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Agenda Item: ID#17-443 (2:05 P.M.)

Date: 4/13/17

CITY CLERK, FRESNO

FRESNO CITY COUNCIL



Supplemental Information Packet

Agenda Related Item(s) – ID#17-443 (2:05 P.M.)

Contents of Supplement: PowerPoint Presentation

Item(s)

WORKSHOP – Water Conservation Program

Supplemental Information:

Any agenda related public documents received and distributed to a majority of the City Council after the Agenda Packet is printed are included in Supplemental Packets. Supplemental Packets are produced as needed. The Supplemental Packet is available for public inspection in the City Clerk's Office, 2600 Fresno Street, during normal business hours (main location pursuant to the Brown Act, G.C. 54957.5(2)). In addition, Supplemental Packets are available for public review at the City Council meeting in the City Council Chambers, 2600 Fresno Street. Supplemental Packets are also available on-line on the City Clerk's website.

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WORKSHOP Water Conservation Update

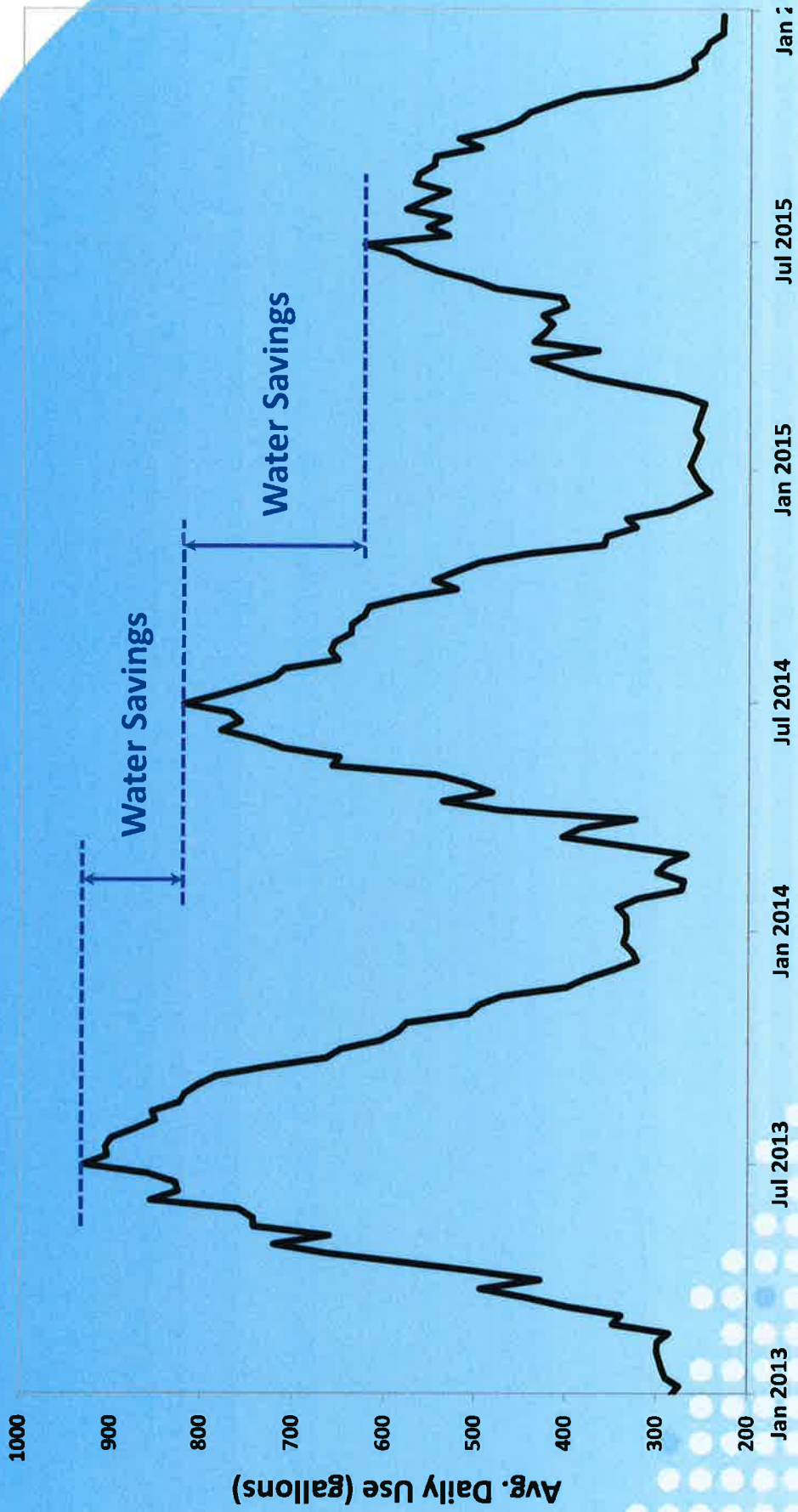
April 13, 2017

Workshop Outline

- **Water Conservation Performance**
- **Single Family Residential Water Use Patterns**
- **Water Conservation Program Activity**
- **Outdoor Watering Schedule Options**
- **Outdoor Watering Enforcement**
- **Proposed Next Steps**
- **Questions**



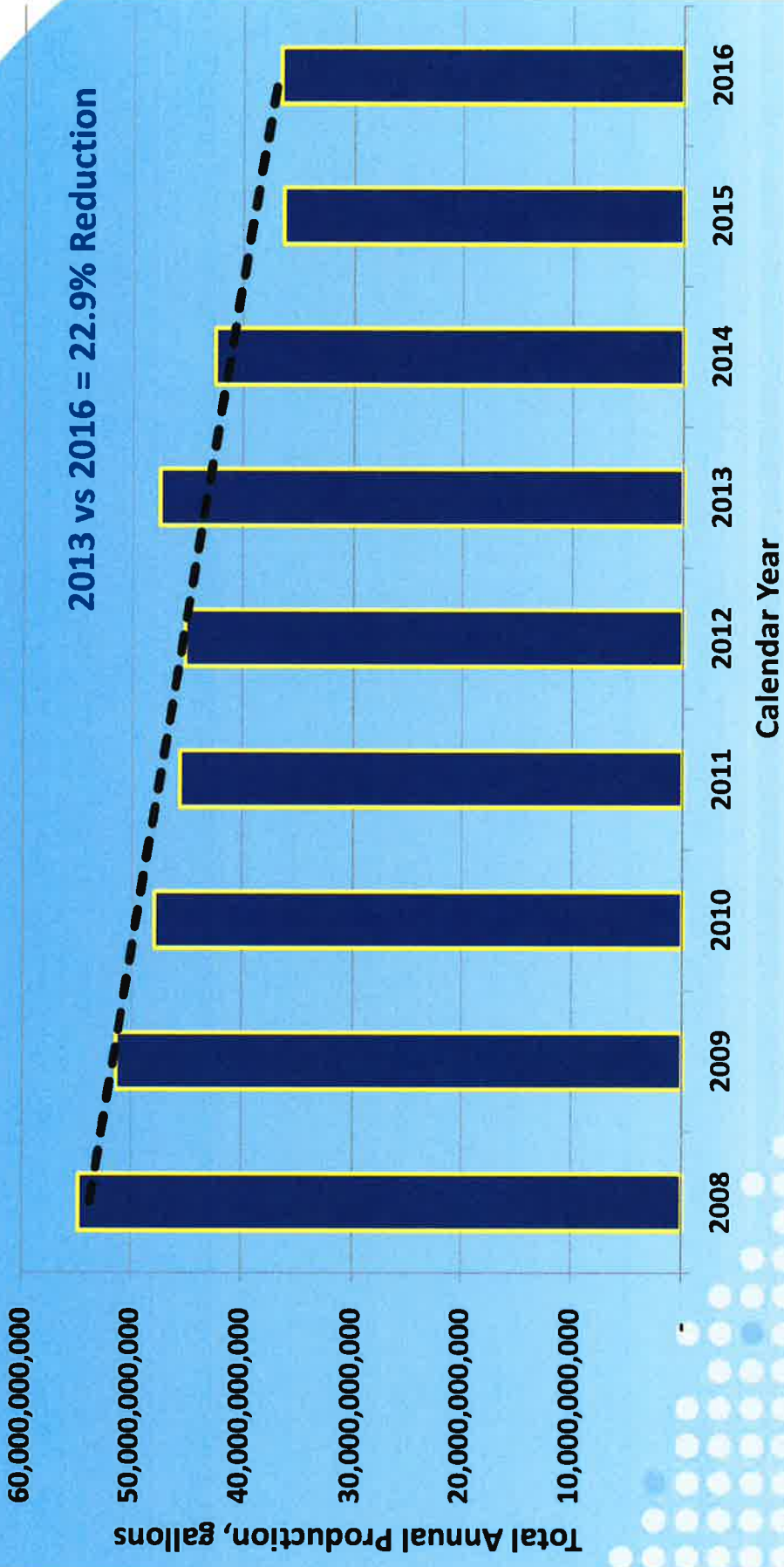
Water Conservation Performance Average Daily Water Use 2013-2015



