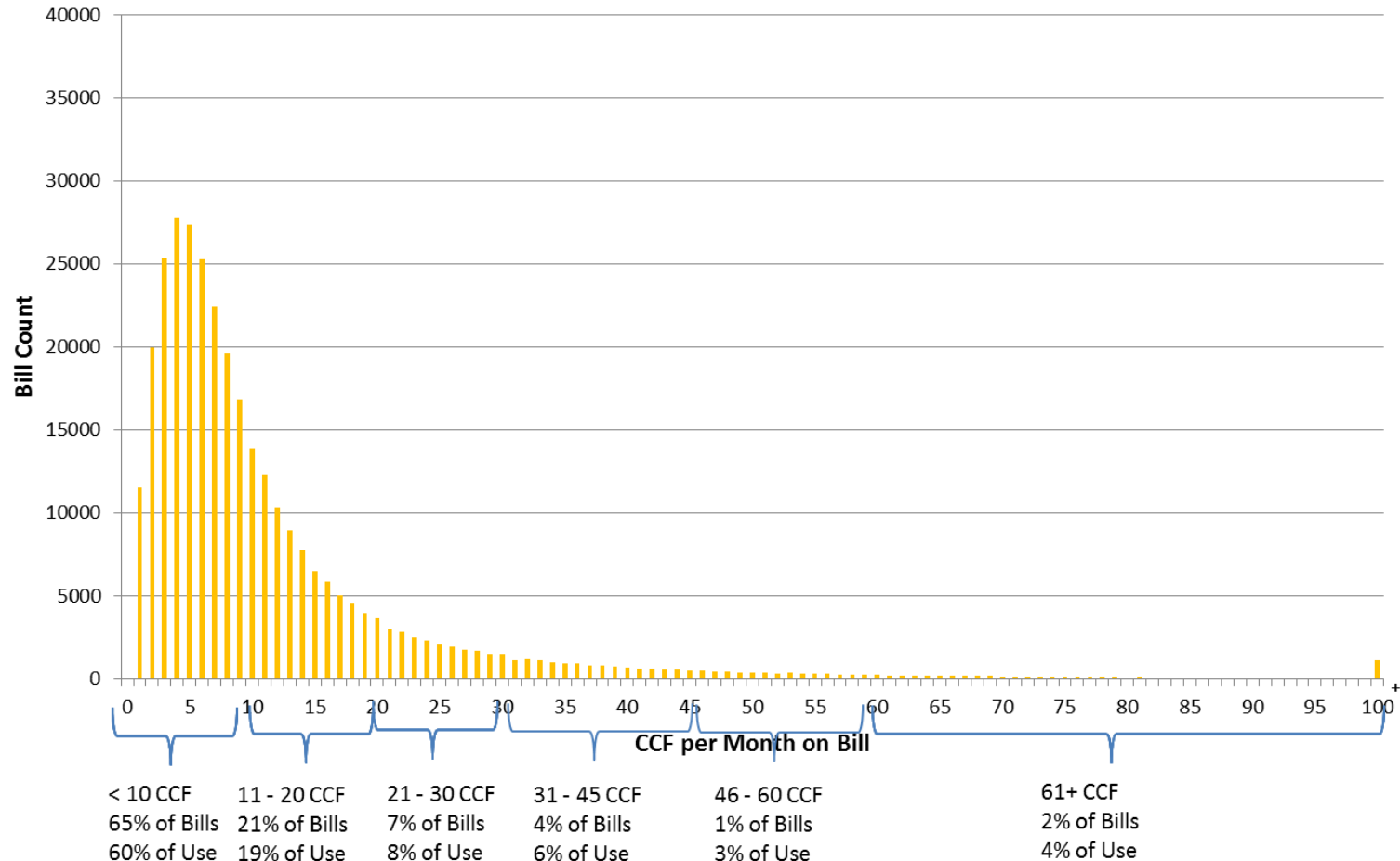
% of Use is for "block" use (e.g. 85% of Use for <10 Ccf reflects 0-10 Ccf block use for All 320k Customers)



