



“A multicounty agency authorized to plan for and acquire supplemental water supplies, encourage water conservation and use of recycled water on a regional basis.”

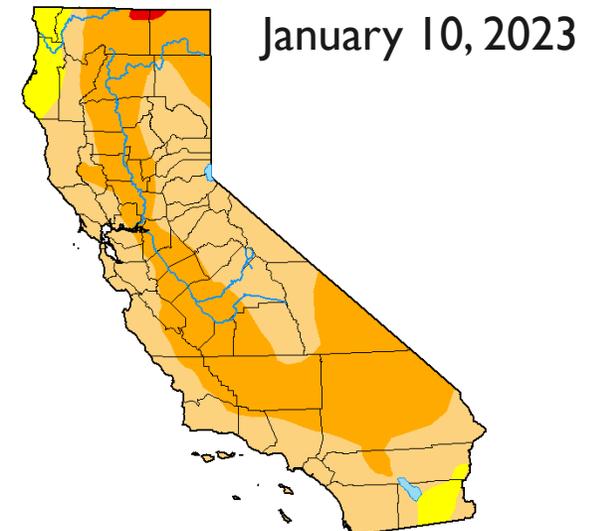
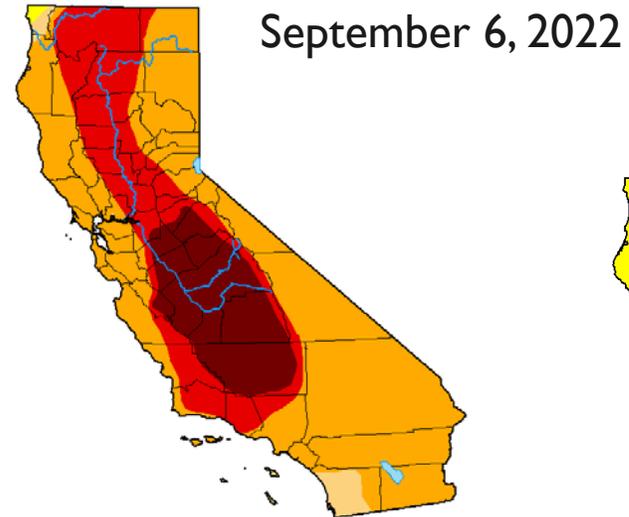
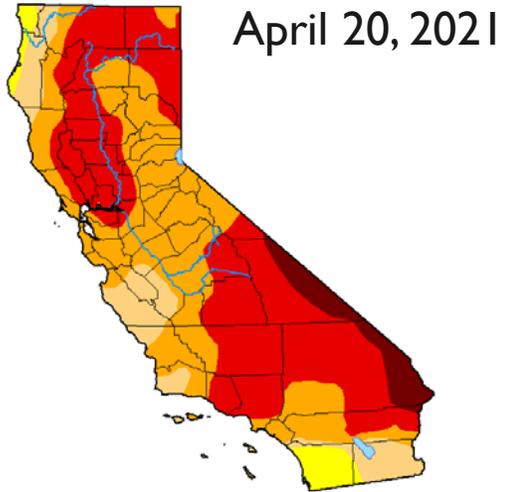
*[BAWSCA Act, AB2058 (Papan-2002)]*

## **San Mateo County C/CAG Resources Management and Climate Protection (RMCP) Committee Meeting**

**July 16, 2025**



# Progression of the 2021- 2023 Drought



# Project Objectives

- Document and evaluate drought actions and drought response measures (DRMs)
- Document fiscal impacts and water quality issues observed
- Quantify water use reductions achieved
- Quantitatively analyze the effectiveness of local and regional DRMs
- Identify lessons learned to support future planning

# Governor Key Actions During Drought

- Governor Key Actions (primarily via Executive Order (EO))
  - Directed State officials to take all necessary actions to prepare for a drought - April 2021
  - Called for a statewide voluntary water use reduction of 15% as compared to 2020 use levels - July 2021
  - Issued a proclamation that provided greater clarity on allowable water uses during the drought - October 2021
  - Maintained the drought emergency and directed the SWRCB to consider adopting emergency regulations that (1) require suppliers submit a preliminary annual supply and demand assessment, (2) to enter Stage 2 of their Water Shortage Contingency Plan (WSCP), and (3) banned irrigation of "non-functional" turf - March 2022
  - Maintained the Statewide drought emergency and directed the SWRCB to consider modifying requirements for reservoir releases in light of heavy winter precipitation - January 2023
  - Terminated certain provisions from previous EOs that were no longer needed considering improving drought conditions, such as requiring suppliers enact Stage 2 of their WSCPs, and ending the Statewide voluntary 15% water use reduction – March 2023
  - Terminated the drought EOs in 19 counties, including San Mateo and Santa Clara. At the time of this report, Alameda County is still under the drought EO – September 2024