Water Conservation Performance

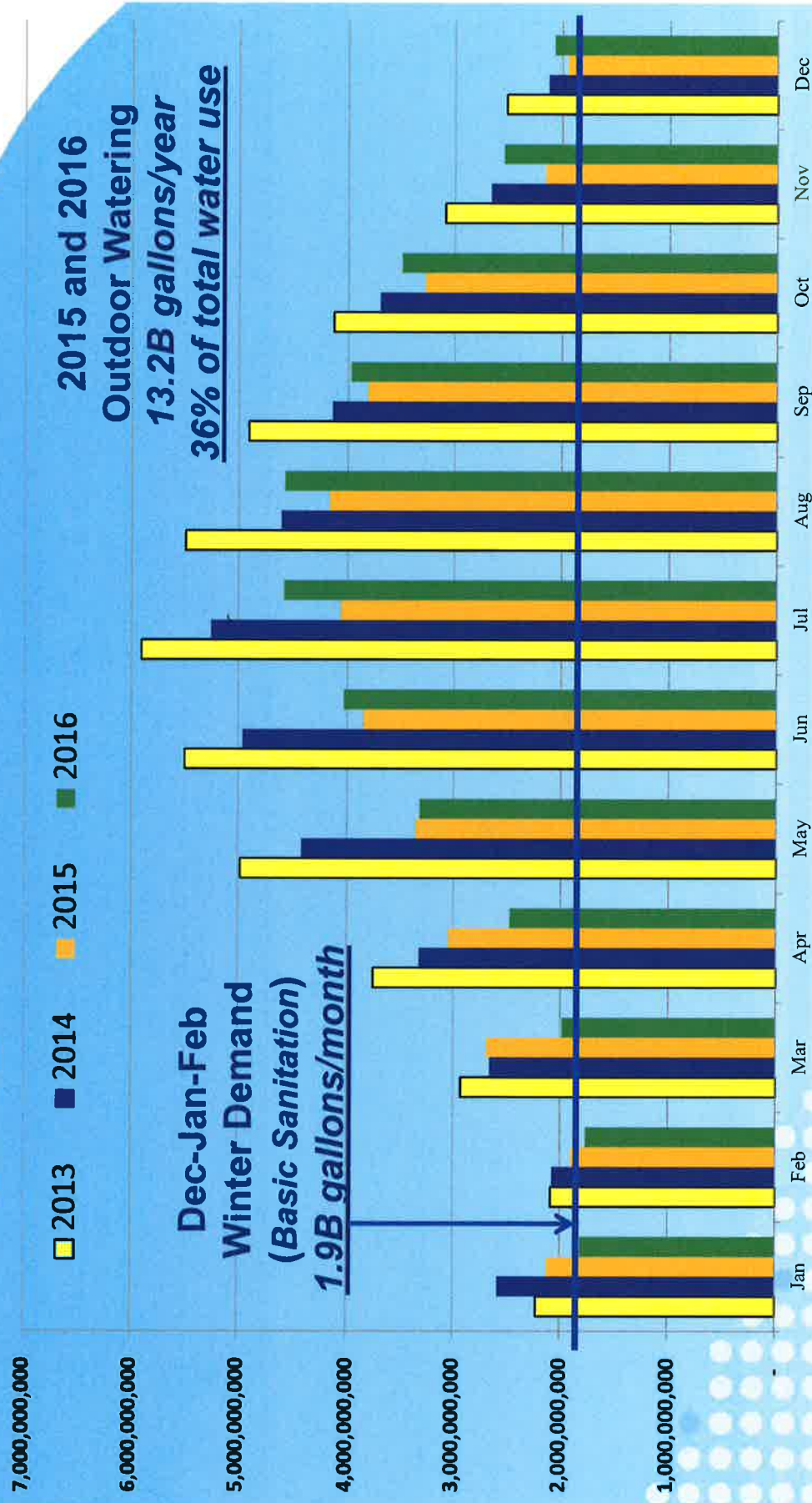
Total Water Production Trend

■ Total Gallons - - Linear (Total Gallons)



