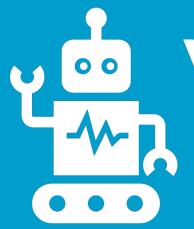
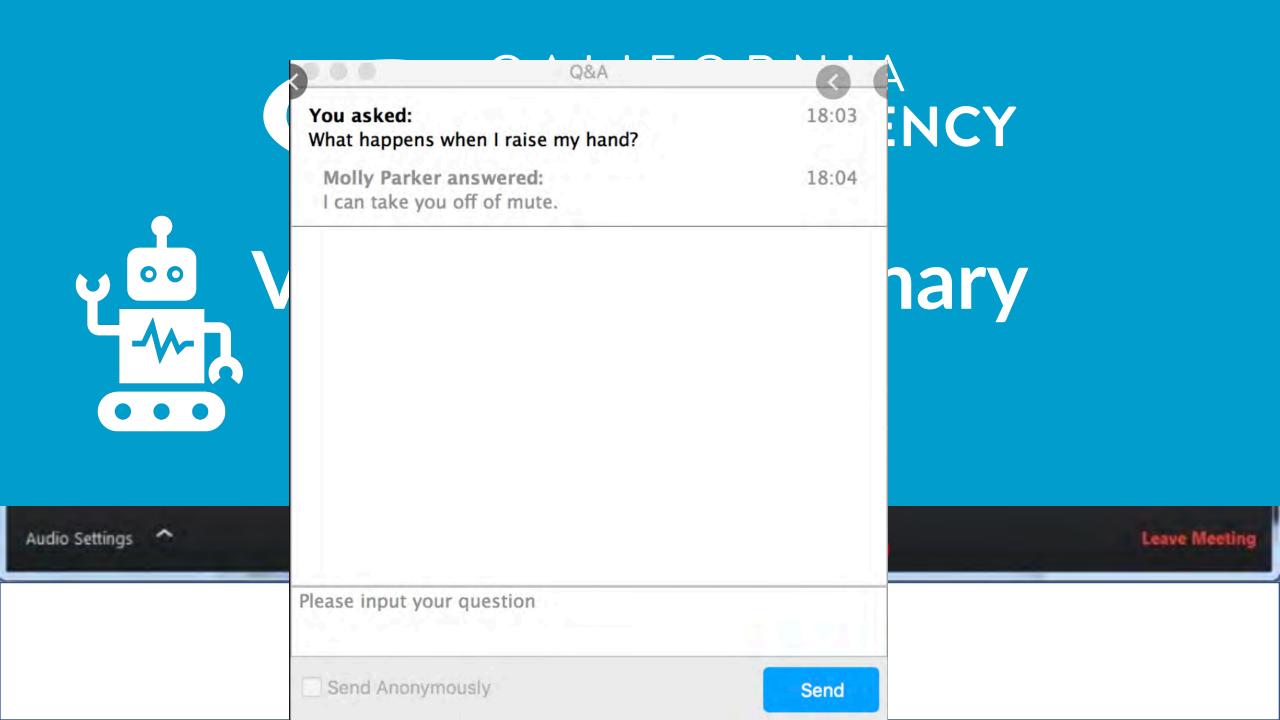


CALIFORNIA WATER EFFICIENCY PARTNERSHIP



Virtual Spring Plenary

March 10, 2021





CALIFORNIA WATER EFFICIENCY PARTNERSHIP

Justin Finch
CalWEP Board Chair
Moulton Niguel Water District

WHAT WE'LL COVER



HOST PRESENTATION
CVWD



WHAT'S NEW AT CALWEP & AWE

w/ special guest Lisa Maddaus



NEW MEMBER SPOTLIGHT







AN UWMPillionaire?

THANKS FOR OUR VIRTUAL HOST:

Coachella Valley Water District

CalWEP Spring Plenary – Host Presentation March 10, 2021

Jenna Shimmin Conservation Manager

Ishimmin@cvwd.org



Our Mission

To meet the water-related needs of the people through dedicated employees, providing high quality water at a reasonable cost.