# State Water Board Key Actions During Drought

- SWRCB Key Actions

- Ordered water diversion curtailment and mandated reporting requirements for some water rights holders in the Delta Watershed, including the Tuolumne River – August 2021
- Adopted an emergency drought regulation that prohibited specific water waste activities identified in the Governor's October 2021 proclamation – January 2022
- Adopted subsequent emergency drought regulations consistent with the Governor's March 2022 EO – May 2022
- Extended the January 2022 drought emergency regulations through December 2023 – issued in December 2022
- Readopted the ban on using potable water for watering non-function turf – May 2023
- Allowed the emergency regulation prohibiting wasteful water use to expire – December 2023



# SFPUC Key Actions During Drought

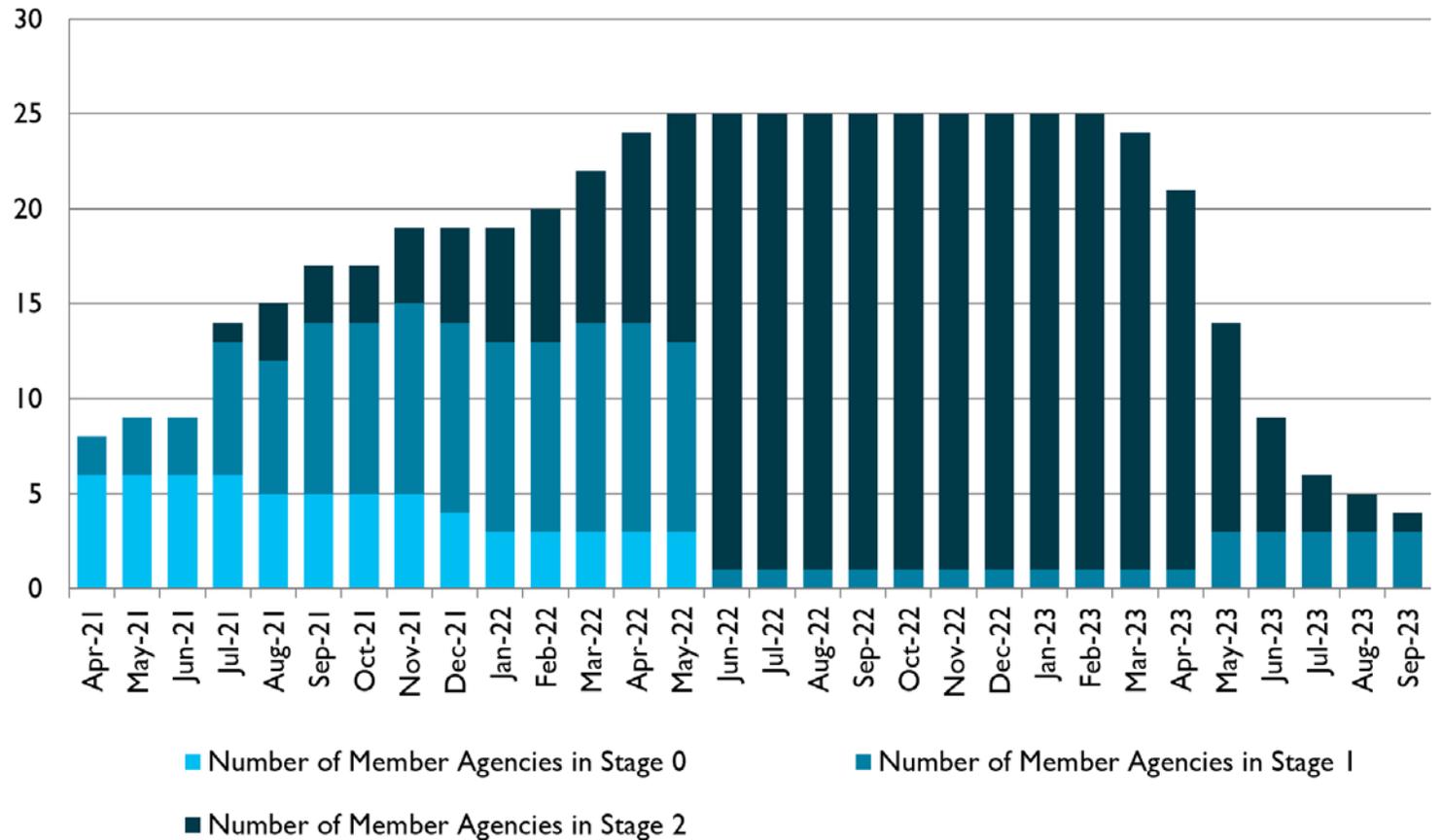
- SFPUC Key Actions

- Issued its Water Supply Availability Estimate for the coming FY which indicated a goal to maintain water use systemwide below 2019 levels – April 2021
- SFPUC formally issued a request for customers of the SF RWS to voluntarily reduce water use by 15%, pursuant to the Governor's July 2021 EO – July 2021
- Submitted a petition to the State Board requesting that they reconsider the curtailment orders. SWRCB suspended curtailments for the SFPUC points of diversion on the Tuolumne River - August 2021. *The State Board granted the request in October 2021.*
- As drought conditions worsened, the SFPUC declared a Water Shortage Emergency and called for a 10% voluntary reduction in water usage system-wide. SFPUC also set the effective date of 1 April 2022 for the mandatory temporary 5% drought surcharge for its retail customers – November 2021. *This instigated the use of the Tier 1 and Tier 2 Drought Allocation formulas*