Water Conservation Performance

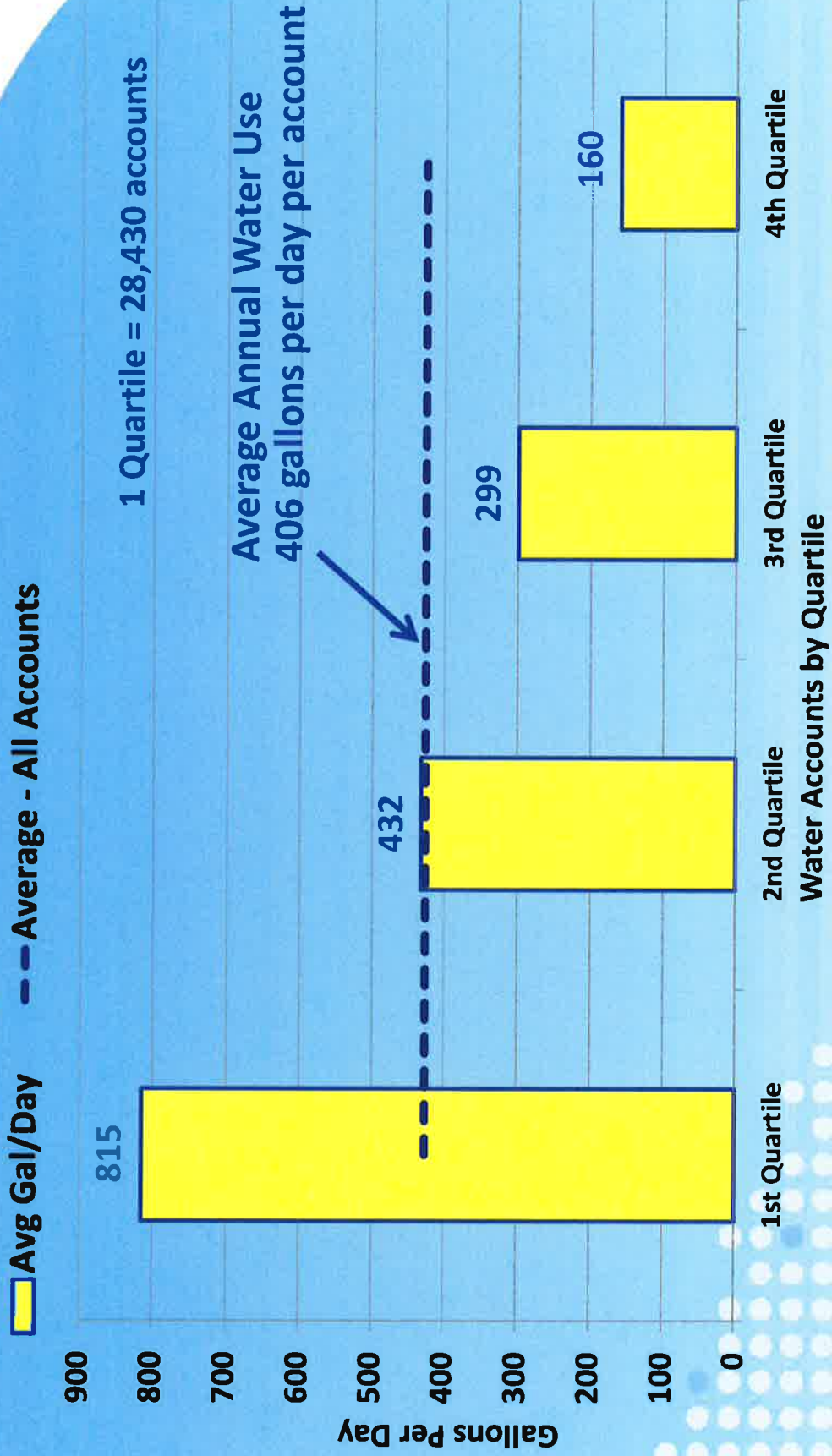
Monthly Water Use Comparison



Single-Family Residential Water Use Patterns



Single-Family Residential Water Use Quartile Distribution for Calendar Year 2015

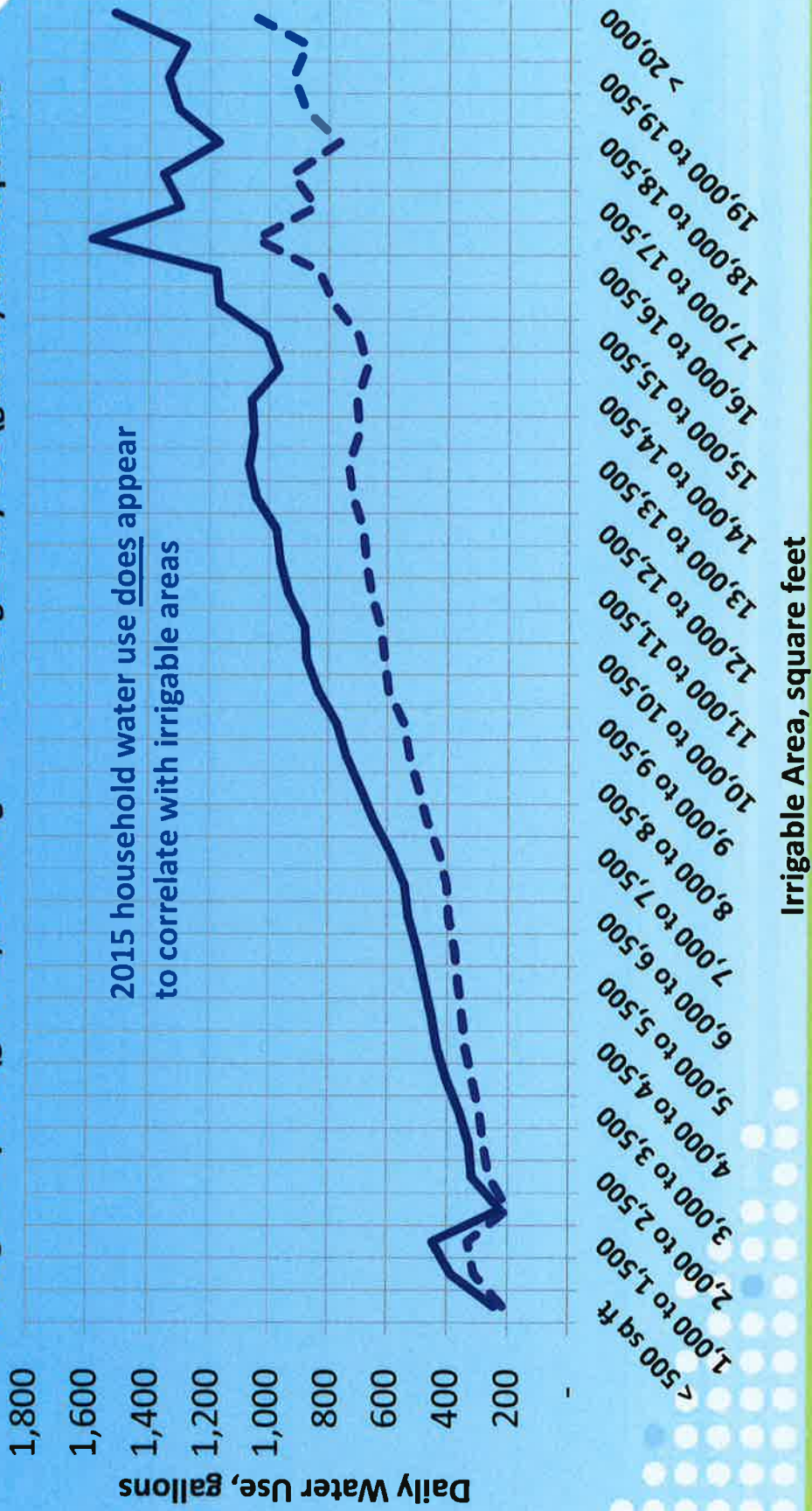


Single-Family Residential Water Use Irrigable Land Area

Lot Size – Home Size = Irrigable Area

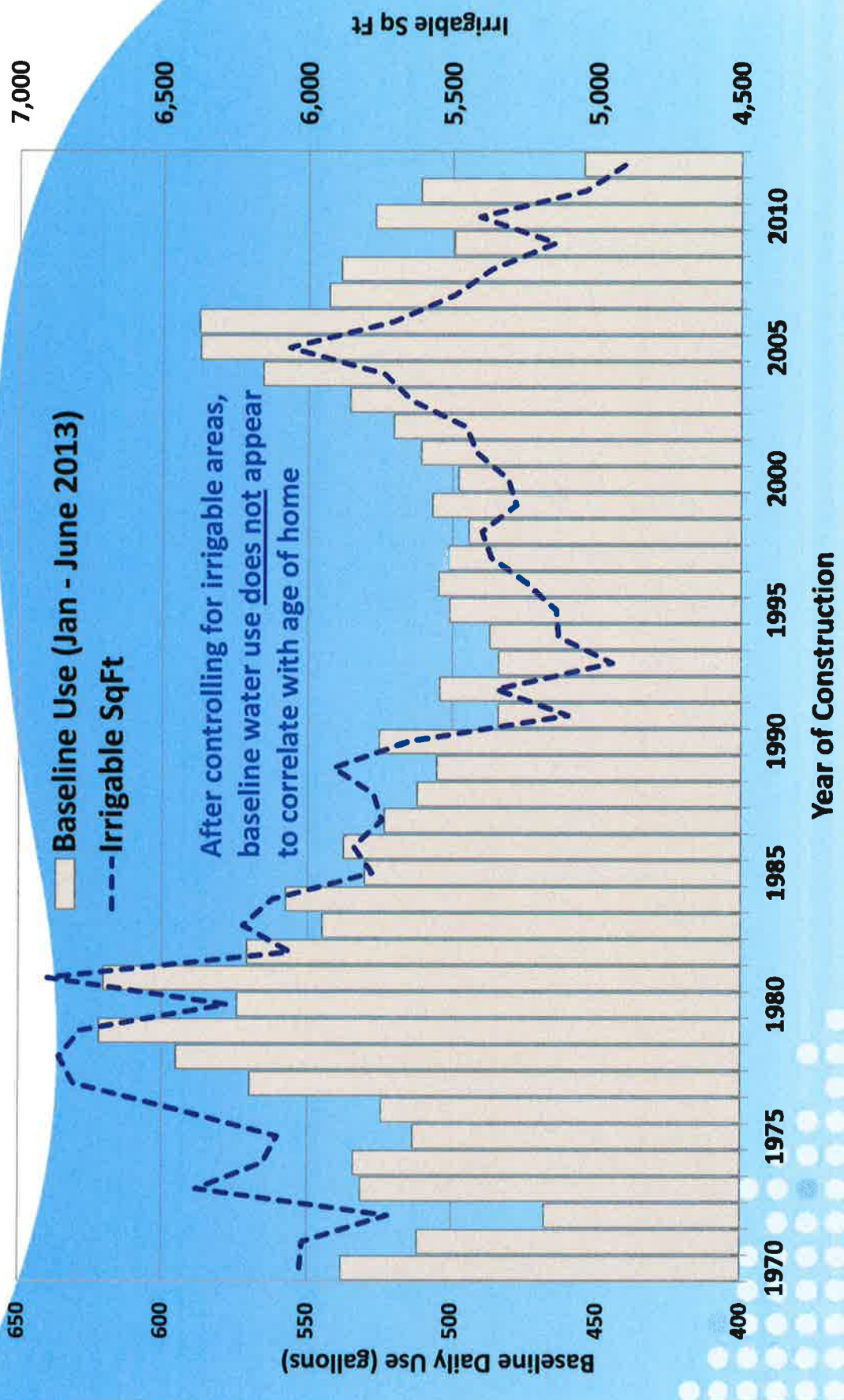
— Average Daily Use (gallons) 2015 Avg — Average Daily Use (gallons) June-Sept 2015

