

# This presentation premiered at WaterSmart Innovations

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# Taking the Temperature on Drought Response Effectiveness

WATER SMART INNOVATIONS 2017

4 OCTOBER 2017

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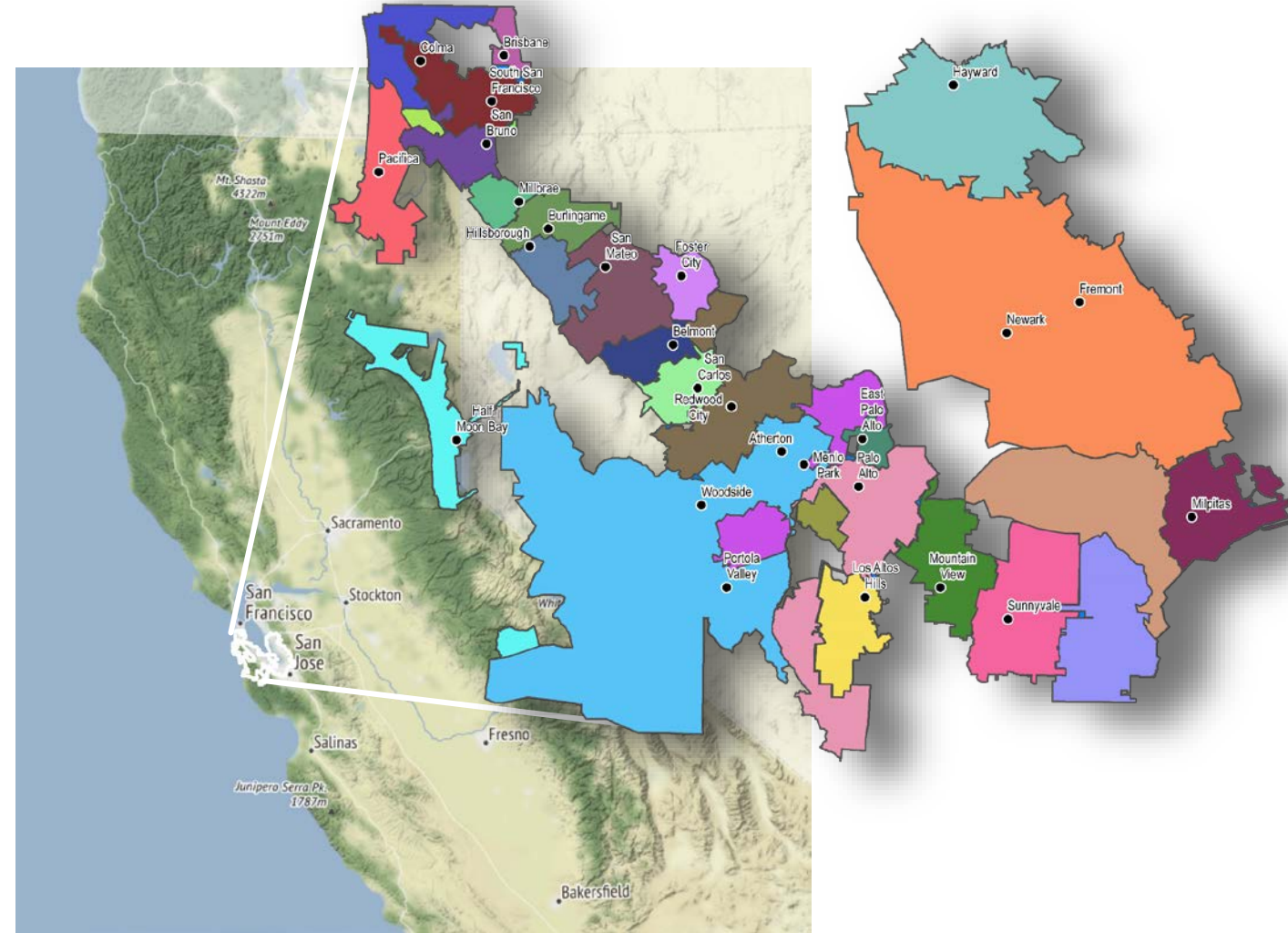
# PRESENTATION OVERVIEW

- BAWSCA
- Drought Severity and Timeline
- Drought Response Action Survey
- Agency Response to Drought
- Lessons Learned & Preparation for Next Drought