- Adopted a system-wide voluntary water use reduction of 11% associated with Stage 2 of the SFPUC's WSCP, in alignment with SWRCB requirements – May 2021
- SFPUC sent a formal letter to the State Board asking that emergency drought regulations be modified to rescind requirements for WSCP Stage 2 response actions from water suppliers with demonstrated sufficient supplies that face no water shortages – March 2023. *The State Board did not respond / take any action*
- Rescinded their November 2021 Water Shortage Emergency Declaration and drought surcharge but continued the voluntary system-wide water use reduction of 11%, with wording to indicate it would expire when the Governor's EO expires – April 2023



# Agencies Phased into Drought Response and Utilized Administrative Actions

- Gradually phased into drought response beginning summer 2021
- Many agencies implemented administrative actions before officially enacting their WSCPs



# Actions Taken by BAWSCA Member Agencies (1 of 2)

Water Use Restriction Actions	% of Agencies Implemented
Weekly water restrictions	96%
Application of water to irrigate turf and ornamental landscapes during rainfall	96%
Excessive irrigation of outdoor landscapes	96%
Application of potable water directly to driveways or sidewalks	92%
Washing a motor vehicle with a hose not fitted with a shut-off nozzle	92%
Use of potable water in decorative water features	88%
Wasting water from broken or defective water systems	80%
Other use-type restrictions	56%

Demand Actions	% of Agencies Implemented
Turf replacement/rebates	75%
Residential water audits	72%
CII Customer Sector water audits	64%
Expanded existing rebate programs	52%

Communication Actions	% of Agencies Implemented
Website updates / use	100%
Paper mail	88%
Articles / new releases	80%
E-mails	80%
Social media	76%
Community events	68%
Notification via customer app	60%
Banners	56%
Door hangers	52%