2015 household water use does appear
to correlate with irrigable areas



Irrigable Area, square feet

Single-Family Residential Water Use Age of Home and Irrigable Acres



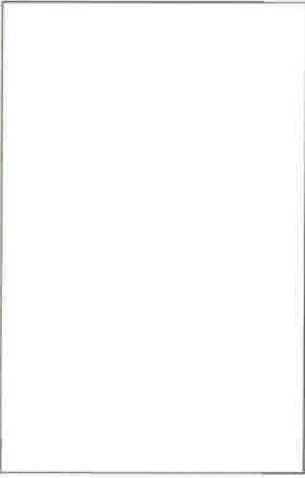
Water Conservation Program Activity



Water Conservation Program Activities

- **Onsite Education and Outreach** – irrigation clock adjustments; landscape consultations; water-leak surveys.
- **Media Education and Public Outreach** (television, print, radio, school visits, community events) – outdoor water schedules, water waste prohibitions
- **Outdoor Watering Enforcement**
 - *Use of Hourly Water Meter Data to Identify Suspected Non-Compliance*
 - *Mail Notifications Assessing \$45 fines to Non-Compliant Accounts*
- **Administration of Water Conservation Rebates** – toilets, clothes washing machines, turf conversions, etc.

Current Water Conservation Rebates & Services



-
- Irrigation Timer**
- Control Setting**
-
- Irrigation Audits**

Residential and Commercial Water Conservation Rebates

Clothes Washer	\$50
Evaporative Cooler	\$100
Lawn to Garden Conversion	\$.50 per square foot
Micro Irrigation Conversion	\$.25 per square foot
Rain Sensor	\$50
Rainwater Harvesting	\$50
Recirculating Hot Water Pump	\$100
Smart Irrigation Controller	\$50
Soil Moisture Sensor	\$50
Sprinkler Nozzles	up to \$4 per nozzle
Swimming Pool Cover	\$50
Toilets	\$50
Commercial Only	
Toilets	\$50
Urinal	\$100

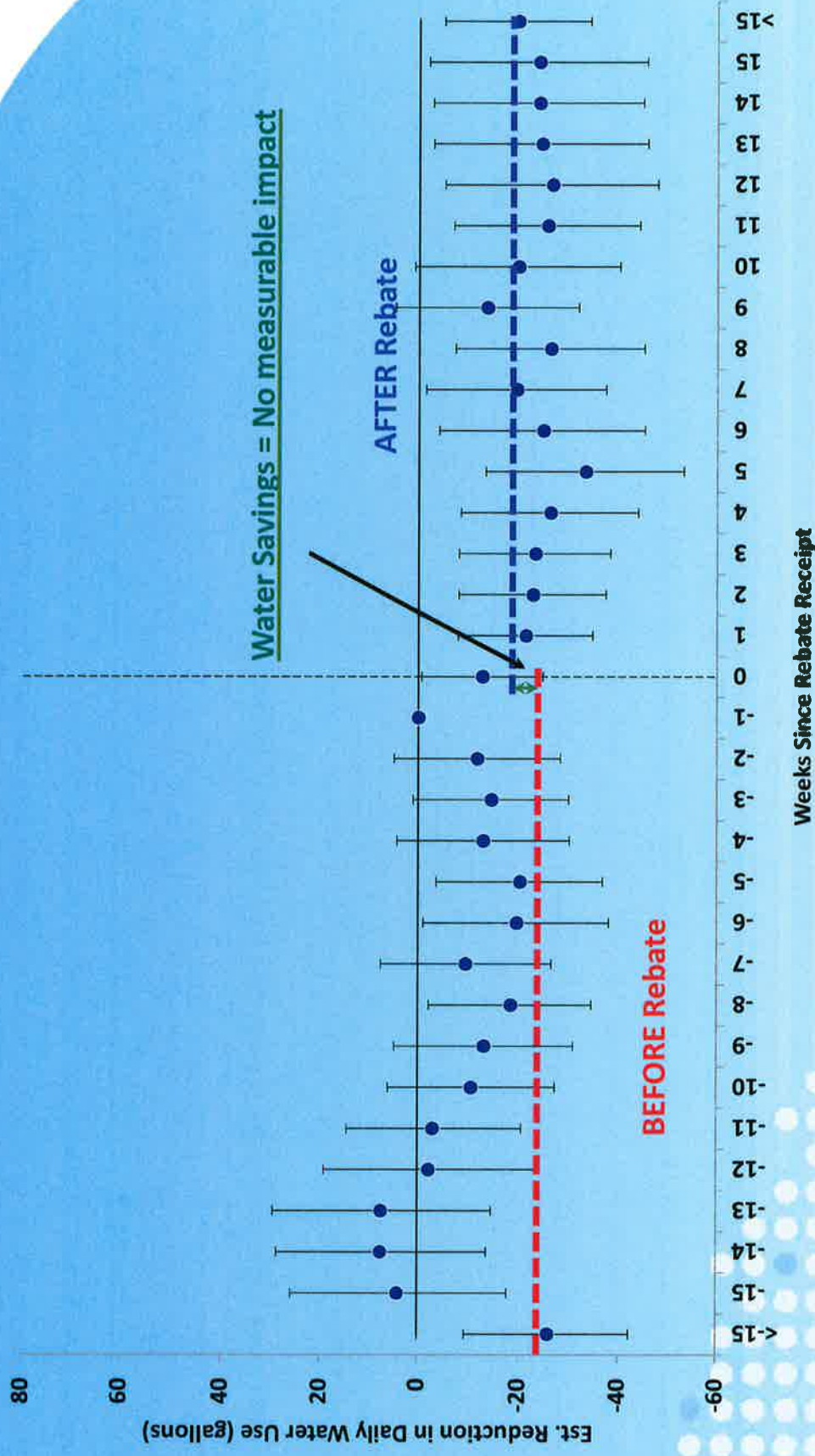
Water Conservation Rebate Activity 2009 to 2016

District	Toilet Rebates		Washer Rebates	
	Count	Percent	Count	Percent
1	372	13.33%	1,284	12.20%
2	444	15.91%	2,365	22.30%
3	98	3.51%	573	5.30%
4	403	14.44%	1,058	10.00%
5	150	5.37%	928	8.70%
6	624	22.36%	2,760	26.00%
7	245	8.78%	564	5.30%
County Island	455	16.30%	1,086	10.20%
TOTAL	2,791	100.00%	10,618	100.00%