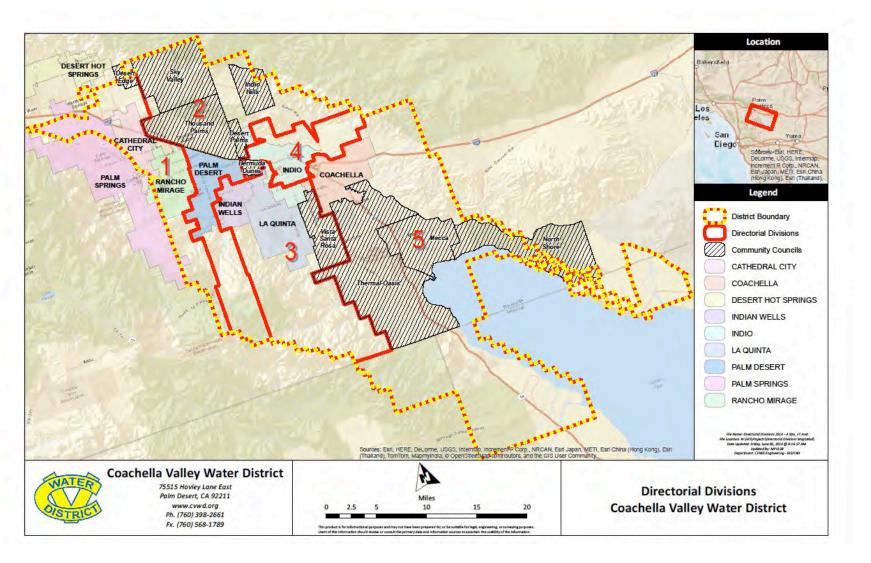


Overview

- Past: History of Coachella Valley Water
- Present: Ongoing Efforts
- Future: Strategic Planning and Regional Collaboration









Past: History of Coachella Valley Water

- Established in 1918
- Originally called the Coachella Valley County Water District
 - Created to protect and expand the valley's water resources
 - Mainly for agricultural uses
- Water Supply Portfolio
 - Ground water (irrigation & domestic)
 - Canal (Colorado river)
- Coachella Valley spans southeast from the San Bernardino Mountains to the northern shore of the Salton Sea
- Population boom from "not a single settled person" in 1900 to 50,000 by 1915



Past to Present

- Currently:
 - Coachella Valley Water Dist.
 - 1,000 square miles
 - 3 counties
 - 110,000+ connections
 - 300,000 population (with seasonal variance)
 - Golf, Agriculture & Hospitality industries
 - Budget Based Tiered Rates since 2009

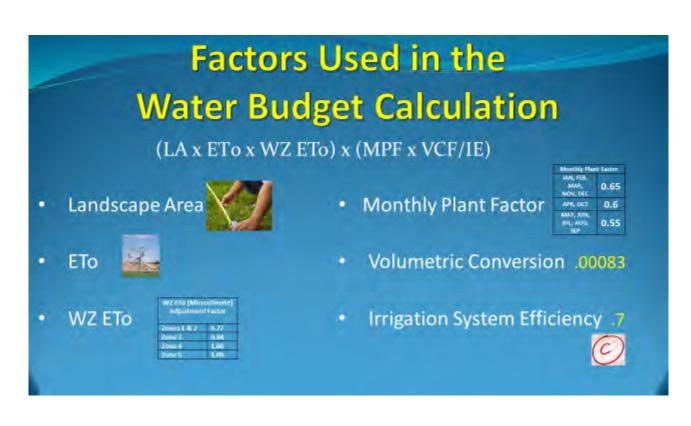
- Services offered:
 - Domestic Water
 - Groundwater Replenishment/ Imported Water
 - Agricultural Irrigation/Drainage
 - Regional Stormwater Protection
 - Wastewater Treatment
 - Recycled Water
 - Conservation



- Budget based tiered rates
- Dedicated irrigation meters
- Conservation programs/outreach efforts
- Pilot programs
- Water Use Restrictions
- Data sharing
- Groundwater recharge
- State compliance



- Budget based tiered rates transition/mapping
 - Established in 2009
 - Tier 1: Indoor Use (8 CCF)
 - Residential: 4 people, 50 gallons per person, per day
 - Tier 2: Outdoor Use
 - (LA x ET0 x WZ ETo) x (MPF x VCF/IE)
 - Map actual landscape area using aerial imagery
 - Tiers 3-5: additional, inefficient use
- Dedicated irrigation meters



