

Development of a Water Conservation Rebate Program

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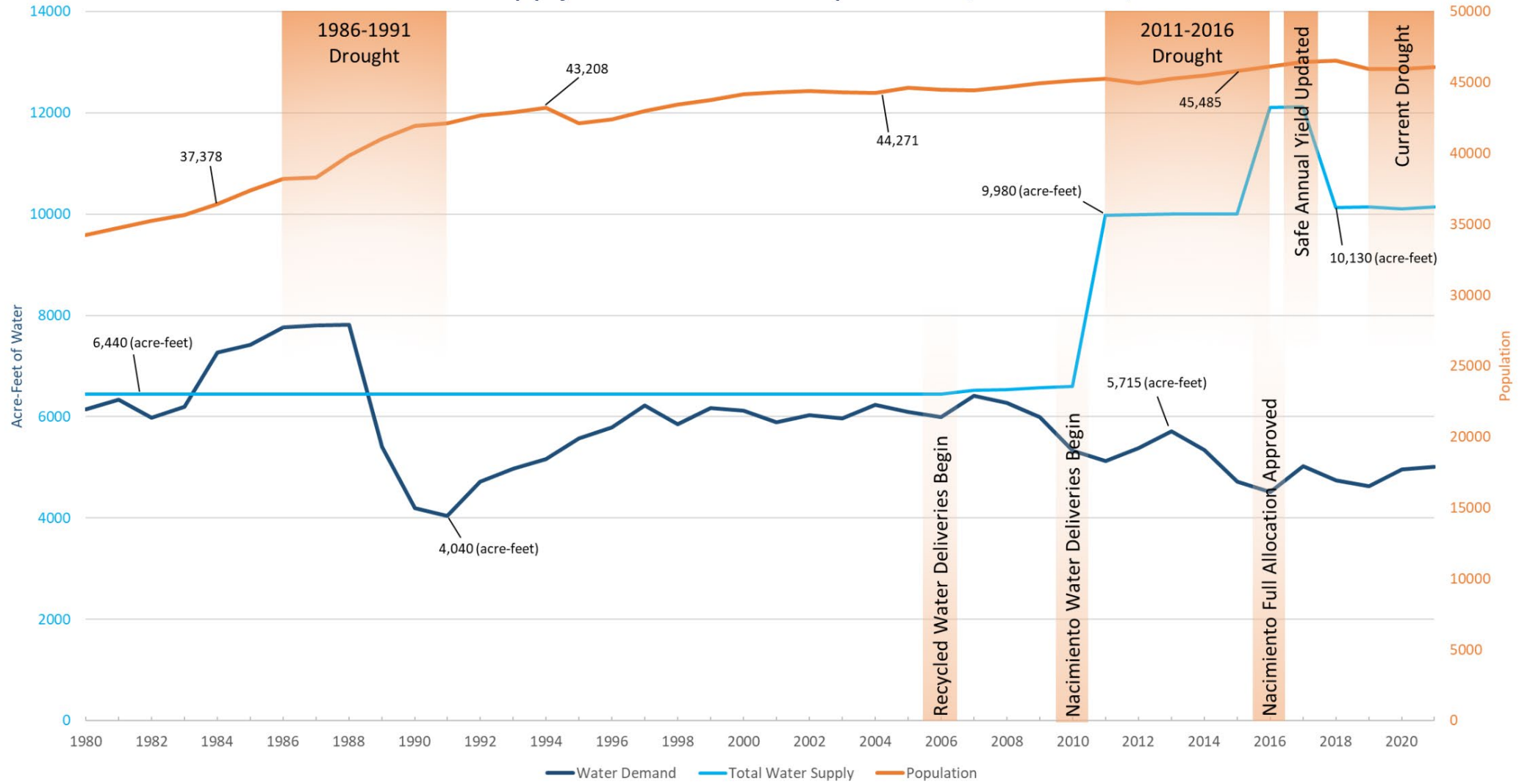


Outline

- Background
- Rebate Program Goals
- AWE Conservation Tracker Tool
- Conservation Program Modeling
- Conservation Program Implementation
- Conservation Program Tracking