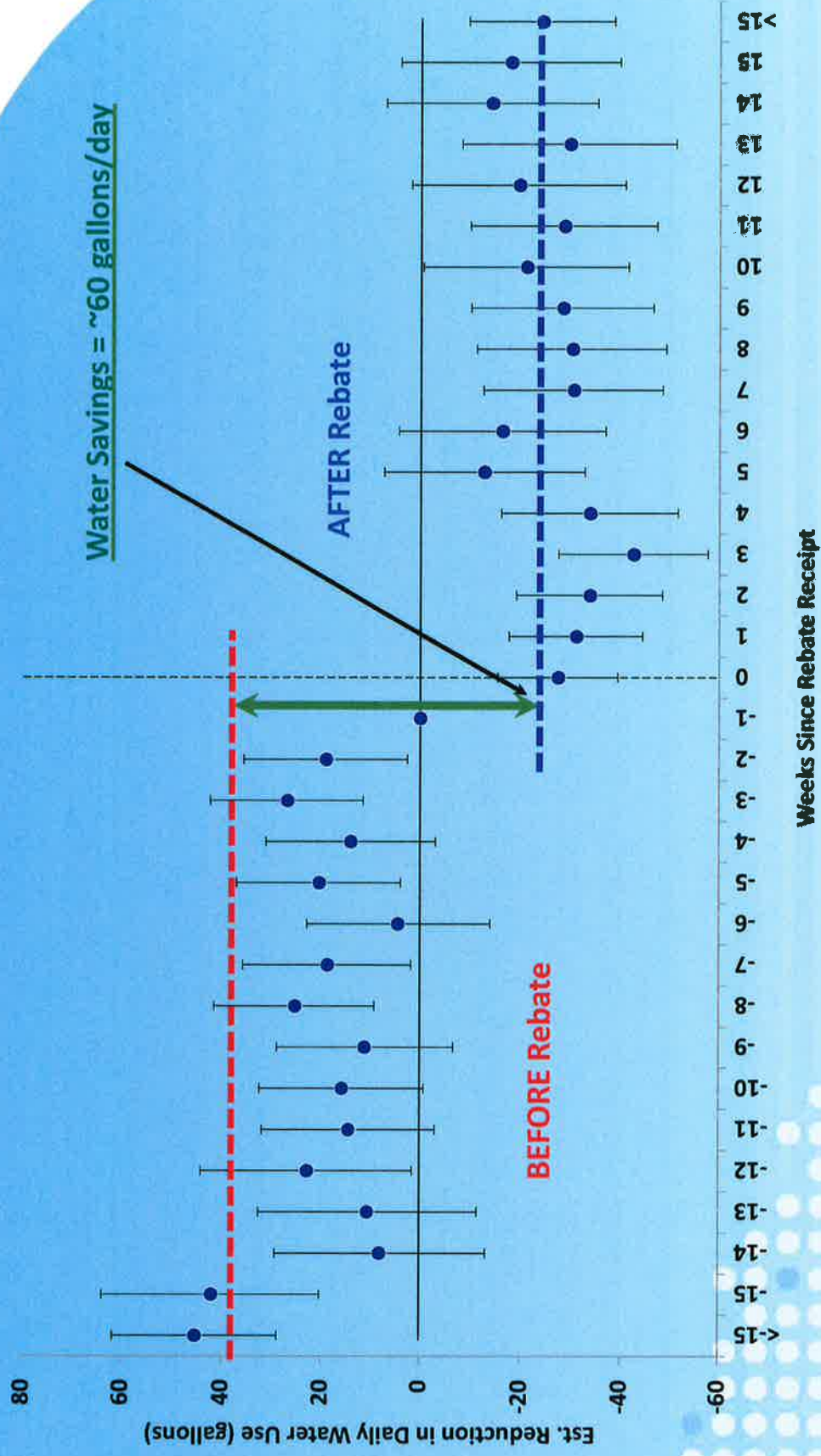
Water Conservation Rebate Expenditures 2009 to 2016

Water Conservation Rebate	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Clothes Washing Machine Rebate	\$113,400	\$136,250	\$205,800	\$86,400	\$74,950	\$57,400	\$20,800	\$13,550
High Efficiency Toilets – Commercial		\$375	\$225	\$1,125	\$100	\$100	\$100	\$1,950
High Efficiency Toilets – Residential	\$22,622	\$54,681	\$41,800	\$47,688	\$17,075	\$12,700	\$10,900	\$15,300
TOTAL	\$136,022	\$191,306	\$247,825	\$135,213	\$92,125	\$70,200	\$31,800	\$30,800