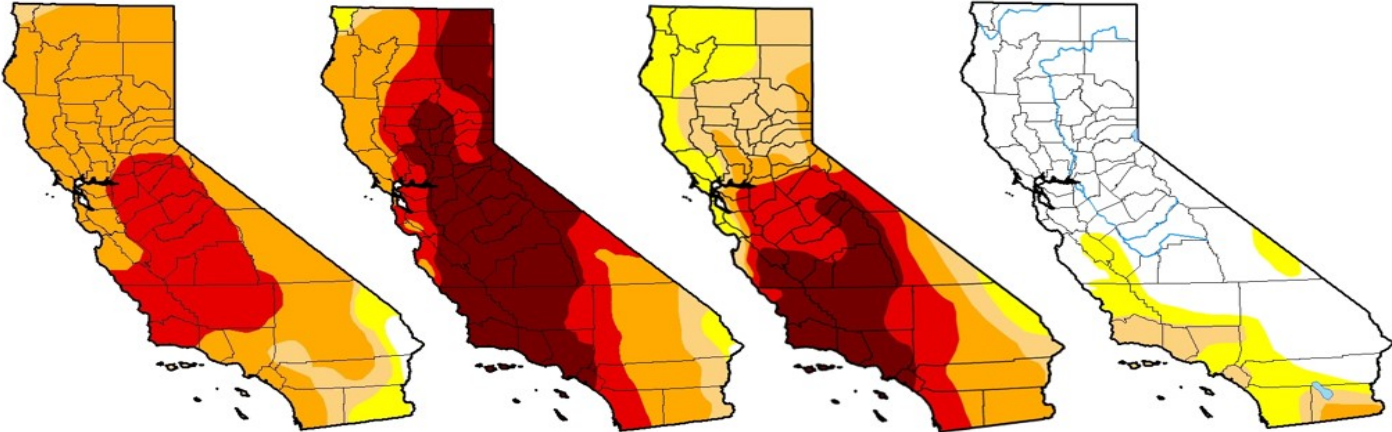


# BAY AREA WATER SUPPLY & CONSERVATION AGENCY (BAWSCA)

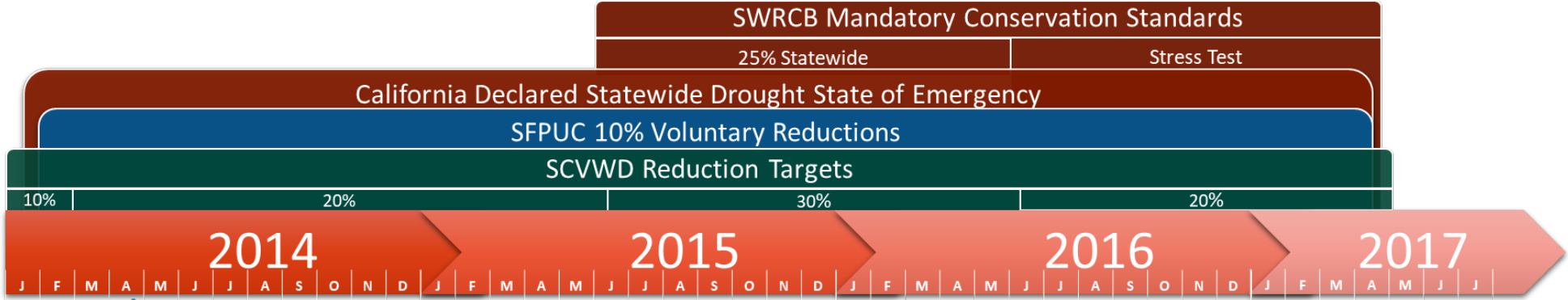
- Special District representing the interests of:
  - 26 cities and water districts in San Mateo, Santa Clara and Alameda Counties
  - 1.8 million residents
- All rely on San Francisco Regional Water System
- Regional water supply planning and conservation program services



# DROUGHT SEVERITY AND TIMELINE



January 2014 - April 2017



# PURPOSE OF DROUGHT REPORT

- BAWSCA Drought Report documents
  - Drought response actions during 2014 – 2017 drought
  - Critical knowledge gained through these actions
- Report serves as reference document for future drought response and planning efforts





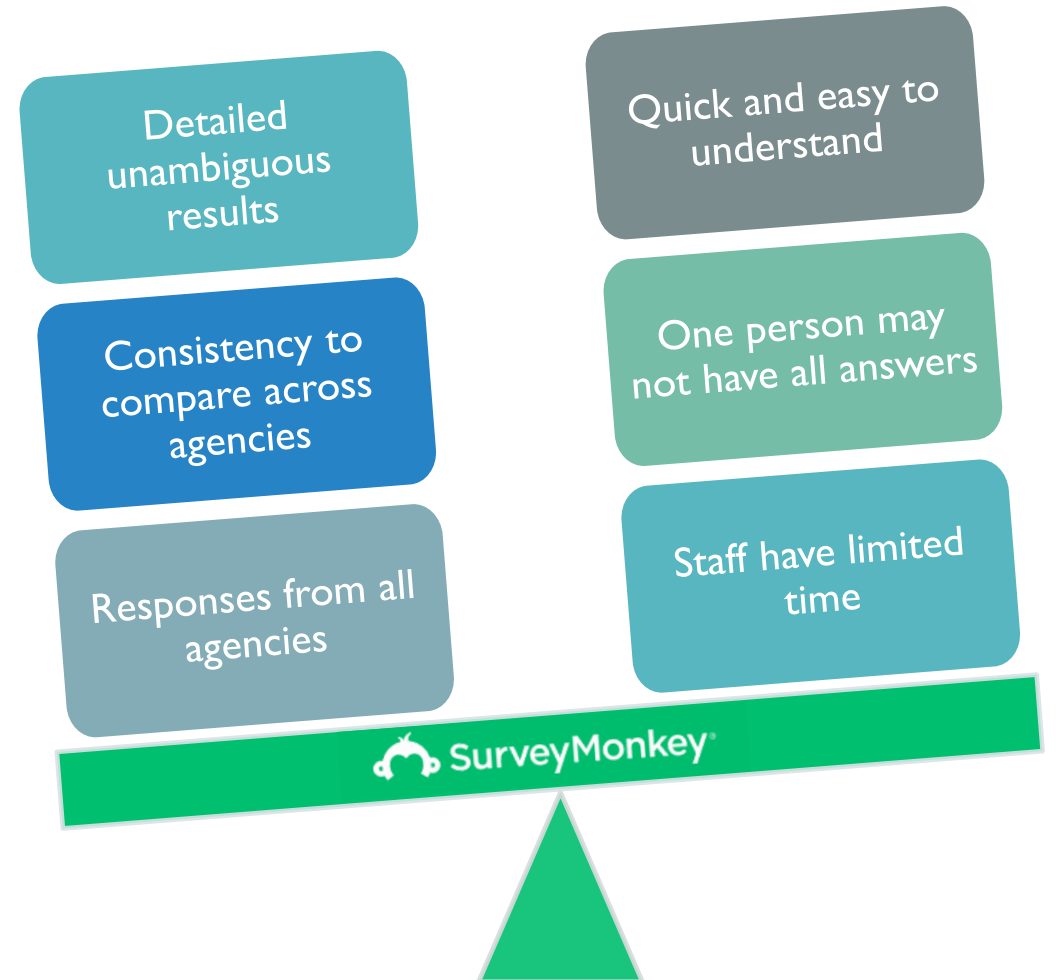
# DROUGHT RESPONSE ACTION SURVEY

- Want to understand:
  - What drought response actions member agencies utilized (regional and local)
  - How effective were the regional & local actions
  - What feedback agencies received from their management and public
- Use info to inform what regional actions should be prioritized in the event of a future drought