Water Supply & Demand VS Population (1980-2021)



ishing



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Background

- Population: 47,653
- Number of Service Connections: 16,000+
- Decrease in GPCD with increase in population (RGPCD = 55)
- Current Conservation Efforts
 - Communication and outreach
 - Customer Support
 - Complimentary Items
 - Retrofit upon sale program
 - MWELO
 - School education program
 - Drought regulations – most were already commonplace
 - Rebates last offered in 2017 (toilets and washing machines)



Conservation Rebate Program Goals

1. Support a community that already conserves water
2. Increase conservation among CII properties
3. Maximize water savings with available budget
4. Equitable across all user groups



AWE Conservation Tracker Tool

- Excel-based spreadsheet tool for evaluating the water savings, costs, and benefits of urban water conservation programs
- Input data derived from UWMP, Water Loss Audit, EAR, etc.
 - Service Area Data
 - Base Year Demand
 - Avoided Costs
 - Water Rate Escalation
 - Plumbing Fixture Standards
 - New Landscape Standards
 - Water Loss Management
 - Conservation Program Specs



Tracker Tool Model Runs

- Scenario 1 – Biggest and best
 - 30 conservation measures
 - \$341,646 (2023-2040)
 - Water Savings: 1,535 AF (active) and 279 AF (passive)
- Scenario 2 – Best benefit cost ratios
 - 16 conservation measures
 - \$161,446 (2023-2040)
 - Water Savings: 1,071 (active) and 243 AF (passive)
- Scenario 3 – Scenario 2 revised to be equitable and meet expected budget
 - 12 conservation measures
 - \$70,000 (2023-2040)
 - Water Savings: 739 AF (active) and 105 AF (passive)



Benefit-Cost Analysis

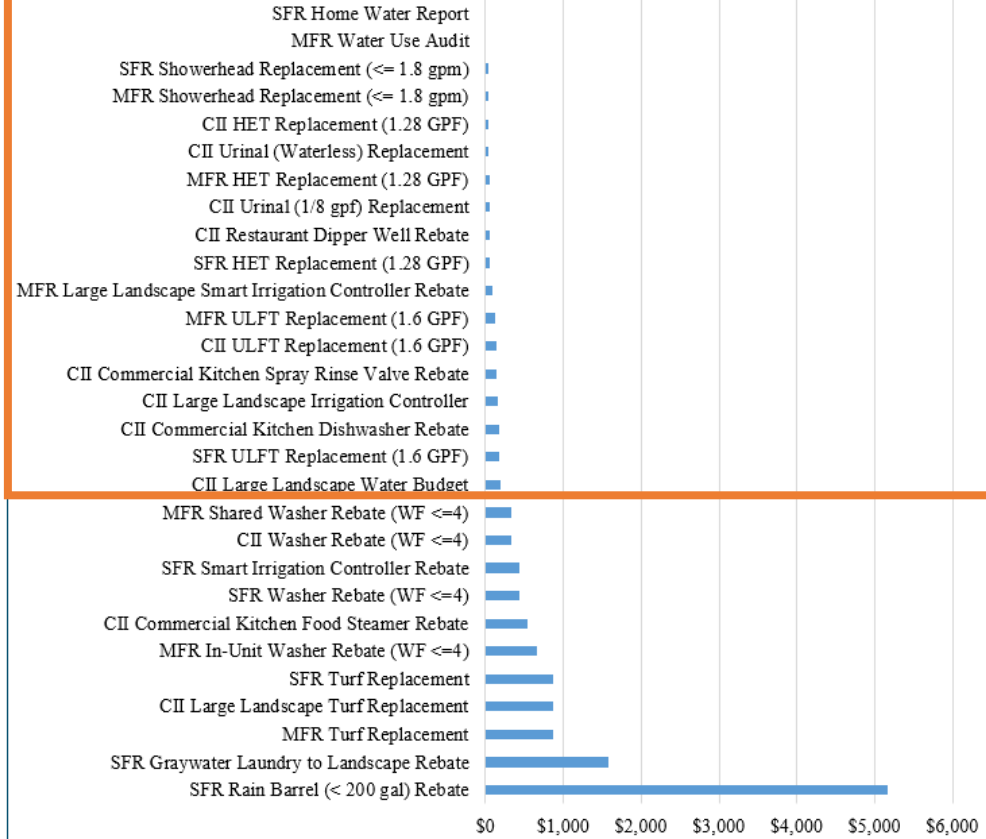
Utility Unit Cost of Water Demand Reduction by Program (\$/AF)

