



Conservation, Drought, and Lessons Learned

December 9, 2021

Ken Jenkins, Director of Water Resource Sustainability

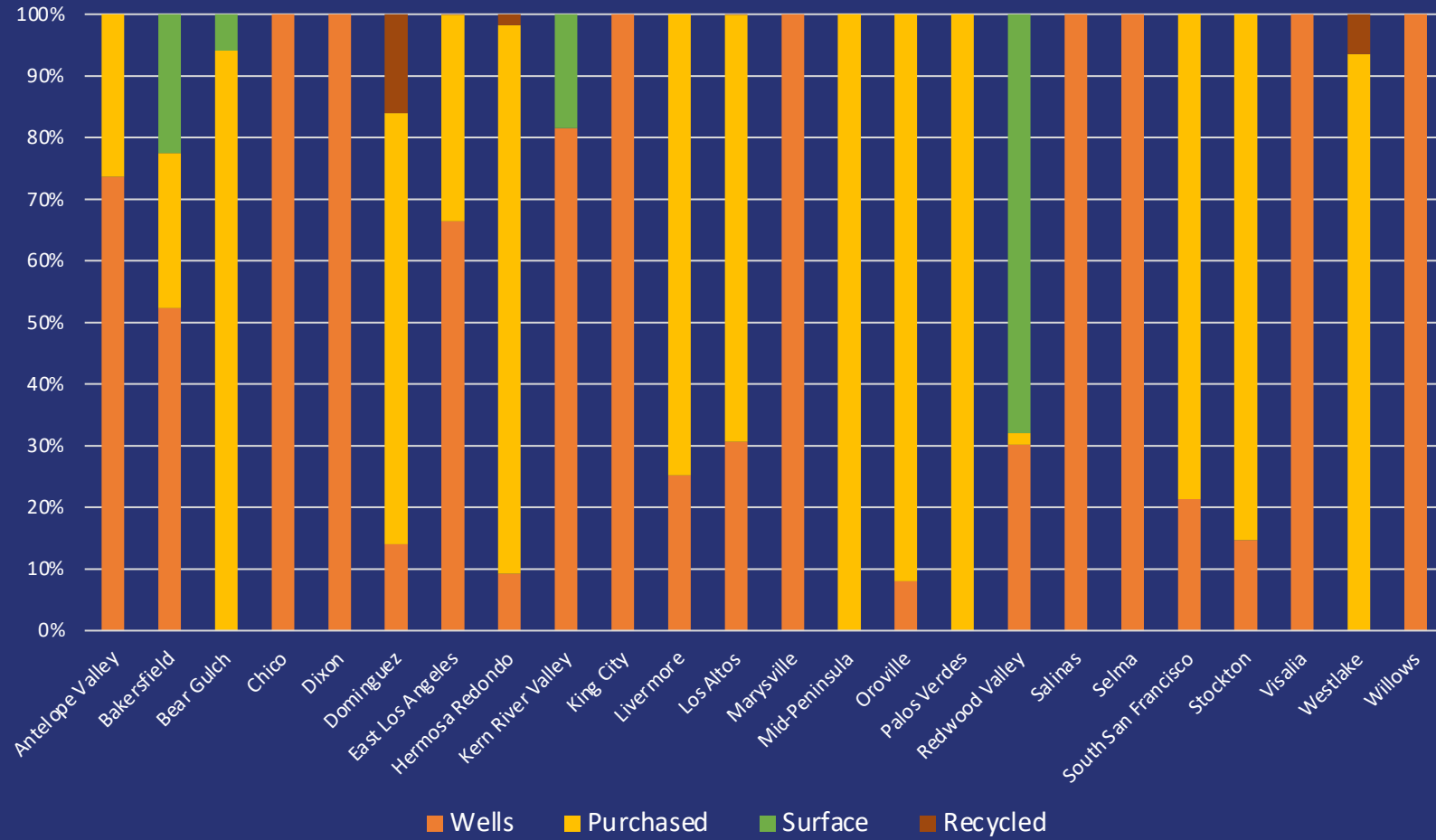
Overview



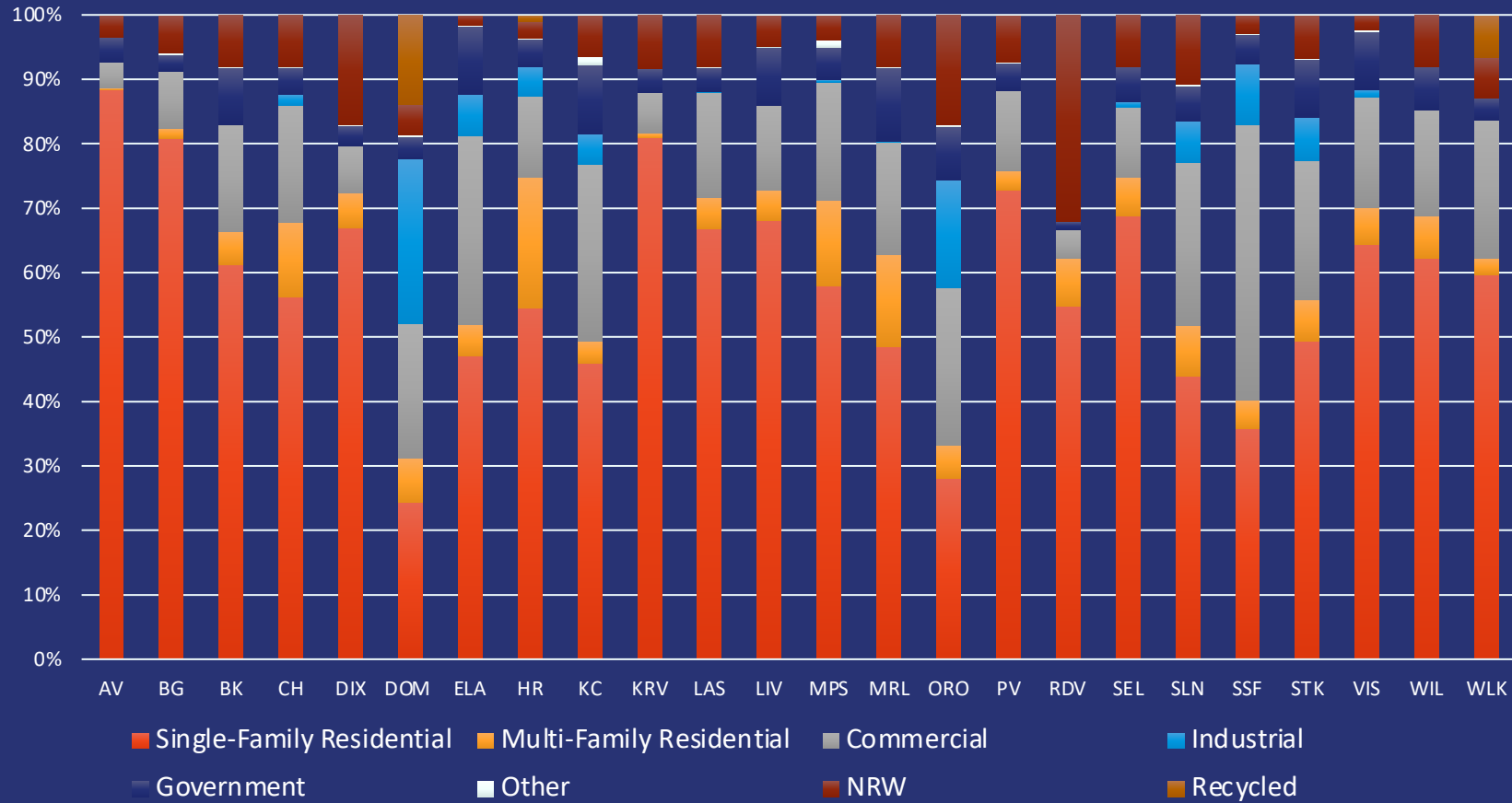
- Diverse challenges in our 24 service areas requires tailored approaches
- Conservation accomplishments during 2014-2016 drought
- How data and lessons learned shaped current drought plans
- How we are helping customers conserve water and keep water affordable
- Providing customers with relevant information to help decision-making
- Focusing on climate change and long-term resiliency