# SURVEY DESIGN PRINCIPLES

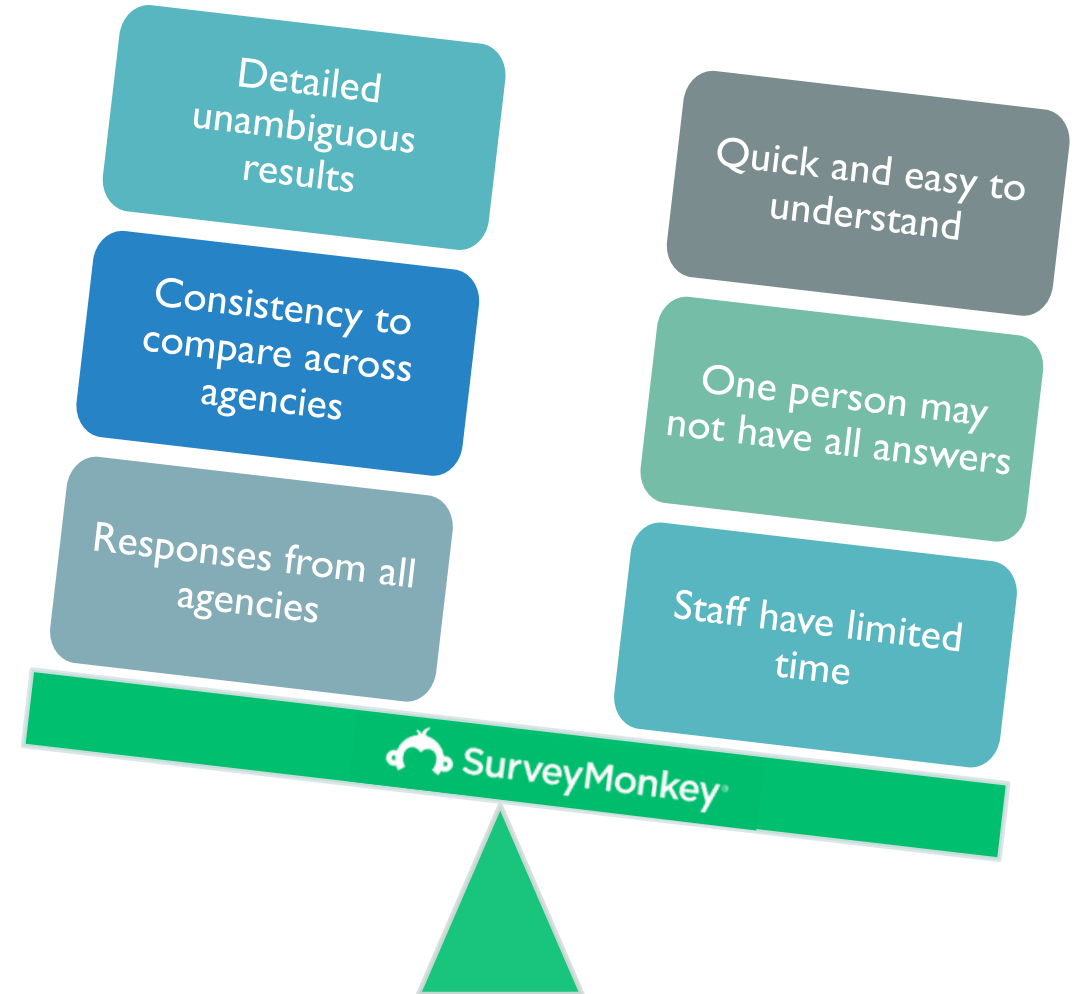
- Keep it short and easy to understand
- Consistent framework for similar questions
- Make the most important questions easiest to respond to
- Leave ample option for comments and narratives, but don't require them
- Provide option to consult with others
- Anticipate the range of responses and how they'll be interpreted - work backwards





# SURVEY IMPLEMENTATION

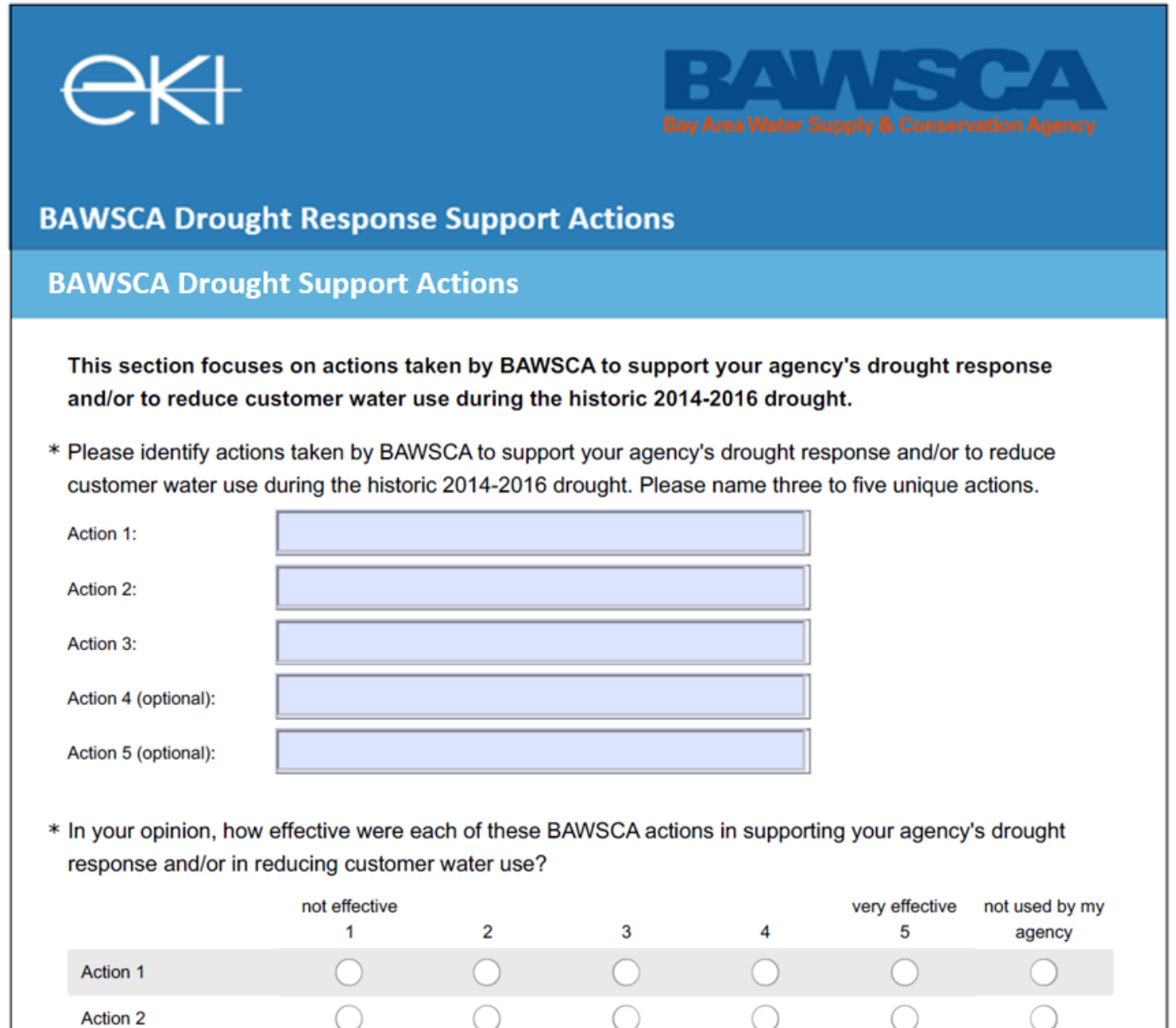
- Online survey tool (Survey Monkey)
- PDF of complete survey with references
- Gave 2 weeks to respond – most agencies (~70%) responded by deadline
- Within 5 weeks, we got a 100% response rate



# APPROACH

- Which of BAWSCA's drought support programs was most valued by the agencies?
- Asked 3 slightly different ways

I) Open ended



**BAWSCA Drought Response Support Actions**

**BAWSCA Drought Support Actions**

This section focuses on actions taken by BAWSCA to support your agency's drought response and/or to reduce customer water use during the historic 2014-2016 drought.

\* Please identify actions taken by BAWSCA to support your agency's drought response and/or to reduce customer water use during the historic 2014-2016 drought. Please name three to five unique actions.