Select TRUE to include only Activated Programs TRUE
 Class (All)

Programs	Sum of Utility Unit Cost
SFR Rain Barrel (< 200 gal) Rebate	\$5,172
SFR Graywater Laundry to Landscape Rebate	\$1,574
MFR Turf Replacement	\$870
CII Large Landscape Turf Replacement	\$870
SFR Turf Replacement	\$870
MFR In-Unit Washer Rebate (WF <=4)	\$652
CII Commercial Kitchen Food Steamer Rebate	\$539
SFR Washer Rebate (WF <=4)	\$435
SFR Smart Irrigation Controller Rebate	\$427
CII Washer Rebate (WF <=4)	\$327
MFR Shared Washer Rebate (WF <=4)	\$327
CII Large Landscape Water Budget	\$192
SFR ULFT Replacement (1.6 GPF)	\$183
CII Commercial Kitchen Dishwasher Rebate	\$182
CII Large Landscape Irrigation Controller	\$165
CII Commercial Kitchen Spray Rinse Valve Rebate	\$136
CII ULFT Replacement (1.6 GPF)	\$132
MFR ULFT Replacement (1.6 GPF)	\$127
MFR Large Landscape Smart Irrigation Controller Rebate	\$83
SFR HET Replacement (1.28 GPF)	\$51
CII Restaurant Dipper Well Rebate	\$50
CII Urinal (1/8 gpf) Replacement	\$46
MFR HET Replacement (1.28 GPF)	\$46
CII Urinal (Waterless) Replacement	\$43
CII HET Replacement (1.28 GPF)	\$37
MFR Showerhead Replacement (<= 1.8 gpm)	\$31
SFR Showerhead Replacement (<= 1.8 gpm)	\$31
MFR Water Use Audit	\$0
SFR Home Water Report	\$0
Grand Total	\$157

Scenario 2

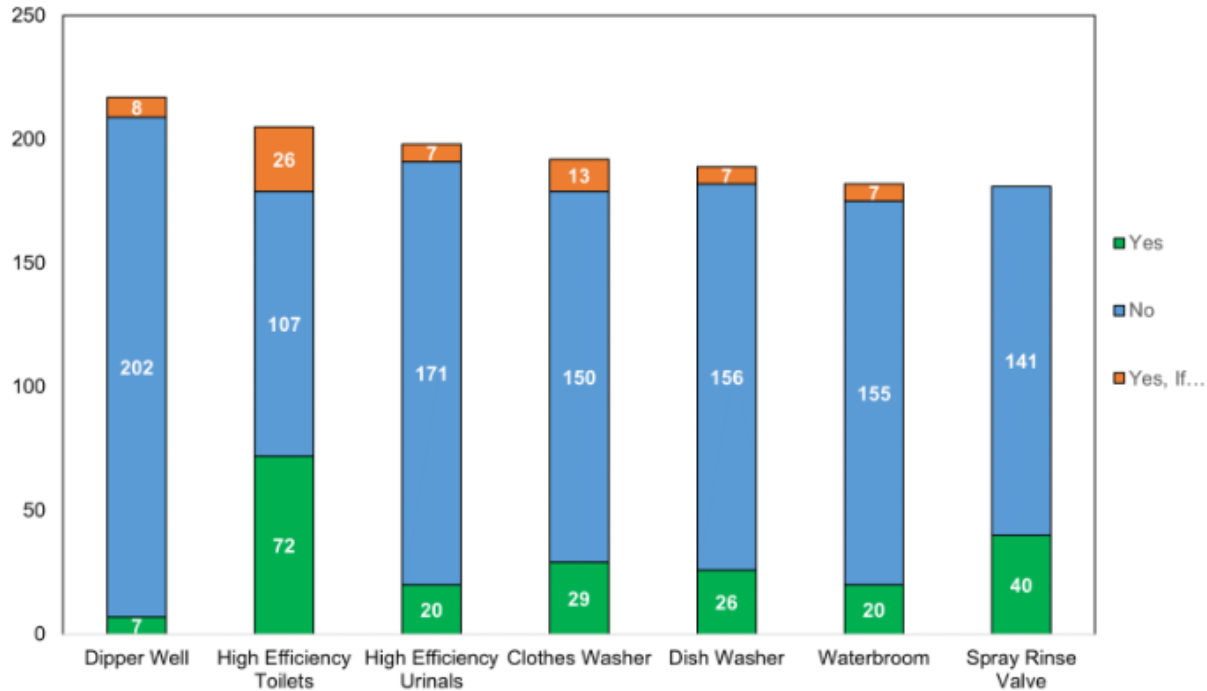
Utility Unit Cost of Water Demand Reduction by Program (\$/AF)