Diverse Water Supplies Require Tailored Approaches to Drought Response



Diverse Demands Require Tailored Approaches to Drought Response



Education & Partnership with Customers Works 2014-16 Drought Response



- We are guided by the notion that customers want to do the right thing. They just need education and tools.
- 19,000+ appeals processed (~4% of customers)
- 145,500 visits to customer usage page
- 48,000+ calls taken at Drought Call Center
- 2.6+ million pieces direct-mailed
- 300+ community meetings
- Our philosophy of education and partnership with customers over punishment (fines) works.
- Company-wide cumulative reduction of 29% during mandate

Objective Analysis of Drought Response Leads to Evolution and Improvement



- Public Policy Institute of California (PPIC)
 - “Building Drought Resilience in California’s Cities and Suburbs”
 - “Water Use Patterns and Trends within the Service Areas of California Water Service (Appendix C)”
- Alliance for Water Efficiency
 - “Use and Effectiveness of Municipal Irrigation Restrictions During Drought”
- California Water Service (M.Cubed/A&N Technical Services)
 - “CII Water Use and Drought Response: Case Study of California Water Service”

Residential Water-Efficiency Programs



- Rebates
 - www.calwater.com/rebates
 - High-efficiency toilets
 - High-efficiency clothes washers
 - Smart irrigation controllers
 - High-efficiency sprinkler nozzles
- Lawn-to-Garden (Turf Replacement) Rebate
- Spray-to-Drip Conversion Rebate
- Conservation Kits
 - www.calwater.com/kit
- Smart Landscape Tune-Up Program



Commercial Water-Efficiency Programs



- Rebates
 - www.calwater.com/rebates
 - High-efficiency toilets
 - High-efficiency urinals
 - Smart irrigation controllers
 - Spray bodies w/ pressure regulation
 - Large rotary nozzles
 - High-efficiency sprinkler nozzles
- Lawn-to-Garden (Turf Replacement) Rebate
- Spray-to-Drip Conversion Rebate
- Customized Incentives
- Smart Landscape Tune-Up Program



Helping Low-Income Customers Save Water & Keep Bills Affordable



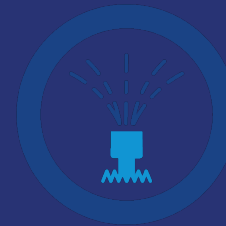
- Smart Landscape Tune-Up Program
 - Evaluation of irrigation system
 - Identification and improvement of irrigation leaks, broken equipment, and other water saving opportunities
 - Installation of smart irrigation controllers
 - Installation of high-efficiency sprinkler nozzles
 - Repair of drip irrigation
 - Repair and replacement of irrigation valves
 - Repair and replacement of spray bodies