Action 1:

Action 2:

Action 3:

Action 4 (optional):

Action 5 (optional):

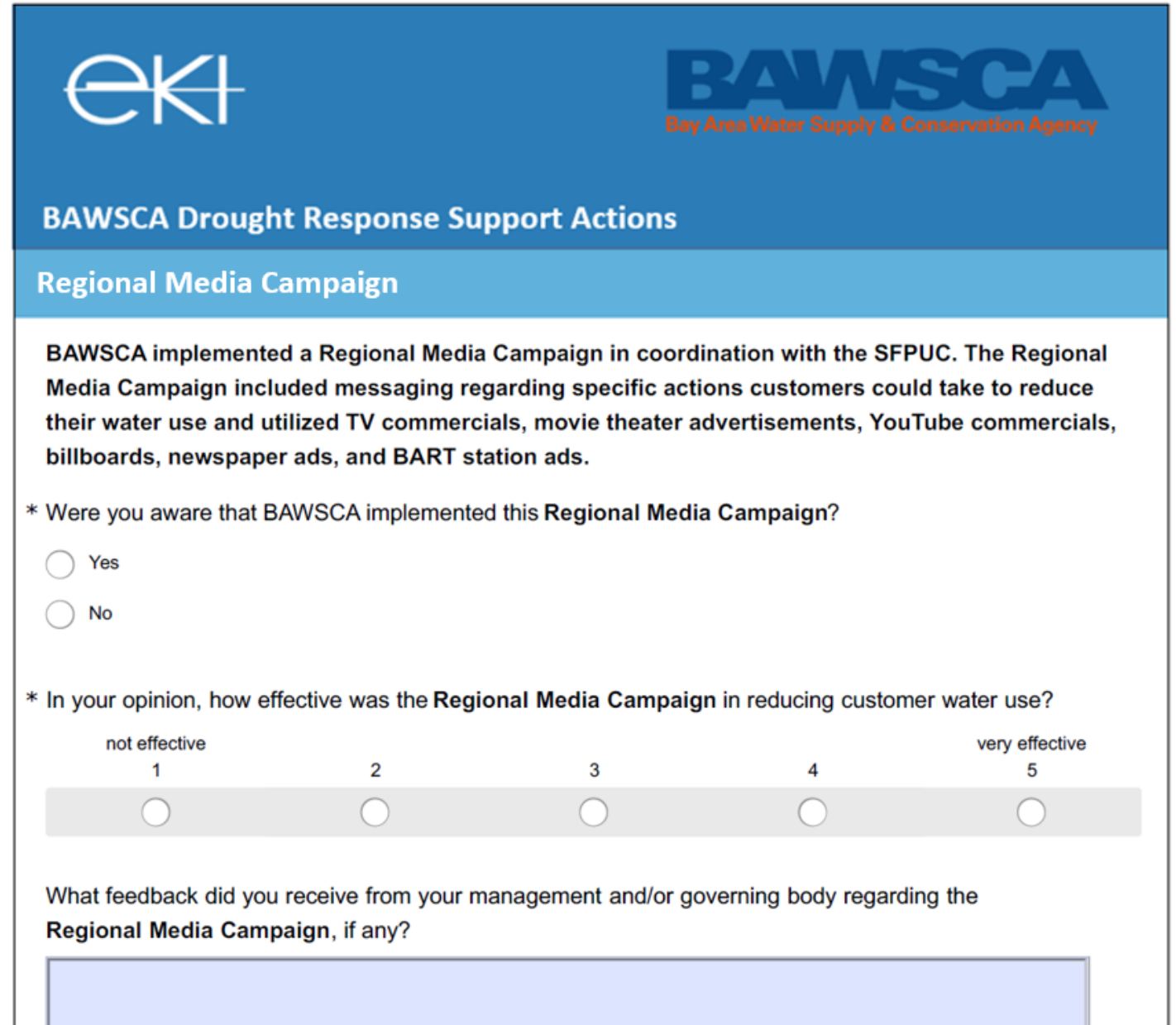
\* In your opinion, how effective were each of these BAWSCA actions in supporting your agency's drought response and/or in reducing customer water use?

	not effective 1	2	3	4	very effective 5	not used by my agency
Action 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Action 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# APPROACH

- Which of BAWSCA's drought support programs was most valued by the agencies?
- Asked 3 slightly different ways

## 2) Value of each specific action alone



**eKI** **BAWSCA**  
Bay Area Water Supply & Conservation Agency

### BAWSCA Drought Response Support Actions

#### Regional Media Campaign

BAWSCA implemented a Regional Media Campaign in coordination with the SFPUC. The Regional Media Campaign included messaging regarding specific actions customers could take to reduce their water use and utilized TV commercials, movie theater advertisements, YouTube commercials, billboards, newspaper ads, and BART station ads.

\* Were you aware that BAWSCA implemented this Regional Media Campaign?

Yes

No

\* In your opinion, how effective was the Regional Media Campaign in reducing customer water use?