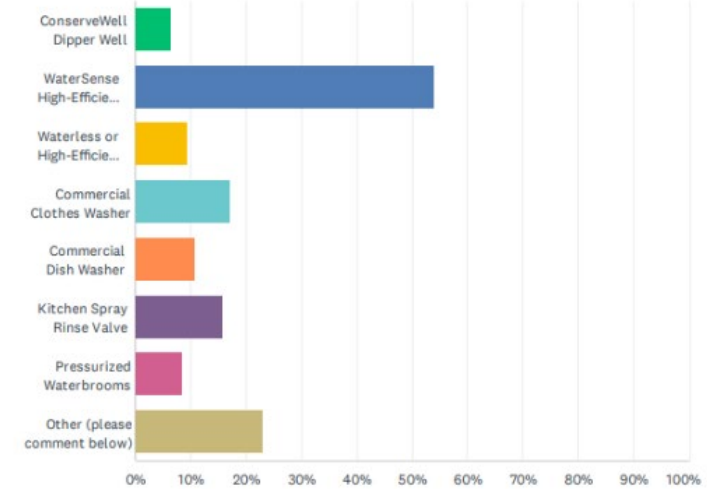
Stakeholder Feedback

Q9 Of the rebate options listed, which would your business be most interested? (check all that apply)

Answered: 139 Skipped: 101



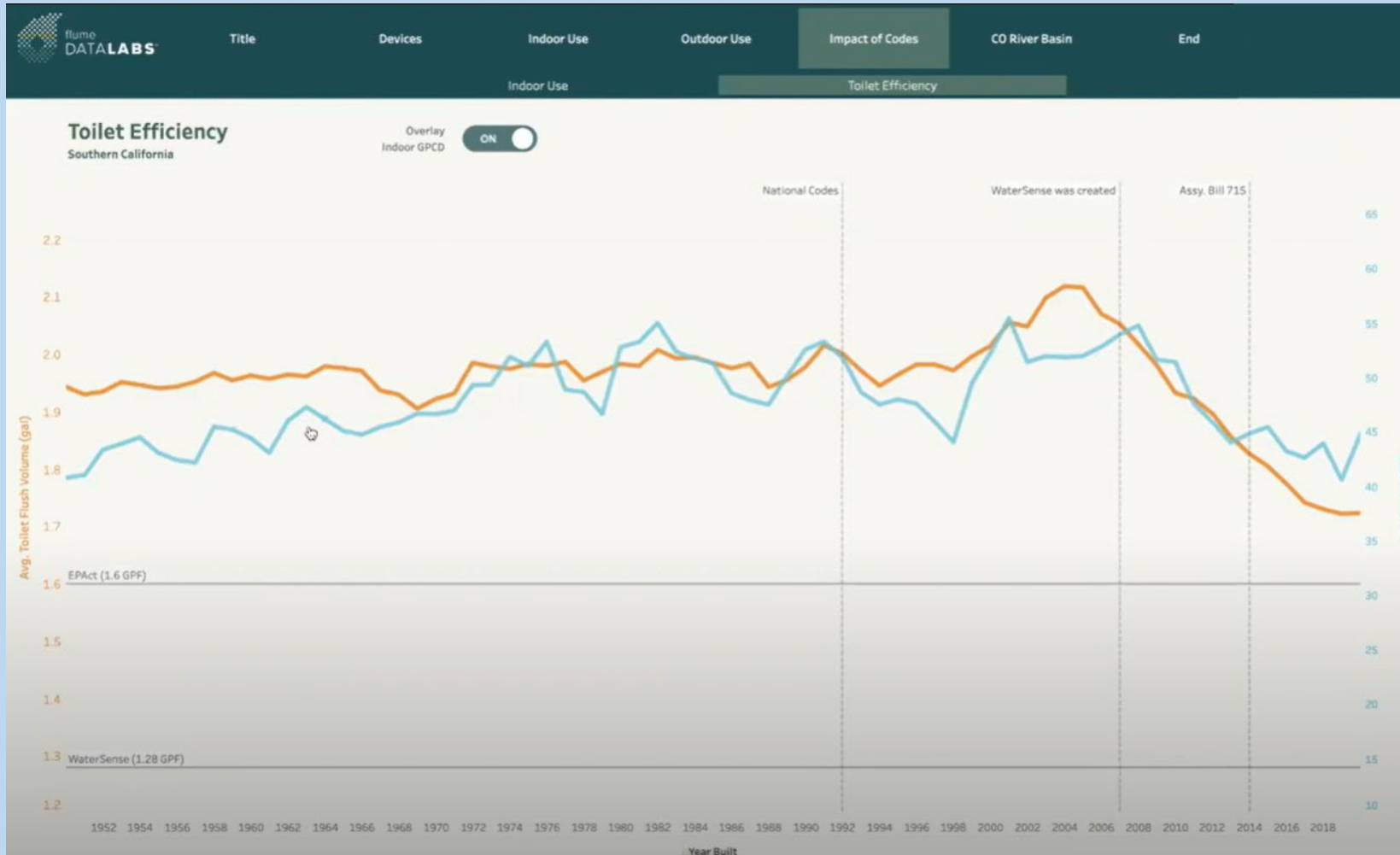
Landscape	2.10%	5
Construction	3.36%	8
Other (please specify)	32.35%	77
Total Respondents: 238		