- Conservation programs/outreach efforts
 - Outreach
 - Your Water is Our Promise/ outreach campaigns
 - Landscape Workshops (virtual)
 - How to Videos/Publications
 - Indoor Rebates
 - Conservation Kits
 - HE Toilets
 - Comm. Water Brooms
 - Comm. Pre-Rinse Nozzles



- Turf Conversion (Res. & Comm.)
- WBICs
- Rotary Nozzles
- Irrigation Upgrade
- Pilot programs
 - Recently adopted
 - Residential Washing Machines
 - Hot Water Recirculating Pumps
 - More in the works
- WBIC Recycling
- AMI Pilot





- Water Use Restrictions
- Data sharing
 - Provide data to the California Data Collaborative (CaDC)
 - UC Davis Studies:
 - Seasonal Variance
 - Indoor Water Use
- CII audits
 - Conservation Reviews
 - Pending Training

- Future Rebate Potential
- Groundwater recharge
 - Priority since beginning
 - 4 facilities
 - 282,998 AF replenished from imported water as of 2019
- State compliance
 - MWELO
 - Reporting





Future: Strategic Planning and Regional Compliance



- Agency Efforts
 - QWEL Certification Training
 - CII Audit Training
 - Demonstration Garden
- Strategic planning
 - Coachella Valley Urban Water Management Plan (SGMA)
 - Water Supply Contingency
 - Regional Conservation Efforts

- Legislative compliance
 - DWR Workgroups
- Statewide collaboration
 - CaDC
 - CalWEP
 - AWE
 - ACWA
 - AWWA CA-NV



Thank you!

Jenna Shimmin Conservation Manager jshimmin@cvwd.org 760-398-2661 ext. 3405





A Chapter of the Alliance for Water Efficiency

What's New at CalWEP

Sarah Foley & Tia Lebherz

CalWEP Co- Executive Directors

Welcome New Members













Member Updates



Member Profiles: Coming SOON

- Intended to facilitate sharing among similar members
- Information for each agency will be hosted on MyCalWEP
- Survey will be circulated in next month

New Dues Structure in 2022

Base Membership Fee

+

\$0.05/connection 2022 Annual Dues

- Eliminates volumetric charge
- Minimal impact on dues amounts for most members



JUMPSTART WATER SHORTAGE TOOLKIT

TOOL #1: Model Water Shortage Contingency Plans



CALIFORNIA WATER EFFICIENCY PARTNERSHIP

PARTNERS FOR A WATER-EFFICIENT CALIFORNIA

Drought Toolkit Update

TOOL #1: Model Water Shortage Contingency Plans

Contents

Introduction3	Sample Water Shortage Contingency Plans
New WSCP Requirements	Retail Examples12
Water Shortage Contingency Plan Development Overview4	Marin Municipal Water District
Water Shortage Percentage Levels5	Wholesale Examples
Water Shortage Stages6	San Diego County Water Authority
Examples of Stages and Goals	Valley Water (formerly Santa Clara Valley Water District)
Water Shortage Stage Triggers	Regional Examples
Demand Reduction Goals	Regional Water Authority 2020 Urban Water Management Plan
Water Waste Prohibitions/Restrictions	American River Region 2019 Water Shortage Contingency Plans
City of Sacramento Case Study Takeaways8	Resources
Key Water Codes	Appendix
Sample Drought Contingency Plan	Water Use Restriction
Key Takeaways from IEUA 2012-2017 Drought 11	Key Terms
The IEUA Plan	

- Jumpstart Water Shortage Toolkit Webinar was held February 11th
- Other tools will also be updated

Figures and Table

Table 1: Water Shortage Contingency Plan Requirements4	Table 9: WSCP Stages and Restrictions for the City of Clovis
Figure 1: Water Shortage Contingency Plan Development and Implementation Process5	Table 10: WSCP Stages and Restrictions for San Diego County Water Authority
Table 2: Example of Six Stages	Table 11: WSCP Stages and Restrictions for Valley Water
Table 4: Declaring a Water Shortage Emergency	Table 12: Water Shortage Stage Template from RWA's 2020 Urban Water Management Plan 17
Table 6: California Water Code Key Sections for Water Restrictions	Table 13: Water Shortage Tables from ARR's 2019 Water Shortage Contingency Plan
Table 7: IEUA Drought Stages and Responses	
Table 8: WSCP Stages and Restrictions for Marin Municipal Water District	