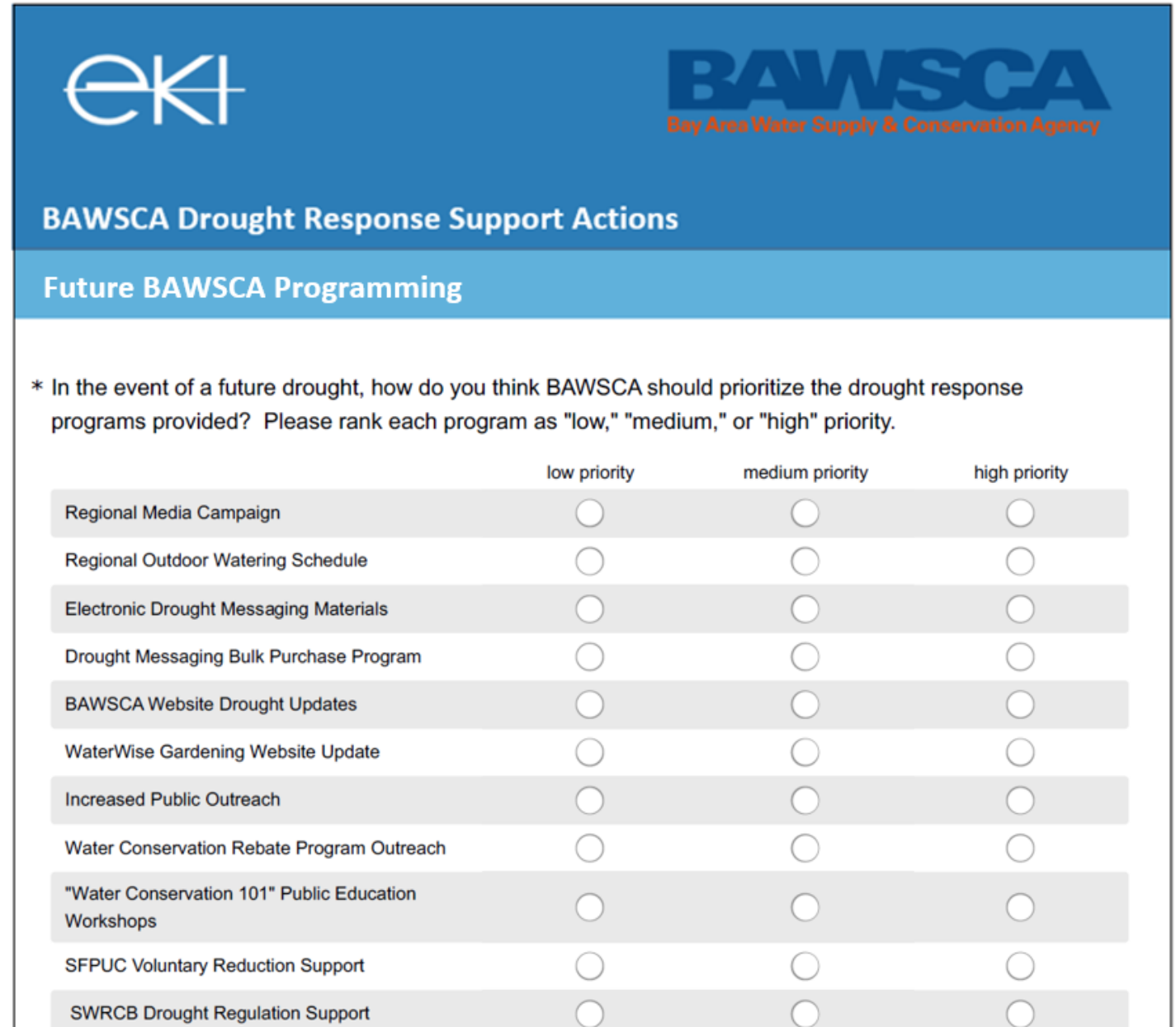
not effective 1 2 3 4 5 very effective

What feedback did you receive from your management and/or governing body regarding the Regional Media Campaign, if any?

# APPROACH

- Which of BAWSCA's drought support programs was most valued by the agencies?
- Asked 3 slightly different ways

3) Value of each action relative to each other



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## BAWSCA Drought Response Support Actions

### Future BAWSCA Programming

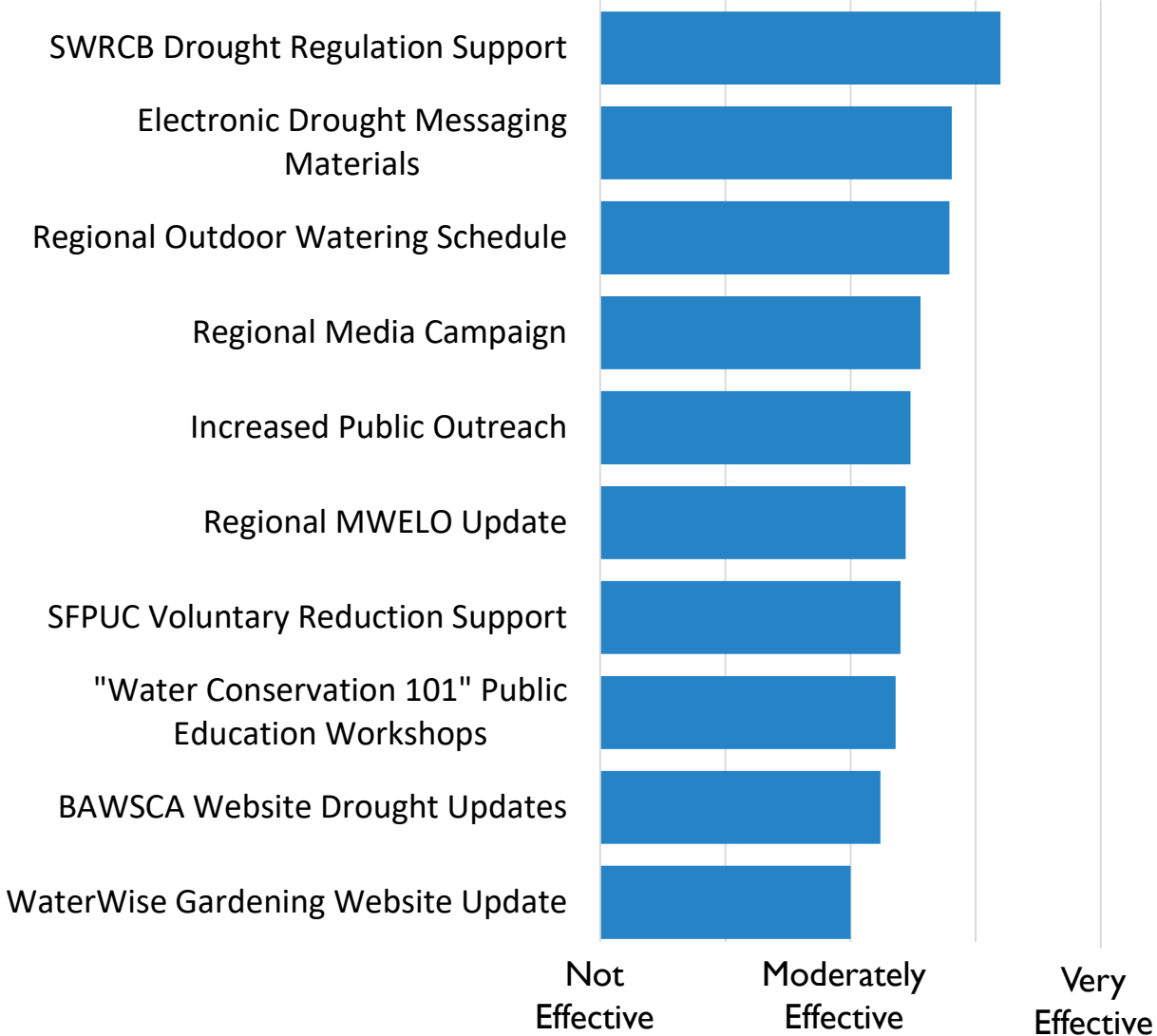
\* In the event of a future drought, how do you think BAWSCA should prioritize the drought response programs provided? Please rank each program as "low," "medium," or "high" priority.

	low priority	medium priority	high priority
Regional Media Campaign	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regional Outdoor Watering Schedule	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electronic Drought Messaging Materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drought Messaging Bulk Purchase Program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BAWSCA Website Drought Updates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
WaterWise Gardening Website Update	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased Public Outreach	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water Conservation Rebate Program Outreach	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
"Water Conservation 101" Public Education Workshops	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SFPUC Voluntary Reduction Support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SWRCB Drought Regulation Support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# HIGHLY VALUED REGIONAL PROGRAMS

- Agencies valued most highly the programs that:
  - Coordinated consistent messaging across the region
  - Supported agencies with understanding and complying with the evolving regulations