ANSWER CHOICES	RESPONSES
ConserveWell Dipper Well	6.47% 9
WaterSense High-Efficiency Toilet	53.96% 75
Waterless or High-Efficiency Urinal using 0.125 gallons per flush or less	9.35% 13
Commercial Clothes Washer	17.27% 24
Commercial Dish Washer	10.79% 15
Kitchen Spray Rinse Valve	15.83% 22
Pressurized Waterbrooms	8.63% 12
Other (please comment below)	23.02% 32
Total Respondents: 139	



Why toilets?



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Scenario 3

Utility Unit Cost of Water Demand Reduction by Program (\$/AF)

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CII HET Replacement (1.28 GPF)	\$37
MFR Showerhead Replacement (<= 1.8 gpm)	\$31
SFR Showerhead Replacement (<= 1.8 gpm)	\$31
MFR Water Use Audit	\$0
SFR Home Water Report	\$0
Grand Total	\$157



Table 3. Cost per unit and quantity expected for 2023, 2024, and annually thereafter for all measures used in Program 3.

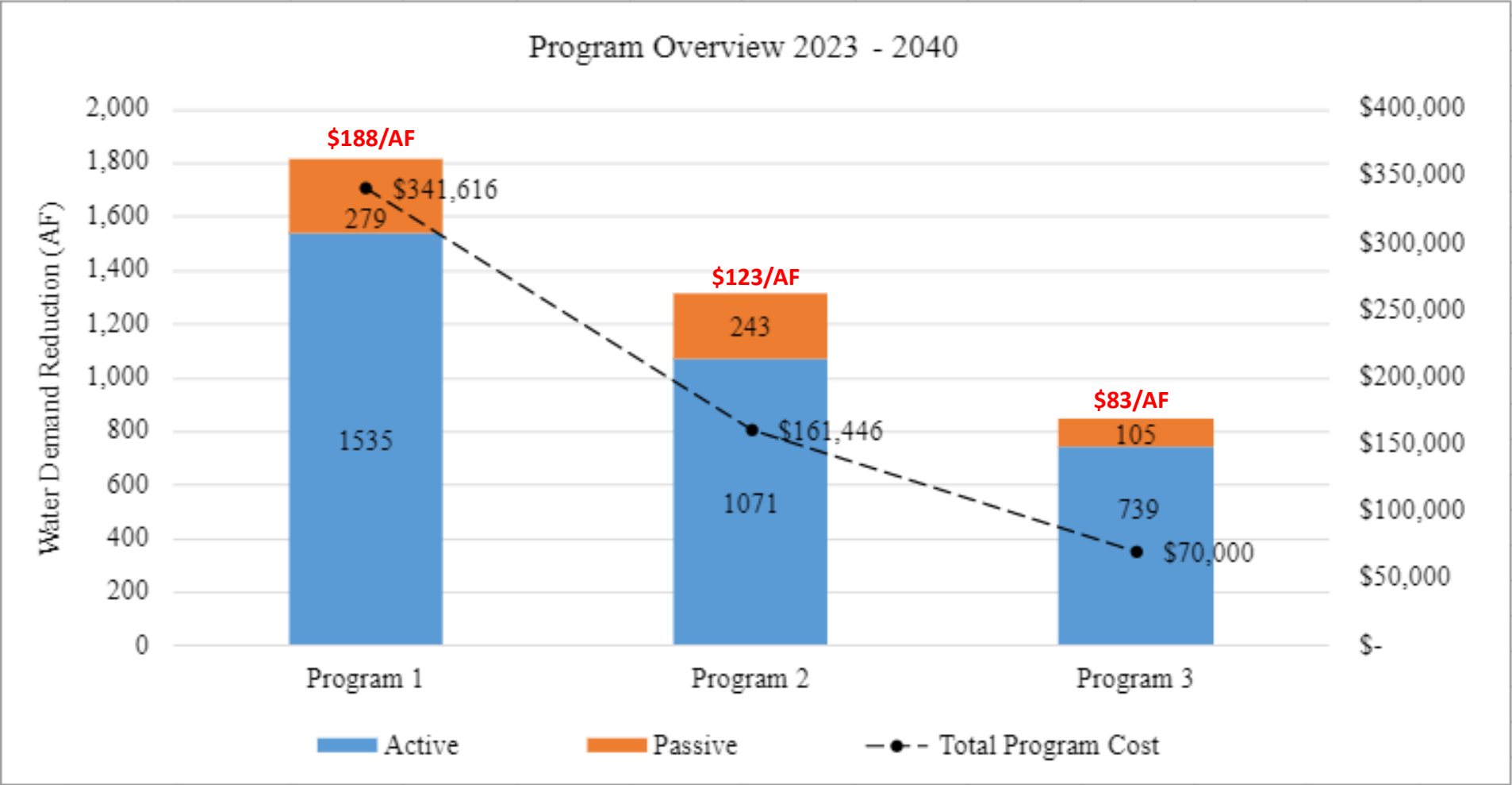
Conservation Measure	Utility (\$/Unit)	Quantity (2023)	Quantity (2024)	Quantity (Annual Thereafter)
SFR Home Water Report	\$0.00*	250	250	250
SFR HET Replacement (1.28 GPF)	\$100.00	100	100	-
SFR Showerhead Replacement (<= 1.8 GPM)	\$0.00**	50	50	50
MFR Water Use Audit	\$0.00*	250	250	250
MFR HET Replacement (1.28 GPF)	\$100.00	44	44	-
MFR Showerhead Replacement (<= 1.8 GPM)	\$0.00**	10	10	10
MFR Large Landscape Smart Irrigation Controller Rebate	\$700.00	8	8	-