Observed Water Reductions with Rebates Clothes Washers



Observed Water Reductions with Rebates Toilets

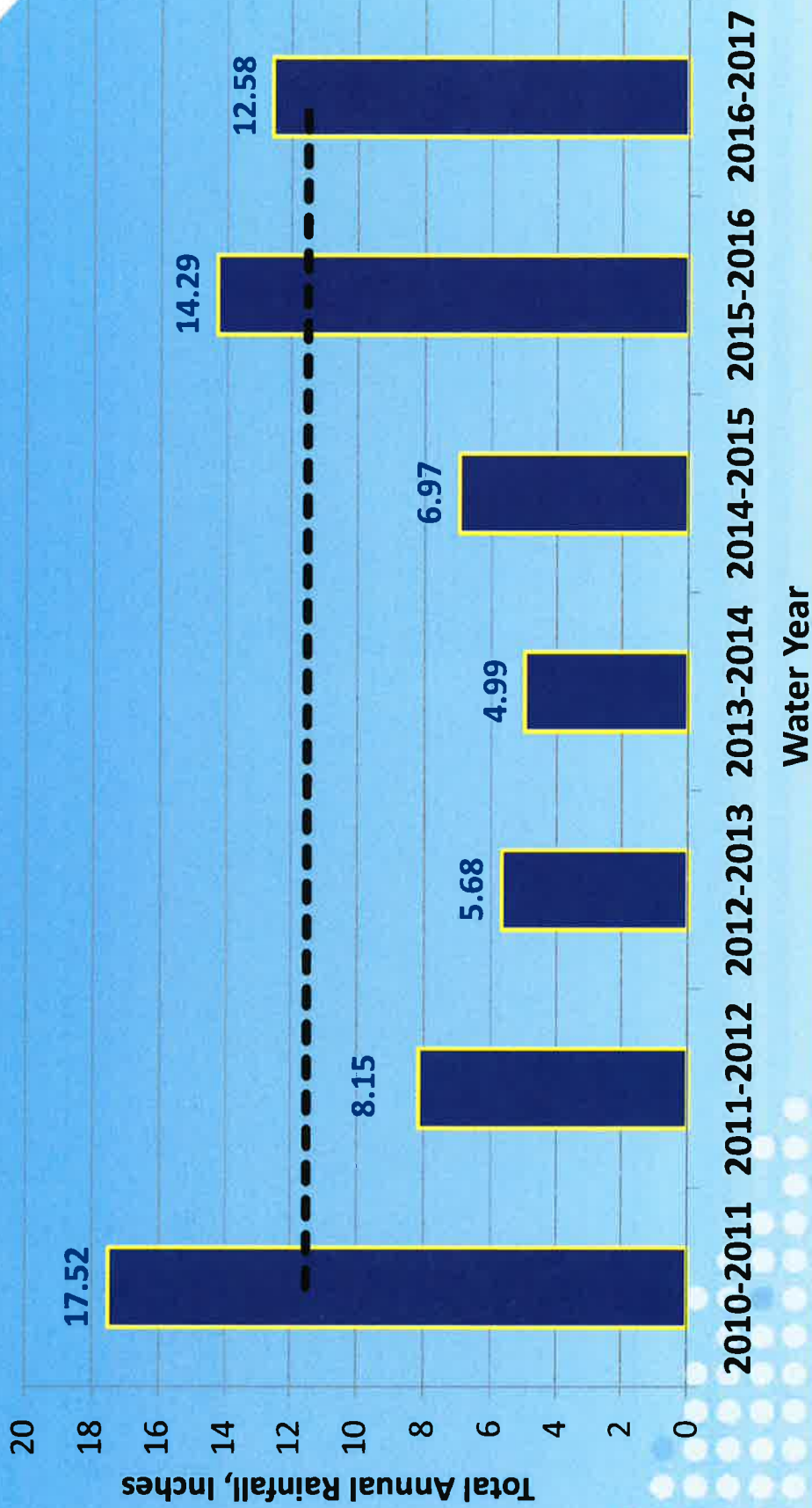


Outdoor Watering Schedule Options

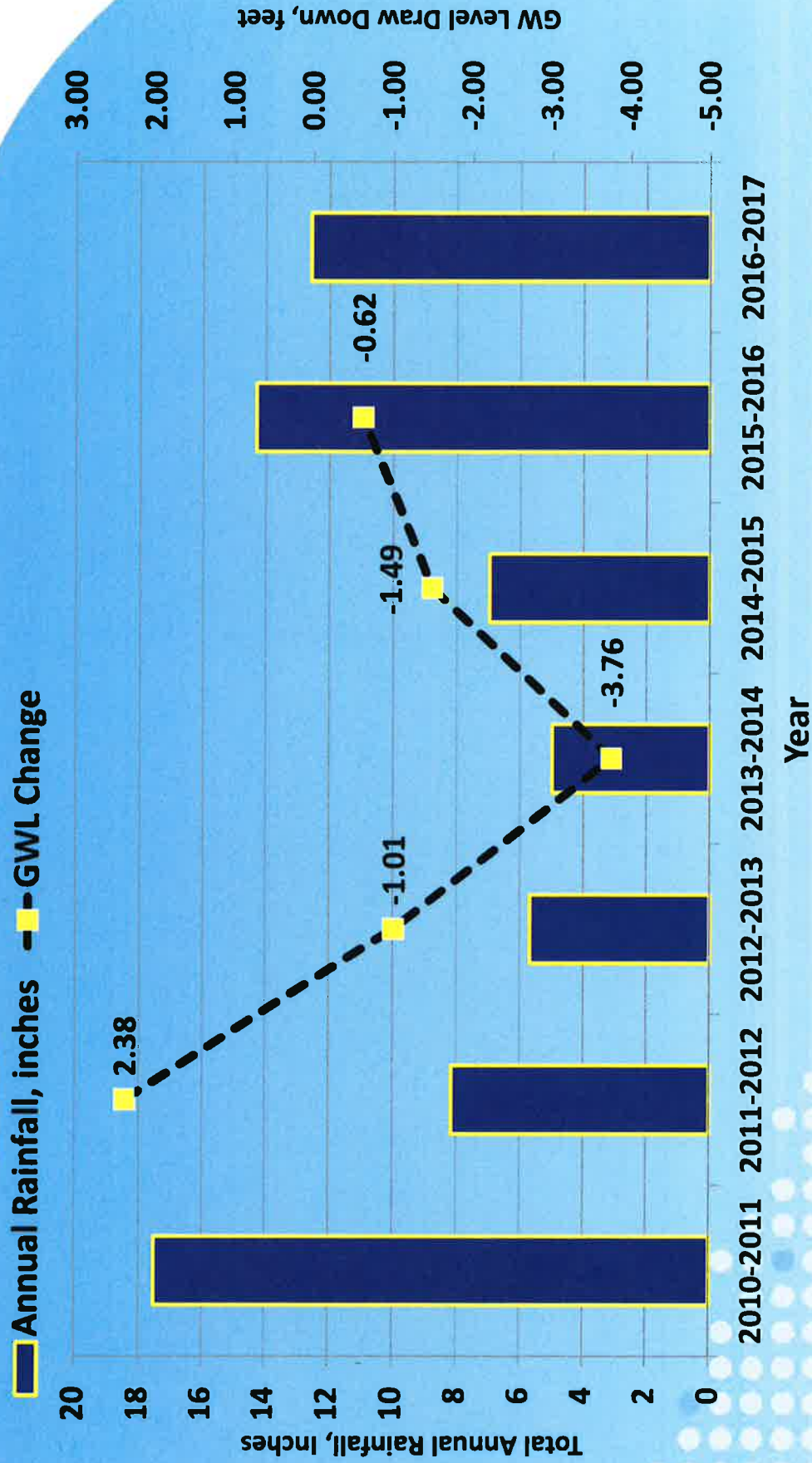


Annual Rainfall During Drought

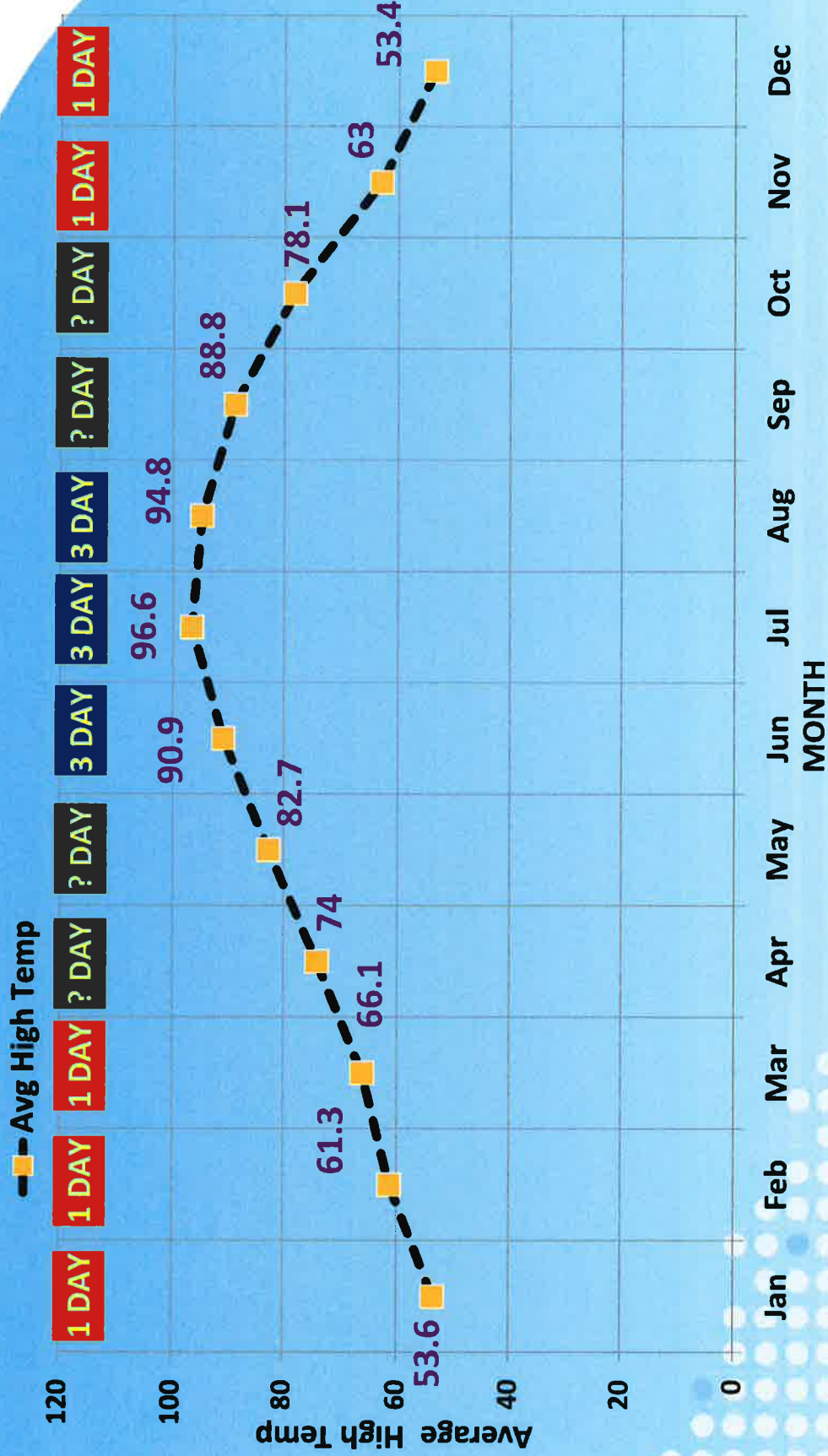
■ Annual Rainfall, inches - - Normal Annual Rainfall