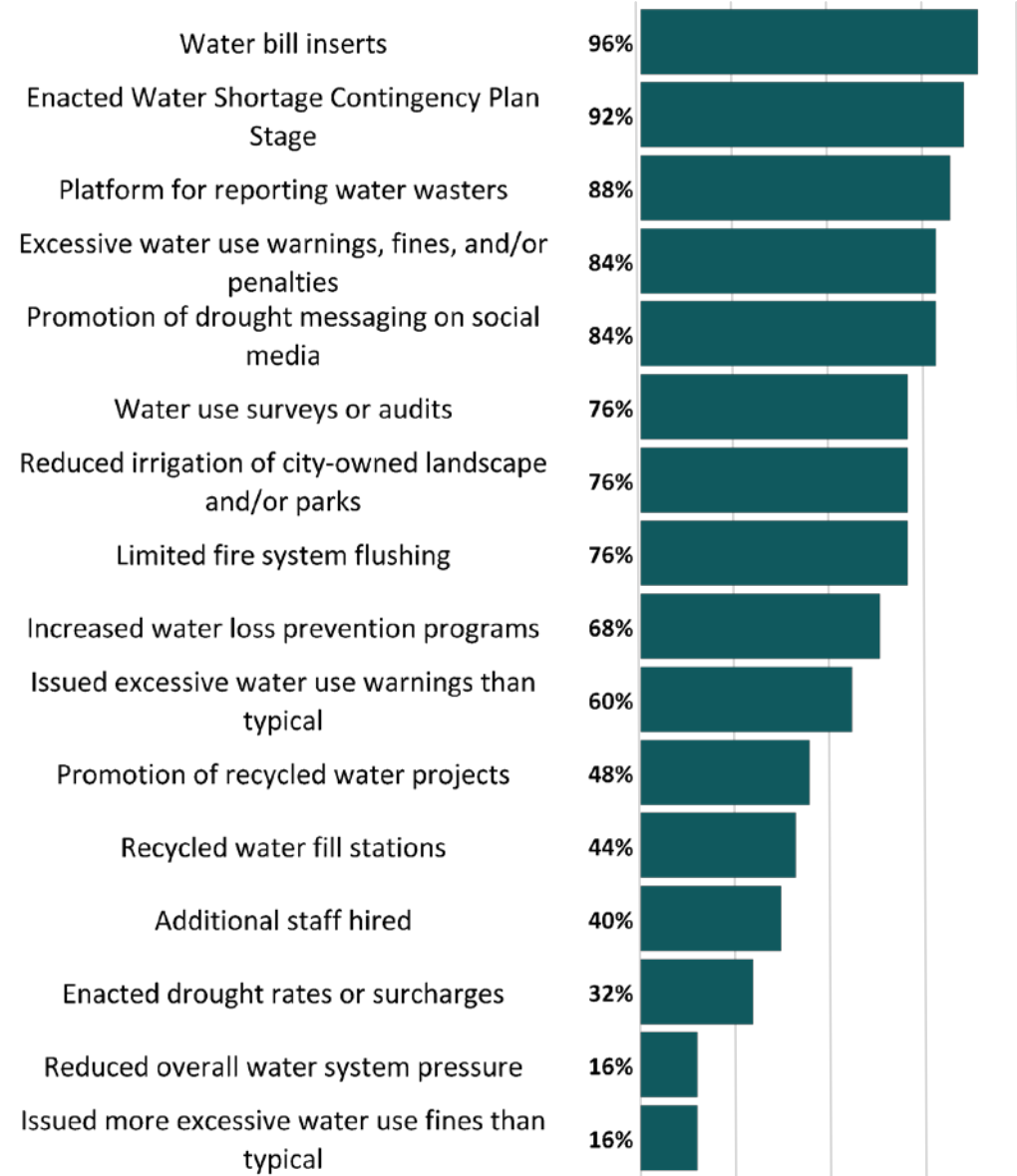
Relative Perceived Effectiveness of Programs and Actions Utilized by ≥ 50% of Member Agencies



# LOCALLY IMPLEMENTED ACTIONS

- Wide variety of local actions
- Some agencies also:
  - increased or adjusted their water rates,
  - intensified their existing conservation program efforts,
  - utilized AMI leak detection function
  - adjusted/enforced large landscape water budgets