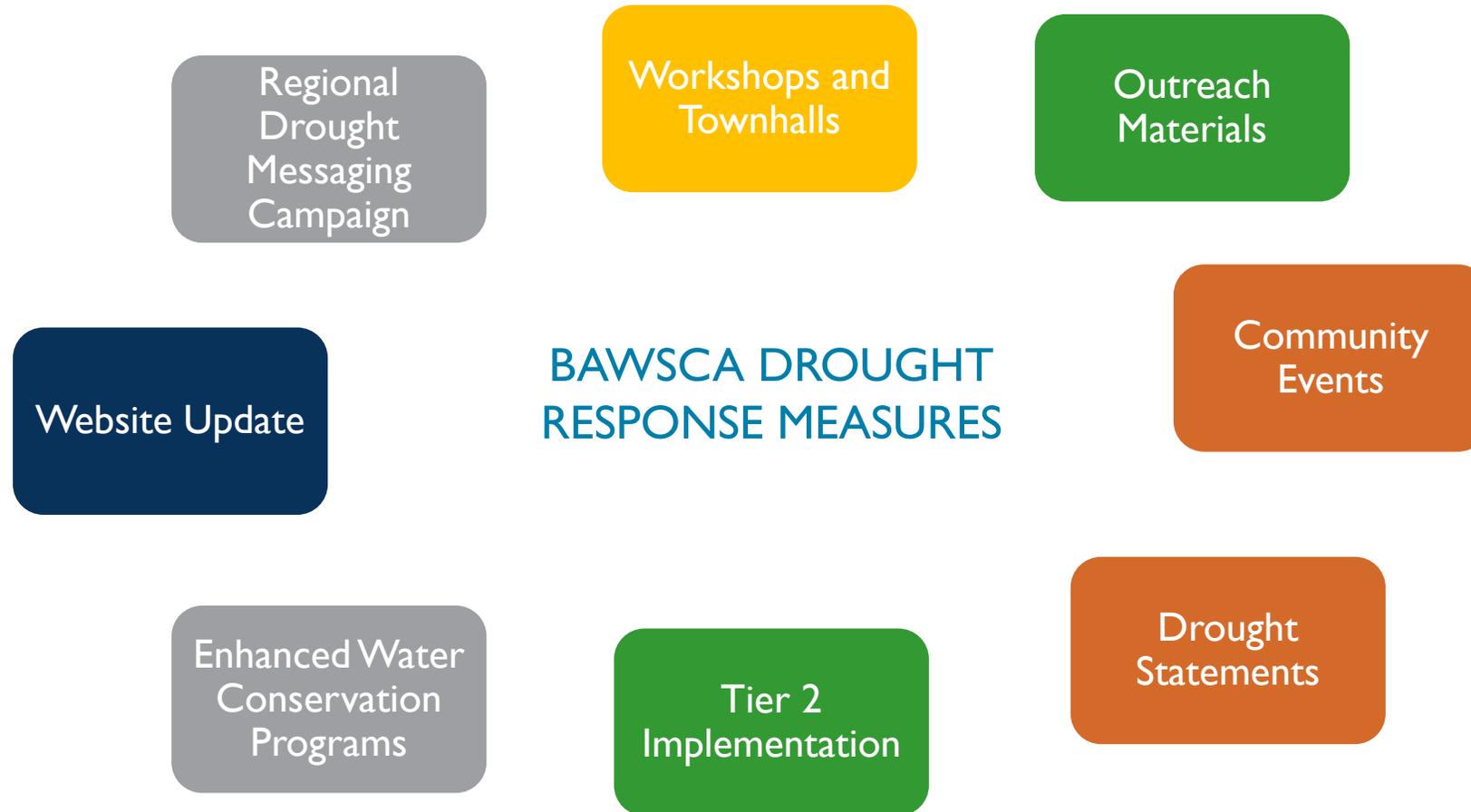
# Actions Taken by BAWSCA Member Agencies (2 of 2)

Water Waste Actions	% of Agencies Implemented
Notification via door hanger	84%
Notification via letter	72%
Notification via phone call	72%