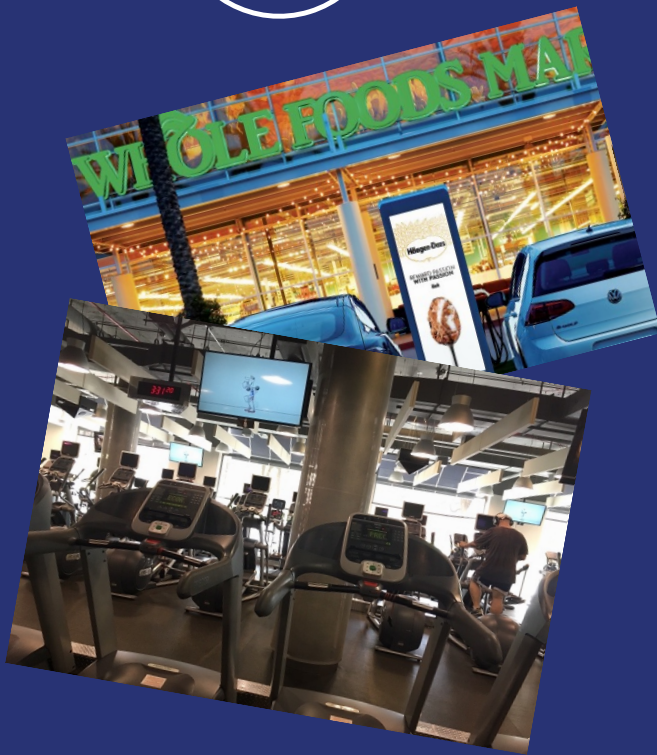
Conservation Marketing



CONSERVE MY
California
SAVE WATER EVERY DAY



Drought Response Marketing & Outreach



CONSERVE MY California
SAVE WATER EVERY DAY

RESIDENTIAL REBATES: ANOTHER TOOL IN YOUR TOOLBOX

California Water Service (Cal Water) is committed to supporting our customers' water conservation efforts as part of our plan to provide a reliable water supply for today and tomorrow.

CUSTOMER ELIGIBILITY:

- Devices must be installed at a residence served by Cal Water.
- The Cal Water account number matches the location the device are installed.

REBATE DETAILS:

- Rebates are available on a first-come, first-served basis on a single-family or in-unit, multi-family customer basis. Customers cannot apply for the same rebate under multiple rebate programs.
- This offer only applies to devices on the qualified product list purchased and installed from January 1, 2020 through December 31, 2020, or until rebate program funds are depleted, whichever comes first.
- Do not submit final applications prior to installation. Rebates will only be issued after installation.
- Rebates will only be paid for up to the purchase price of the device(s). This does not include tax, shipping, or installation.
- Cal Water reserves the right to verify customer eligibility, proof of purchase, and installation. If access to verify is denied, rebates will be voided.
- Applicant must submit a copy of the sales receipt with the application.
- Please allow 6-8 weeks for reimbursement of your rebate check.
- Receipts and applications cannot be processed, Cal Water is not responsible for late returns or delays in the mail, or any returns or delays because of incorrect or incomplete applications.
- Offer is void where prohibited or restricted by law.

LEARN MORE AT CALWATER.COM/CONSERVATION

COMMERCIAL REBATES: ANOTHER TOOL IN YOUR TOOLBOX

California Water Service (Cal Water) is committed to supporting our customers' water conservation efforts as part of our plan to provide a reliable water supply for today and tomorrow.

CUSTOMER ELIGIBILITY:

- Devices must be installed at a site served by Cal Water.
- Rebate must be installed at the location where the rebate are installed.
- Site qualification may be required to determine program eligibility.

REBATE DETAILS:

- Rebates will only be paid for the purchase price of the device(s).
- This offer only applies to devices on the qualified product list purchased and installed from January 1, 2020 through December 31, 2020, or until rebate program funds are depleted, whichever comes first.
- Customers cannot apply for the same rebate under multiple rebate programs.
- Rebates will only be issued after product installation.
- Site qualification is required if total rebate amount is \$5,000 or more. Please contact Cal Water at commercial@calwater.com to begin the pre-qualification process. Do not proceed with purchase until installation prior to receiving pre-qualification.
- Cal Water reserves the right to verify customer eligibility, proof of purchase, and installation. If access to verify is denied, rebates will be voided.
- Applicant must submit a copy of the sales receipt with the application.
- Please allow 6-8 weeks for reimbursement of your rebate check.
- Receipts and applications cannot be processed.
- Offer is void where prohibited or restricted by law.

LEARN MORE AT CALWATER.COM/CONSERVATION

CONSERVE MY California
SAVE WATER EVERY DAY

CONSERVE MY California
SAVE WATER EVERY DAY

HOW CAN I SAVE WATER IN MY GARDEN AND YARD?

It's always been wise to conserve water in California today, but it's even more important to stretch our water supplies in our garden. People who live in California today, and who love their garden, use less water to stretch the quality of your landscaping. When it's time to refresh your landscape that designed one.

OUTDOOR REBATES

Water is a precious resource. You can save water in your garden. People who live in California today, and who love their garden, use less water to stretch the quality of your landscaping. When it's time to refresh your landscape that designed one.