# District-Wide SFR Bill Distribution Summer



## Distribution of Bills by # of Billed Units per Month Summer 2014



Monthly Consumption from for 320k SFR customers in June, July and August 2014

% of Use is for "block" use (e.g. 60% of Use for <10 Ccf reflects 0-10 Ccf block use for All 320k Customers)

# District System Capacity Charge (SCC) Regions



- Three principal regions utilized for system capacity charge (SCC)
- SCC recovers facility costs from developers
- Not familiar to customers—not part of regular rate structure
- Proxy for climate—not perfectly aligned

# Winter SFR Water Use by SCC Region



## Winter (December 2014)

	Accounts Total	Average Monthly Use (Ccf)	Median Monthly Use (Ccf)	Accounts > 5 Ccf	%	Accounts > 7 Ccf	%	Accounts > 9 Ccf	%	Accounts > 30 Ccf	%
SCC 1	179,158	6	5	79,578	44.4%	46,756	26.1%	27,186	15.2%	591	0.3%
SCC 2	67,508	6	5	30,631	45.4%	17,799	26.4%	10,347	15.3%	362	0.5%
SCC 3	71,446	9	7	48,169	67.4%	34,201	47.9%	23,808	33.3%	1,633	2.3%
<b>TOTAL</b>	<b>318,112</b>	<b>7</b>	<b>5</b>	<b>158,378</b>	<b>49.8%</b>	<b>98,756</b>	<b>31.0%</b>	<b>61,341</b>	<b>19.3%</b>	<b>2,586</b>	<b>0.8%</b>

# Summer SFR Water Use by SCC Region



## Summer (JUNE-AUGUST 2014)

	Accounts Total	Average Monthly Use (Ccf)	Median Monthly Use (Ccf)	Accounts > 9 Ccf	%	Accounts >11 Ccf	%	Accounts > 13 Ccf	%
SCC 1	181,497	8	6	47,404	26.1%	31,618	17.4%	21,026	11.6%
SCC 2	68,179	9	7	23,606	34.6%	17,508	25.7%	12,941	19.0%
SCC 3	71,891	25	18	54,530	75.9%	50,252	69.9%	46,128	64.2%
<b>TOTAL</b>	<b>321,567</b>	<b>12</b>	<b>7</b>	<b>125,540</b>	<b>39.0%</b>	<b>99,378</b>	<b>30.9%</b>	<b>80,095</b>	<b>24.9%</b>

	Accounts Total	Average Monthly Use (Ccf)	Median Monthly Use (Ccf)	Accounts > 16 Ccf	%	Accounts > 30 Ccf	%	Accounts > 45 Ccf	%	Accounts > 60 Ccf	%
SCC 1	181,497	8	6	11,642	6.4%	1,180	0.7%	282	0.2%	98	0.1%
SCC 2	68,179	9	7	8,339	12.2%	1,643	2.4%	547	0.8%	243	0.4%
SCC 3	71,891	25	18	40,009	55.7%	18,931	26.3%	8,800	12.2%	4,434	6.2%
<b>TOTAL</b>	<b>321,567</b>	<b>12</b>	<b>7</b>	<b>59,990</b>	<b>18.7%</b>	<b>21,755</b>	<b>6.8%</b>	<b>9,628</b>	<b>3.0%</b>	<b>4,775</b>	<b>1.5%</b>

# Excessive Use Summary



- Activated in drought Stages 3 and 4
- Uniform trigger level throughout District service area
  - Stage 3—60 units/month
  - Stage 4—45 units/month
  - \$2/unit in excess of monthly trigger level
- Penalty considerations
  - Level at which penalty triggered
  - Implementation considerations
  - Amount of penalty

# FY16 & FY17 Budget Schedule



## **Budget Workshop**

March 24

- Biennial Budget FY16 & FY17
- FY16 & FY17 Prop 218 rates and charges

## **Budget Workshop**

April 14

- If necessary

## **Mail Proposition 218 Notice**

April 15 - April 24

## **Board Meeting**

May 12

- GM's Report on rates & charges

## **Board Meeting**

June 9

- Public hearing on rates and charges
- Board consideration of budget and rates

## **FY16 Rates & Charges Effective**

July 1