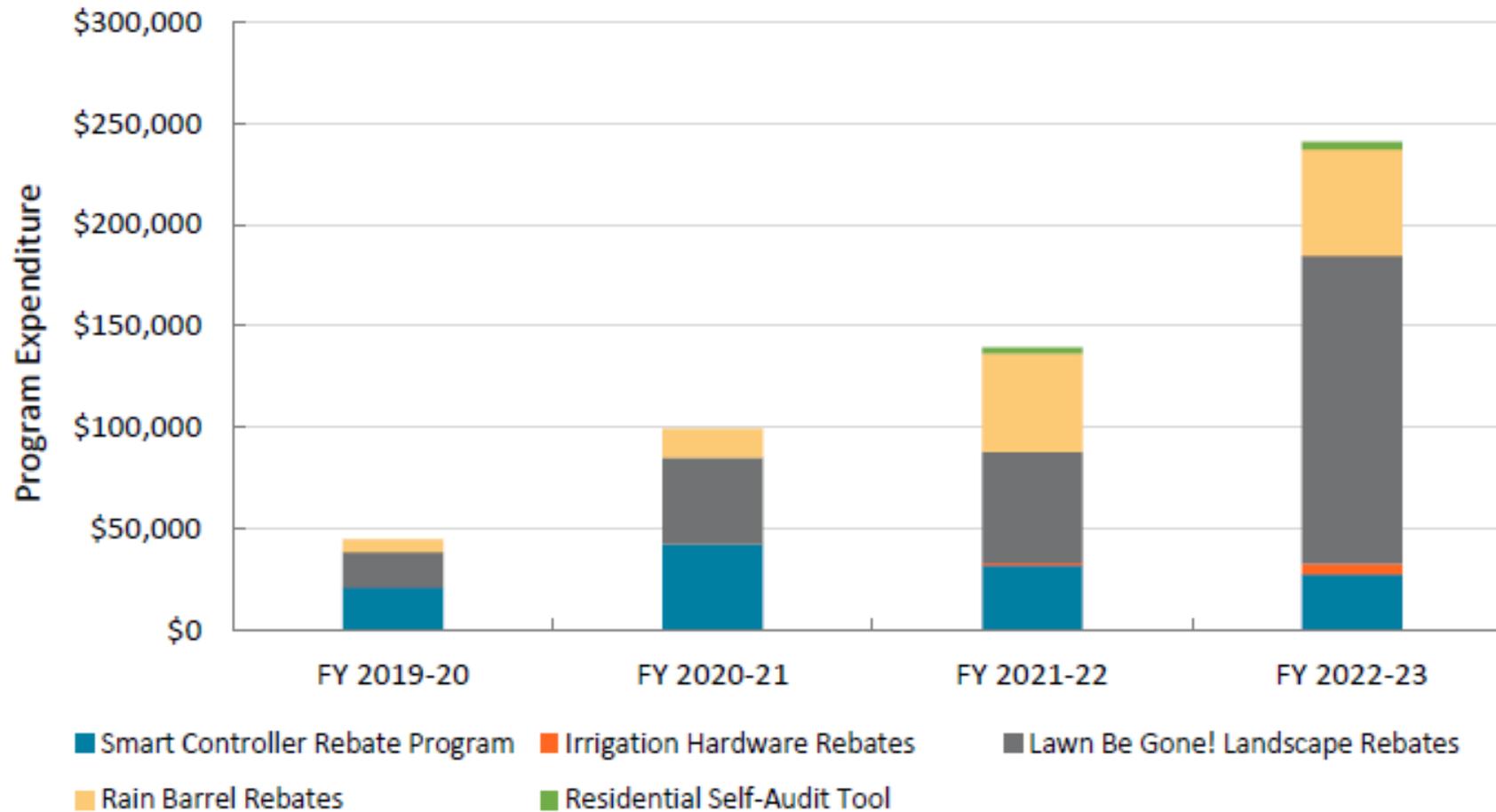
Other Actions	% of Agencies Implemented
Not serving drinking water other than upon request in eating or drinking establishments	76%
Operators of hotels and motels providing guests with the option of choosing not to have towels and linens laundered daily	72%
Implementation of a drought surcharge and/or raised rates	36%
Rationing and reduced water allocations	28%
Fines for wasteful water use	20%
Creative public messaging endeavors (e.g., emergency announcements, school partnerships, hosting of water-efficient garden tours, media briefings, truck decals, etc.)	16%