Local Actions Implemented by Member Agencies

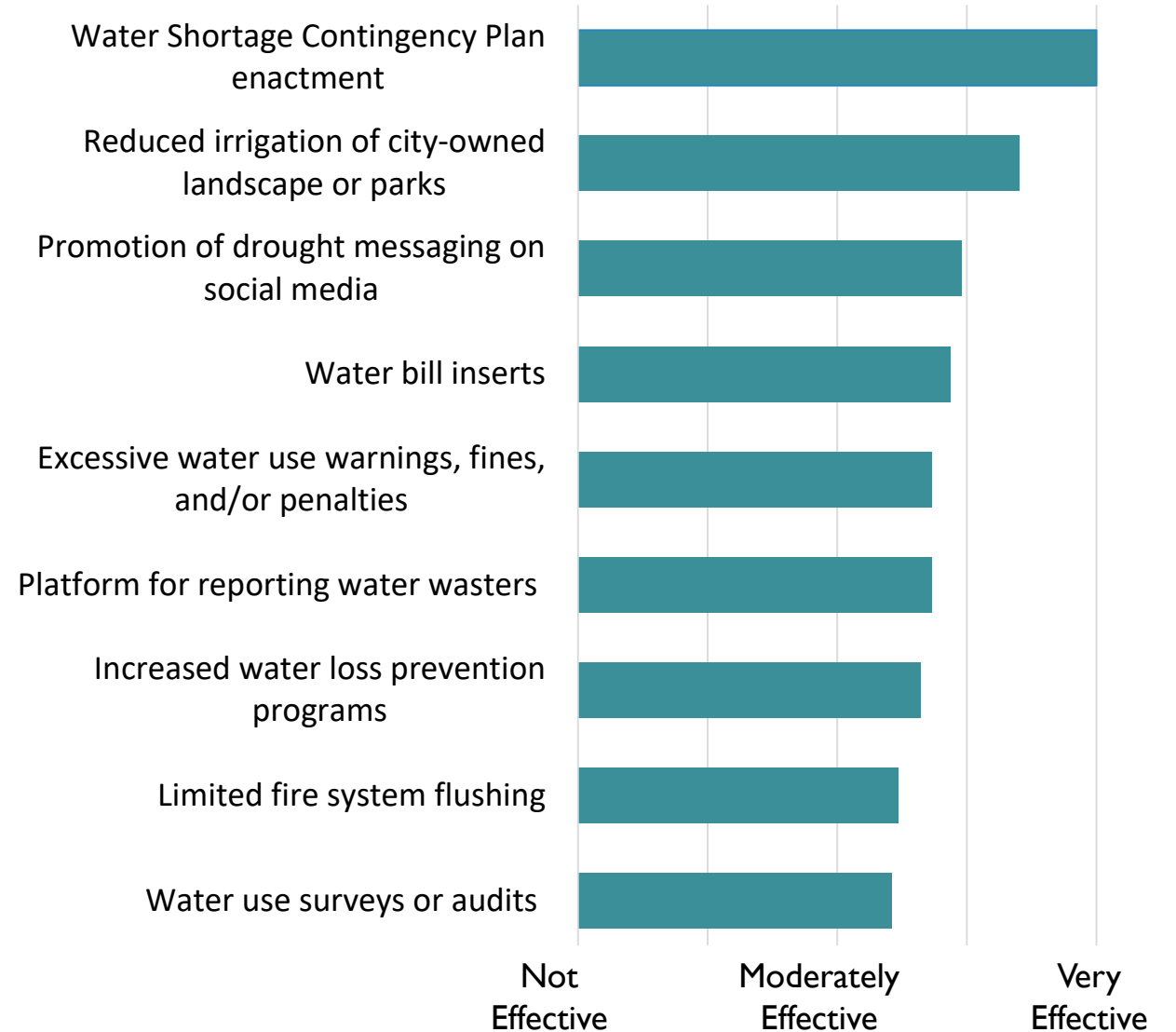




# EFFECTIVENESS OF LOCAL ACTIONS

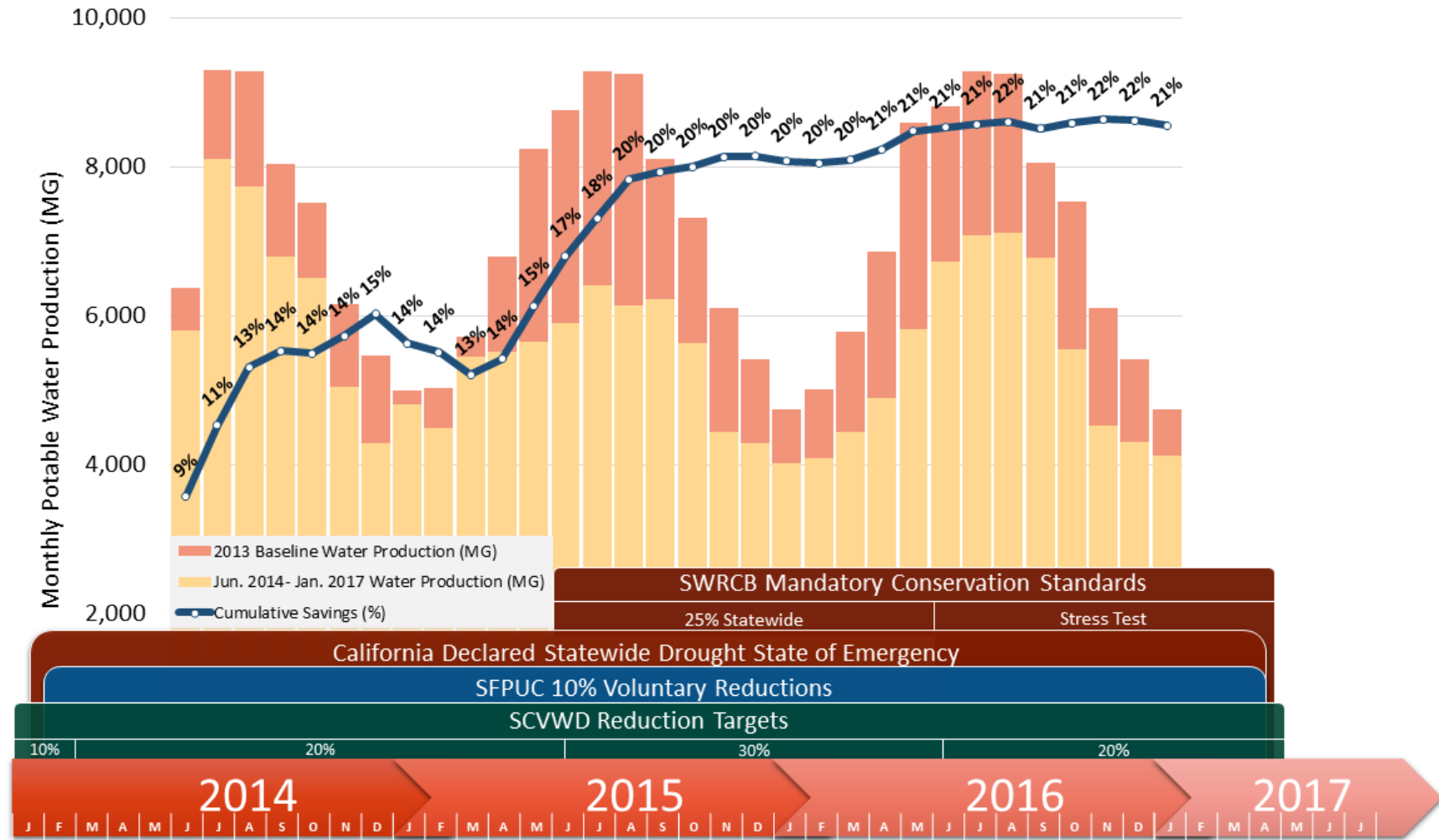
- Most effective programs:
  - Direct change in system/city use of water
  - Involved direct engagement or interaction with customers

Relative Perceived Effectiveness of Actions Implemented by  $\geq 50\%$  of Member Agencies