HIGH-EFFICIENCY VALVE-TYPE TOILET REBATE*
Models must be EPA WaterSense-labeled.
UP TO \$100 PER TOILET

HIGH-EFFICIENCY TANK-TYPE TOILET REBATE*
Models must be EPA WaterSense-labeled.
UP TO \$100 PER TOILET

HIGH-EFFICIENCY URINAL REBATE*
Models must use 0.325 gal or less.
UP TO \$150 PER URINAL

HIGH-EFFICIENCY SPRINKLER NOZZLE REBATE*
UP TO \$5 PER NOZZLE

SPRAY BODY WITH INTEGRATED PRESSURE REGULATION & CHECK VALVE REBATE*
UP TO \$10 PER BODY (MATERIALS)
Plus up to an additional \$8 per body if installed by a C-27 contractor.

LARGE ROTARY NOZZLE REBATE*
UP TO \$30 PER NOZZLE (MATERIALS)
Plus up to an additional \$8 per nozzle if installed by a C-27 contractor.

SMART IRRIGATION CONTROLLER REBATE*
Models must be EPA WaterSense-labeled.
UP TO \$25 PER STATION
*See certification for restricted models.

The following items require pre-qualification. Contact Cal Water at commercial@calwater.com to begin the process.

CUSTOMIZED INCENTIVE PROGRAM
UP TO 50% OF PROJECT COST
(Final amount based on site savings)

Quality. Service. Value.®

AD SELECTOR
California Water Service

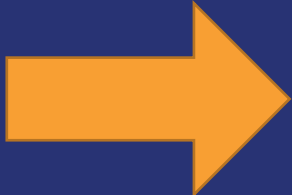
Which California Water Service ad would you like to watch?

Save Water Everyday

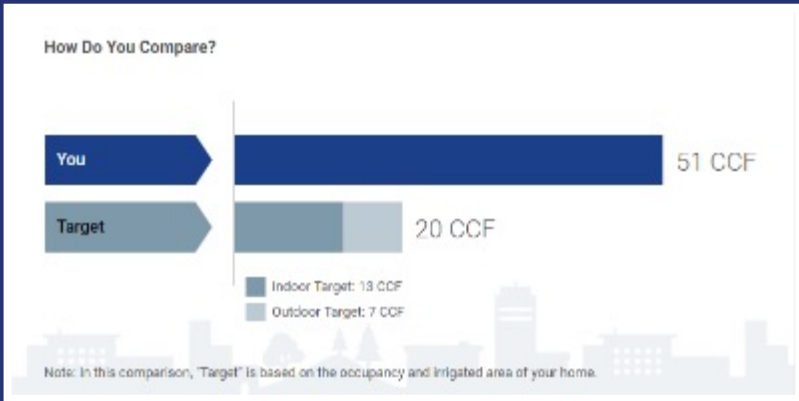
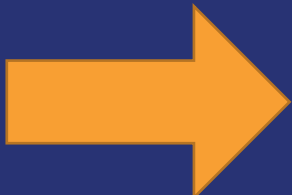
Save Water Outdoors

hulu

Customized Development & Tracking of Water Usage Against Targets



MONTHLY BUDGET & USE INFORMATION (CCF)					
Meter Read	Billed Days	ETo (in)	Indoor Budget	Irrigable Outdoor Budget	
02/28/2018	28	2.1	6	5	
03/31/2018	31	4.0	7	10	
04/30/2018	30	5.6	6	15	
05/31/2018	31	7.6	7	20	
06/30/2018	30	8.9	6	23	
07/31/2018	31	9.3	7	24	
08/31/2018	31	8.4	7	22	
09/30/2018	30	6.3	6	16	
10/31/2018	31	3.9	7	10	



Customized Development & Tracking of Water Usage Against Targets



My Account | Overview | Water Usage | Billing & Payments | Account & Settings

Welcome, Bob

Account: Smith, Bob | 1234567890
Service Address: 100 Service Dr | Anytown, CA 95000

Balance Due: \$99.23
For account: 1234567890
Make a Payment

Usage at a Glance

Your Consumption: 20 CCF (over 2019)

Recommendations for More Savings: Use mulch in your garden.