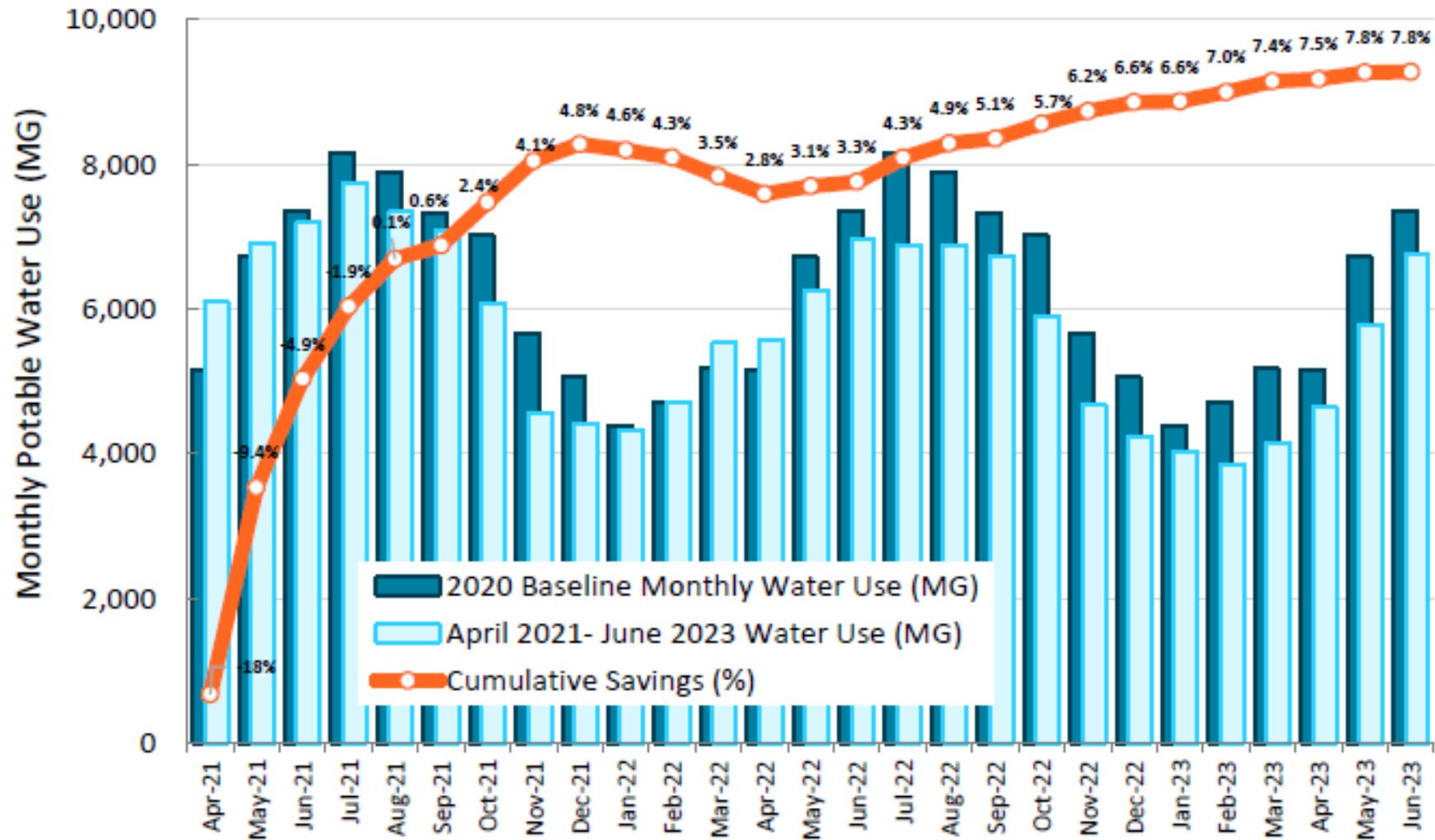
# During the 2021-2023 Drought, Effective Communication and Outreach led by BAWSCA was Instrumental