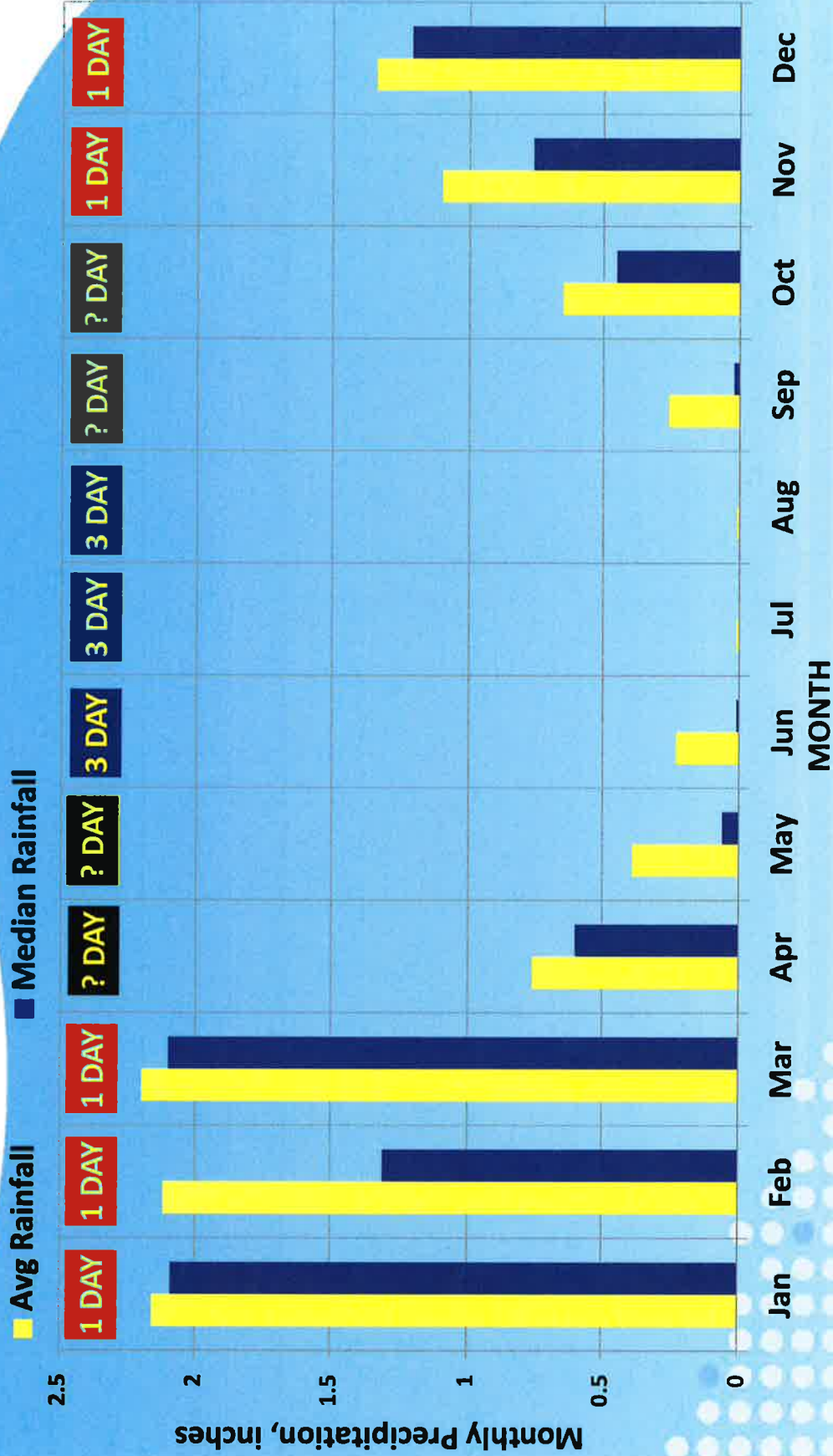
Groundwater Drawdown During Drought



Weekly Watering Demands Based on Monthly Average High Temperatures



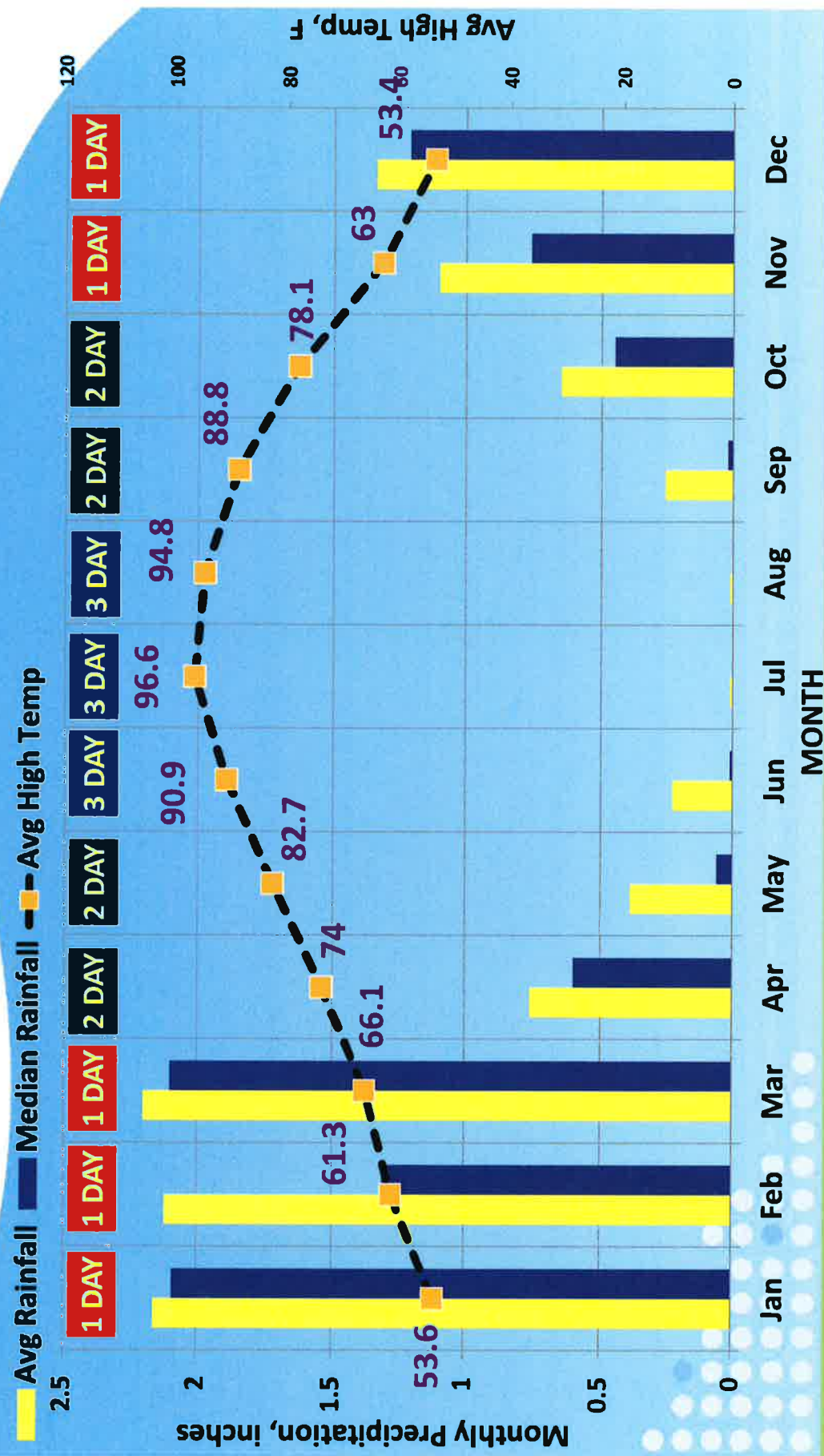
Weekly Watering Demands Based on Monthly Rainfall