CII HET Replacement (1.28 GPF)	\$100.00	70	70	-
CII Urinal (1/8 GPF) Replacement	\$100.00	20	19	-
CII Commercial Kitchen Spray Rinse Valve Rebate	\$0.00**	20	20	20
CII Restaurant Dipper Well Rebate	\$150.00	7	7	-
CII Large Landscape Water Budget	\$250.00	20	20	-

*SFR Home Water Report and MFR Water Use Audits set to \$0.00 because this is a standard service that Water Resources staff provides the community.

**Price set at \$0.00 because the measure is included in the standard \$5,000 annual complimentary water conservation item budget.






Scenario Comparison



*AF = acre-feet



Program Implementation

- Website
- News Release
- Social Media
- Radio
 - Toilet Rebate 
 - Smart Irrigation Controller 
 - Dipper Wells 



Program Management and Conservation Tracking

- Track water use for customers that have received rebates
- Began re-evaluating funding and available refunds at the end of March 2023
- Considering changes to maximize participation
 - Increasing rebate amount
 - Targeting outreach to potential recipients
 - Including additional conservation measures



Questions?

Big thanks to:

Julie Ridgeway – Water Resources Technician, City of San Luis Obispo

Liesel Hans – Director of Programs, Alliance for Water Efficiency

Brad Spilka – Program Planner, Alliance for Water Efficiency



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