# AGENCY RESPONSE TO DROUGHT

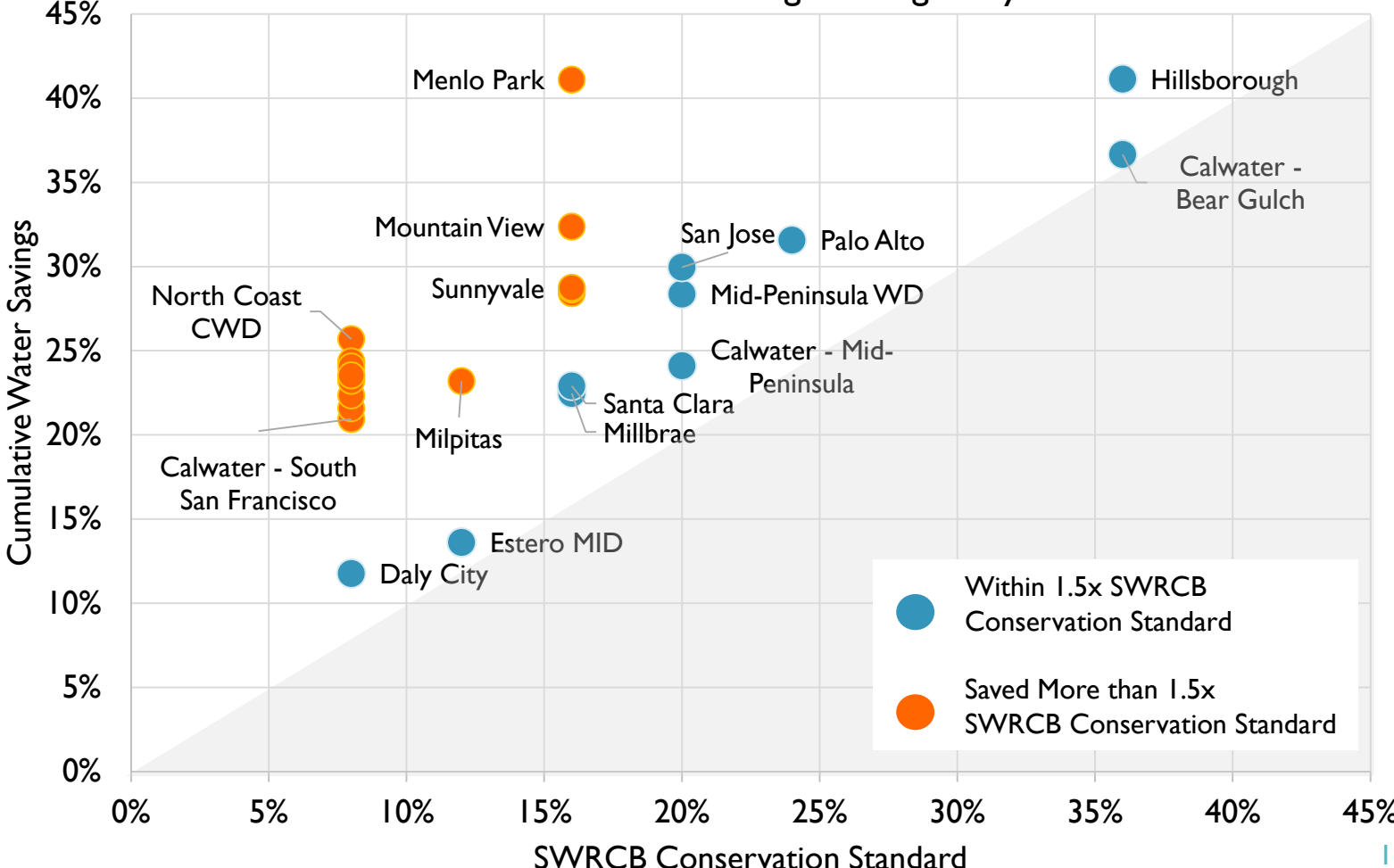
- Cumulative savings across all member agencies



# CUMULATIVE WATER SAVINGS

- All member agencies met their SWRCB conservation standard
- Degrees of savings varied significantly

SWRCB Conservation Standard and Cumulative Water Savings through May 2016

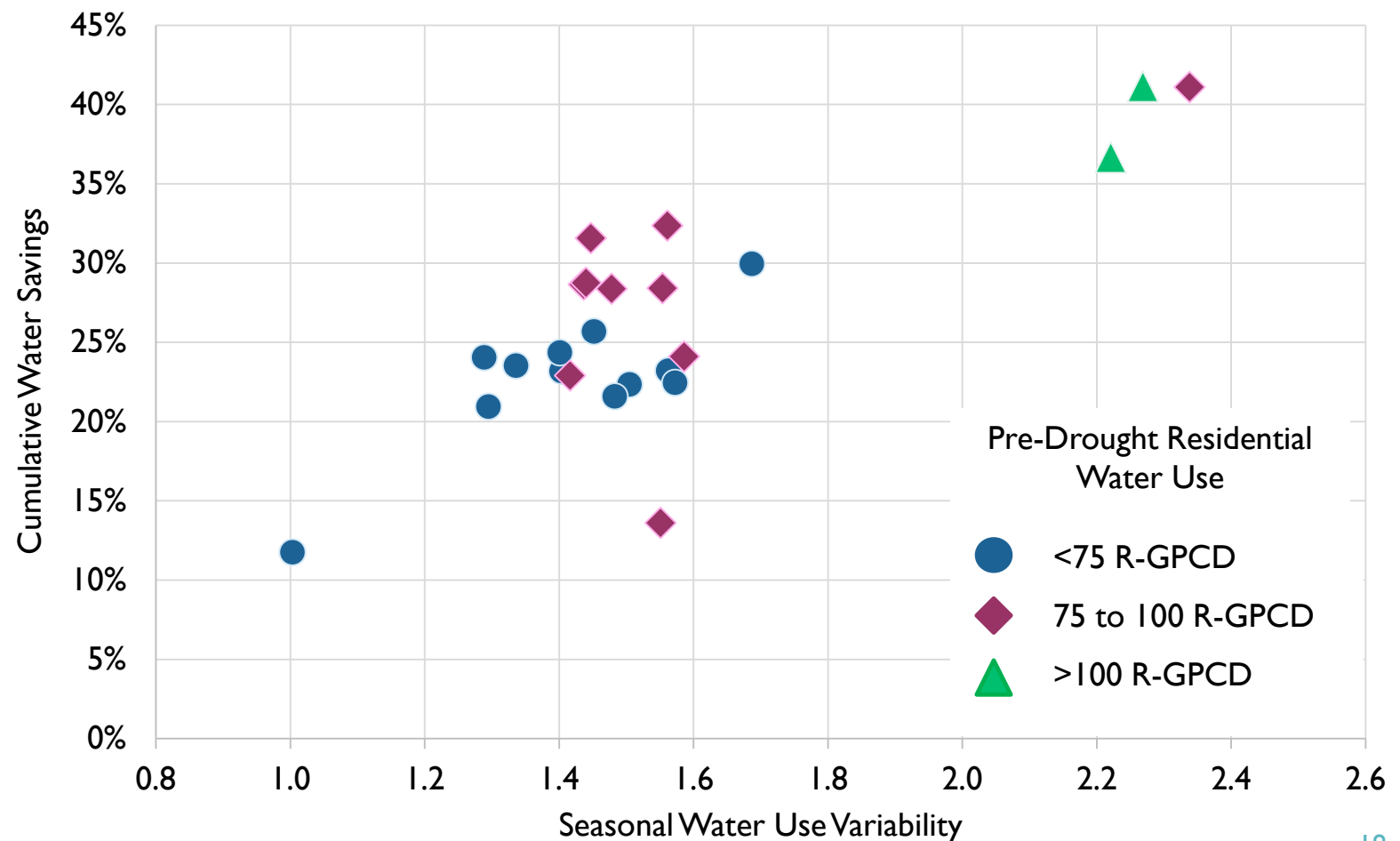




# SEASONAL WATER USE VARIABILITY

- In general, agencies with highest summer water use saved more water

Seasonal Water Use Variability and Cumulative Water Savings through May 2016



# LESSONS LEARNED FOR THE NEXT TIME

1. Anticipate response to state drought actions.
2. Focus of regional drought messaging.
3. Coordinate with others for consistent messaging.
4. Plan for financial impacts.
5. Water quality impacts.





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# QUESTIONS

Download the Report: <http://www.bawsca.org/droughtreport>

## Taking the Temperature on Drought Response Effectiveness

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