Outdoor Watering Schedule Options Drought Response Stages Based on Drought Severity

- **Option 1 (Return to Previous Schedule - Current Stage 1)**
 - 1-Day Per Week: Nov-Dec-Jan-Feb-Mar-Apr
 - 3-Day Per Week: May-Jun-Jul-Aug-Sep-Oct
- **Option 2 (Maintain Status Quo - Current Stage 2)**
 - 1-Day Per Week: Dec-Jan-Feb-Mar-Apr
 - 2-Day Per Week: May-Jun-Jul-Aug-Sep-Oct-Nov
- **Option 3 (Match Rainfall and Temperature Conditions – New Stage)**
 - 1-Day Per Week: Dec-Jan-Feb-Mar
 - 2-Day Per Week: Apr-May, Sep-Oct-Nov
 - 3-Day Per Week: Jun-Jul-Aug

Recommended Weekly Watering Days Based on Average Monthly High Temps and Rainfall



Outdoor Watering Enforcement



Existing Water Use Violation Fines

Fresno Municipal Code Section 6-520 (e)

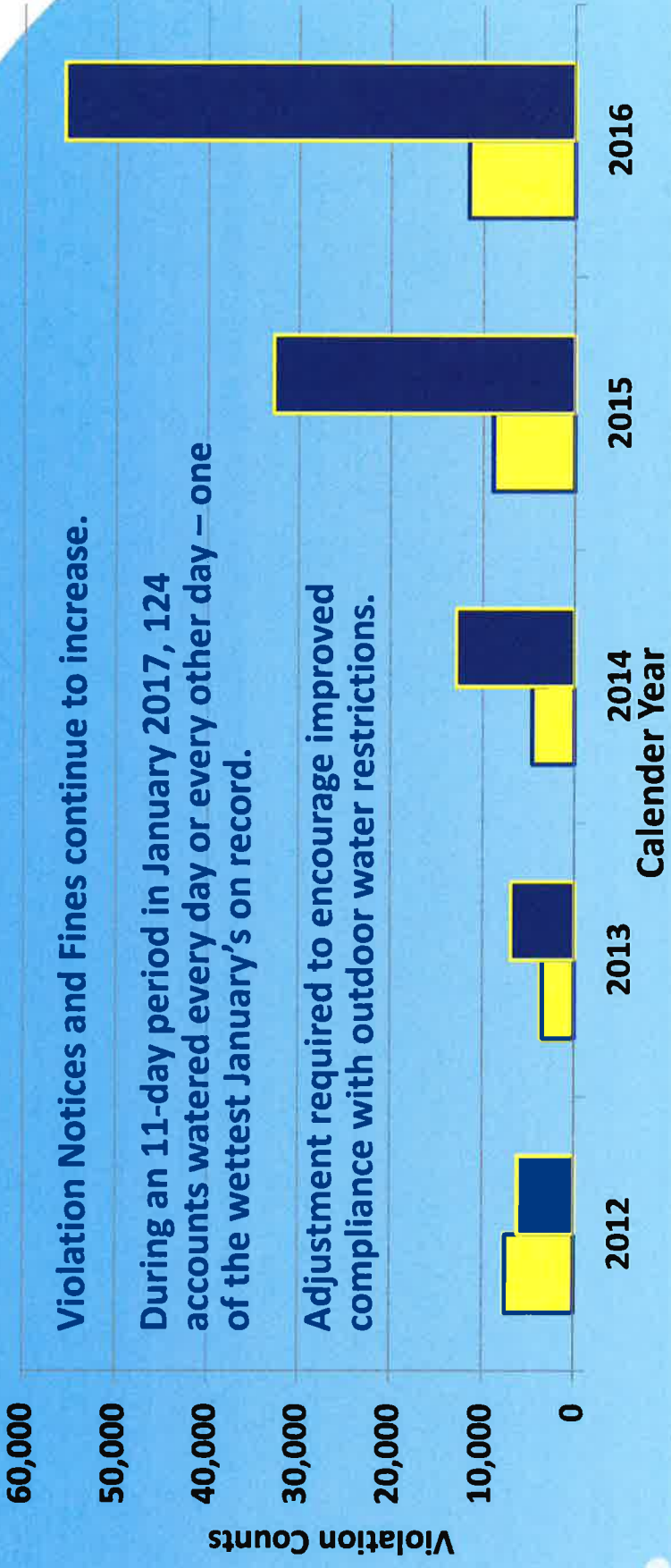
- If a customer has an incident of water waste as observed directly by City staff or as recorded directly by the City's water meter reading system, the customer shall be charged the fee as described herein.
 - 1st Incident = \$45 – Fine held in abeyance unless resident has fourth Incident within 24 month period.
 - 2nd Incident = \$45 – Fine shall be held in abeyance if resident attends water conservation course, and does not have a Third Incident.
 - 3rd Incident = \$45, plus \$45 for Second Incident
 - 4th Incident = \$45, plus \$45 for First Incident. Residents subject to shut-off of water service for any incident following 4th incident.

Outdoor Water Exemptions allowed for properties with landscaped areas three acres and larger (schools and parks)

Water Conservation Enforcement

Fine revenue generated during calendar Year 2016 was \$139,000.

■ Notices \$45 Fine
 ■ Notices No Fine



Violation Notices and Fines continue to increase.

During an 11-day period in January 2017, 124 accounts watered every day or every other day – one of the wettest January’s on record.

Adjustment required to encourage improved compliance with outdoor water restrictions.

Notices and fines are issued based on field observations by Water Conservation staff. Field observations are typically prompted by citizen emails, web-based notifications, phone calls, and FresGo reports that identify specific water violators.

Proposed Water Use Violation Fines

MODIFIED Fresno Municipal Code Section 6-520 (e)

- If a customer has an incident of water waste as observed directly by City staff or as recorded directly by the City's water meter reading system in any given month, the customer shall be charged the fee as described herein.
 - 1st Incident During Calendar Year = Written Notice of Outdoor Watering Violation.
Resident encouraged to correct leaks, irrigation timers, etc. to address water wastage, or be subject to fines.
 - 2nd Incident During Calendar Year = \$50 charge on utility bill
 - 3rd Incident During Calendar Year = \$100 charge on utility bill
 - 4th Incident, and each incident thereafter, During Calendar Year = \$200 charge on utility bill
- Fine deferrals will no longer be offered, and the sequence of fines will restart at \$50 each calendar year, starting January 1st.
- A portion of fine revenue will be allocated to repair park irrigation systems to modernize the systems, and improve water efficiency and water conservation.

Proposed Next Steps

- Administratively Change Drought Response from Stage 2 to Stage 1
 - *Allow 3-Day Per Week Outdoor Watering Jun, Jul, Aug*
 - *Update Urban Water Management Plan to reflect modified irrigation days*
- Prepare modifications to Fresno Municipal Code Section 6-520 (e) for Council consideration:
 - *Change system of water fines for outdoor watering violations*
- Prepare modifications to Master Fee Schedule with new system of water fines
- Launch Eye-On-Water for Residents (2017-2018). Residents can receive texts and emails when their daily water use exceeds pre-defined thresholds.
- Prepare Excessive Water Use Definition for addition to FMC 6-501 (Definitions) as required by State Law (SB 814)
 - (tt) “Excessive Water Use” means, for customers in single-family residences or multi-unit housing in which each unit is individually metered or sub-metered, using potable water in excess of **300 gallons per hour** during days or hours, as recorded during the monthly billing period, when outdoor irrigation is prohibited.

Questions