My Account | Overview | Water Usage | Billing & Payments | Account & Settings

Home: 1234567890
100 Service Dr | Anytown, CA 95000

Last Meter Read: 4:00 PM, Feb 12th | 9597000 CF
Meter Read Frequency: Hourly
Next Scheduled Update: 4:00 PM, Feb 13th

Highlights | Usage Graphs | Usage Alerts | Usage History | Update Household Profile | Water Use Evaluation

Jan 12 - Feb 12, 2020

How Do You Compare?

You	16 CCF
Target	15 CCF

Indoor Target: 9 CCF
Outdoor Target: 6 CCF

At a Glance: You used 10% more water compared to your target in this billing period.

Cal Water's Global View of Customer Efficiency

GIS Dashboard – Water Targets vs. Consumption



Climate Change Research, Planning, and Action



Potential Climate Change Impacts on the Water Supplies of California Water Service

Prepared by
Gary Fiske and Associates, Inc.
Balance Hydrologics, Inc.

January 2016



Table ES-1. Projected Changes in Available Supply due to Climate Change

District		Percentage Change in Supply		
		2020	2050	2100
BK	Minimum	-10%	-10%	-12%
	Maximum	-12%	-16%	-20%
VIS	Minimum	-7%	-8%	-8%
	Maximum	-9%	-10%	-14%
KRV	Minimum	-13%	-16%	-19%
	Maximum	-16%	-21%	-31%
MPS/SSF/BG	Minimum	0%	-2%	-6%
	Maximum	0%	-7%	-15%
LAS	Minimum	-3%	-3%	-10%
	Maximum	-4%	-18%	-28%
CH	Minimum	2%	2%	0%
	Maximum	3%	1%	-3%
DRO	Minimum	0%	8%	5%
	Maximum	0%	-8%	-7%
DOM/HR/PV	Minimum	0%	0%	-1%
	Maximum	0%	-2%	-3%
STK	Minimum	0%	0%	-8%
	Maximum	0%	-14%	-17%
H	Minimum	-6%	-6%	-6%
	Maximum	-7%	-7%	-7%

Table ES-2. Categories of Projected Supply Vulnerability

District	Supply Vulnerability		
	2020	2050	2100
KRV	3	4	4
BK	3	3	4
LAS	1	3	4
VIS	2	2	3
STK	1	2	3
SLN	2	2	2
MPS/SSF/BG	1	1	3
DOM/HR/PV	1	1	1
DRO	1	1	1
H	1	1	1

Category 1 expect -5% reduction in supply; Category 2 indicates a reduction of 5-10%; Category 3 indicates an expected reduction of 10-15%; Category 4 reductions exceed 15%.