# Program Expenditures – BAWSCA Rebate Programs

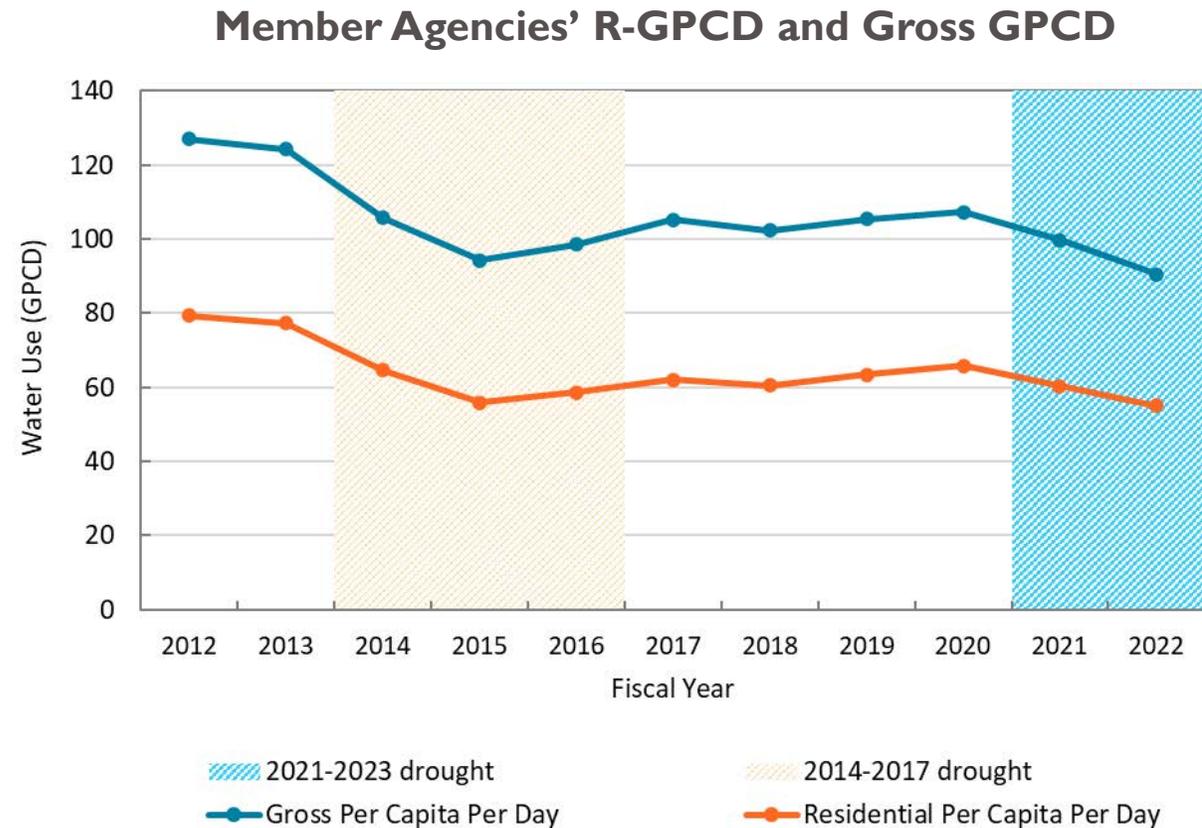


# BAWSCA Agencies' Cumulative Water Use Reduction and Monthly Potable Water Use from April 2021 to June 2023



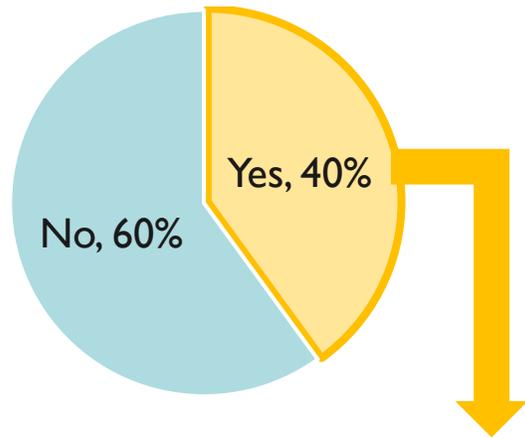
# Water Savings Achieved During the 2021-2023 Drought was Notably Lower than Achieved Previously

- Residential per capita use in gallons per day (R-GPCD) and gross per capita use (gross GPCD) were relatively stable between the two drought periods and did not rebound to pre-2014-17 drought levels
- Slightly lower R-GPCD and GPCD observed during the 2021-23 drought
- Water use reduction during the drought was 7.8% from the 2020 baseline, below the 11% voluntary as requested by the SFPUC
- Demand hardening may have contributed to the lower water use reductions, yet other factors are at play



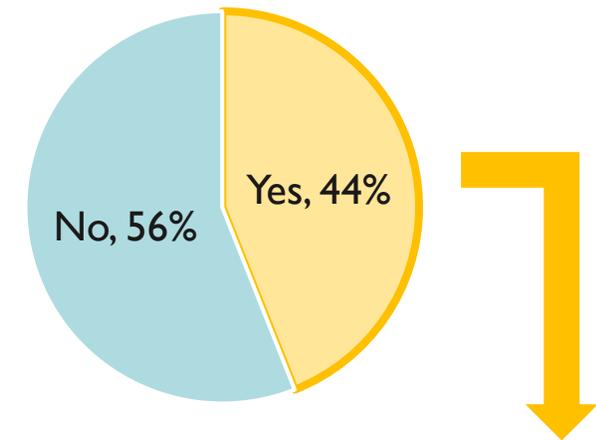
# Water Quality Issues Remain and is an Operational Challenge

- 40% of agencies experienced water quality issues due to lower than usual water flows



- Water quality/nitrification issues due to
  - Reduced flushing
  - Increased water age following lower demand
- Quality issues from raw water sources

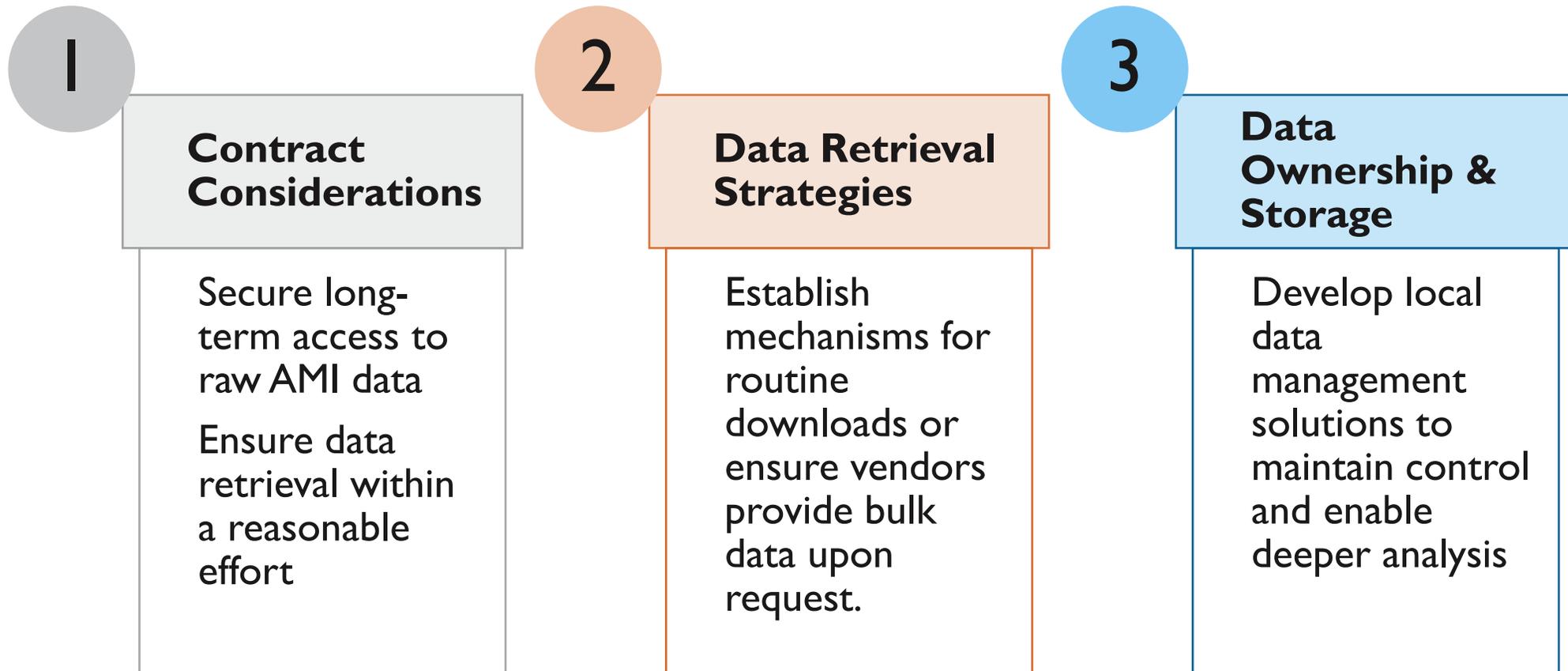
- Many agencies implemented preventative measures during this Drought in anticipation of water quality impacts



- Changed the flushing operations to flush when and where needed
- Utilize Neutral Output Discharge Elimination System (NO-DES)
- Adding additional automatic flushing unit
- Proactively drained and cleaned reservoirs
- Took tank or reservoir offline to help reduce water age

# Limited Access to AMI Data Posed Challenges for Advanced Analysis

## Recommendations for AMI Data Management



# Preparing for the Next Drought

- Plan ahead: coordinate with Regional partners including SFPUC in advance of drought to improve flexibility and responsiveness
- Continue to enhance BAWSCA conservation programs to improve overall water use efficiency and drought preparedness
- Agencies should review their AMI structure and contracts to ensure data is available for analysis
- Advocate for continued research into demand hardening
- Agencies may need to reevaluate effectiveness of their drought plans due to hardening and message fatigue



# Questions & Comments

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- The 2021-2023 Drought Report is available on BAWSCA's website at the following link:  
<https://bawsca.org/water/reliability>