ES-4



Climate Change Water Resource Monitoring and Adaptation Plan

December 10, 2020

California Water Service
1720 North First Street
San Jose, CA 95112

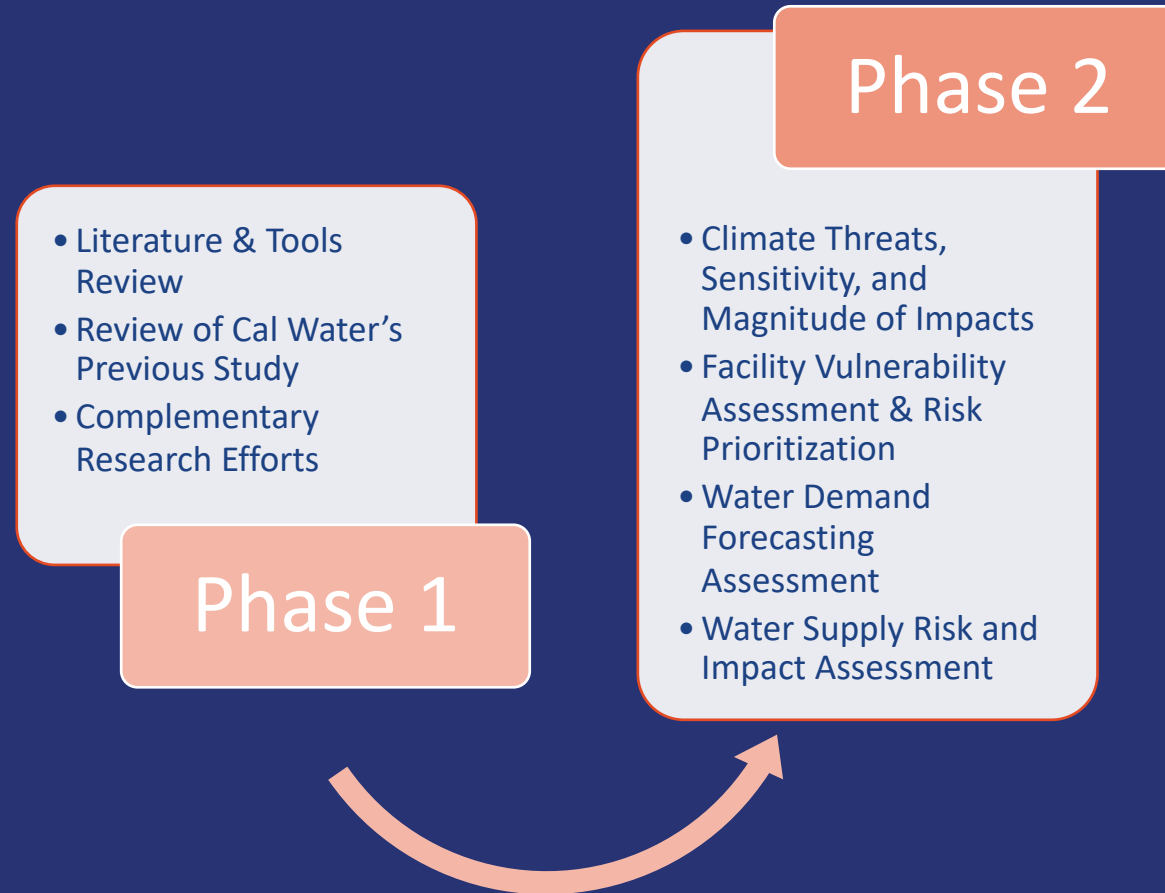
Submitted by:
ICF
555 W 5th St
Suite 3100
Los Angeles, CA 90013

California Water Service Climate Change Water Resource Monitoring and Adaptation Plan



11

Climate Change Water Resources Monitoring & Adaptation Plan



Resources



- PPIC Report
 - www.ppic.org/publication/building-drought-resilience-californias-cities-suburbs/
- AWE Report
 - www.allianceforwaterefficiency.org/impact/our-work/use-and-effectiveness-municipal-irrigation-restrictions-during-drought
- U.S. EPA (“Assistance That Saves”)
 - www.epa.gov/system/files/documents/2021-07/ws-assistance-that-saves-efficiency-and-affordability.pdf
- Cal Water
 - www.calwater.com/conservation
 - www.calwater.com/esg

A collage of resource reports and logos. On the left is the cover of a PPIC report titled "Building Drought Resilience in California's Cities and Suburbs" dated June 2017, listing authors David Mitchell, Ellen Hanak, Ken Baerenklau, Albert Escobar-Bonif, Henry McCann, Maria Pérez-Urdiales, and Kurt Schwedde. In the center is the cover of an Alliance for Water Efficiency report titled "Use and Effectiveness of Municipal Irrigation Restrictions During Drought Executive Summary". On the right is a page from the EPA report "Assistance That Saves" with a list of program components: direct, installs, product, rebates, incentives, education, bill, reduction, retrofits, plumbing, repair, tax status, water bill, pilot programs, Fix a Leak Week, seniors, housing, authorities, energy, programs, multifamily, landscaping, income, qualification, leak, identification, nonprofit, partners, recruitment, efforts, toilet, sensors, weatherization, flow, meters, AMI, major, leak, repair. Below this is the title "Assistance That Saves" and the subtitle "How WaterSense Partners Incorporate Water Efficiency Into Affordability Programs". At the bottom right is the WaterSense logo.