CaWEP Jumpstart Water Shortage Toolkit

Draft table of contents

OOL #1 | 2

Outdoor Standard



- Huge response to this webinar topic over 300 registrations
- Will hold more sessions after final DWR stakeholder meeting in early April
- Slides and recording in Past Events on MyCalWEP
- Q&A will be circulated from the event





Outdoor Standard FAQ was updated and posted on our website same day as the webinar











(Pilot programs)





Qualified Water Efficient Landscaper Training NOW ONLINE!

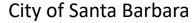
CalWEP Member Participation







Marin Water





Current Participants

City of Santa Barbara **Casitas Water District** City of Napa City of Sacramento Carpentaria Valley Water District



Pilot Agency

Moulton Niguel Water District



Current Users

Western MWD Vacaville Santa Barbara Vallejo Myoma Dunes Camrosa

Monte Vista Solano County Water

Oxnard Las Virgenes

Glendale Cal Water (22 districts)



Qualified **Water Efficient** Landscaper Training **NOW ONLINE!**

Current "BayQWEL" Participants

East Bay MUD City of Napa Solano County Water Agency Sonoma Water

Valley Water

SFPUC

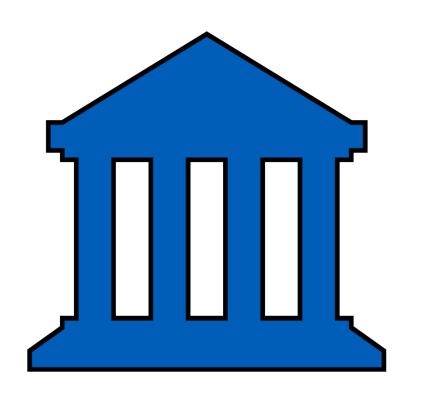
Alameda County Water Agency

BAWSCA

Contra Costa Water

Zone 7 Water District

Capitol Watch



AB 1434 – Indoor GPCD

CalWEP plans to submit a letter of concern regarding this legislation

AB 351 – Water Innovation SB 45 & AB 1500 – Two different safe drinking water, drought, wildfires, flood protection bonds

What's New on MyCalWEP

- Implementation Guides (we'll touch on these later...)
- Past Events Presentations
 - Peer to Peer
 - Jumpstart Water Shortage Toolkit: WSCP Webinar
 - So You Got Your LAM Data from DWR....Now What?
- Framework Resource Hub
 - Shared Calendar with upcoming events for DWR and other conservation related
 - Slide decks and presentations
 - DWR Sharepoint information reposted here

Peer to Peer 2021

Submit a workshop idea by March 22nd!

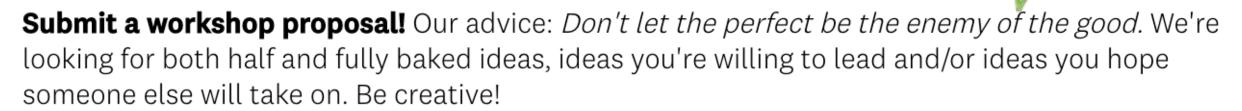
Is there something you've always wanted to **discuss** with your peers?

...A **program** you want to highlight?

... A **topic** you wish would get more attention?

...A **training** you've been wanting to conduct?

...A hard **conversation** you think our industry needs to tackle?



Peer to Peer Registration Opens Next Week!



CalWEP Spring Plenary March 10, 2021

AWE Advocacy update



TAX Exemption status for water efficiency rebates

GREEN Act (H.R. 848):

- Would amend the Internal Revenue Code to provide incentives for renewable energy and energy efficiency
- Was passed by the House last year as part of H.R. 2, The Moving Forward Act, but was not acted on in the Senate
- Co-sponsored by all 34 Democrats on Ways and Means Committee
- Section 310 carries our language on tax-exempt rebates for water conservation and stormwater management
- H.R. 848 not likely to pass on its own without being folded into a bigger bill – the coalition will meet soon to strategize

WATER Act (H.R. 1352):

 Would provide \$34.85 billion annually in a trust fund for drinking water and waste water infrastructure improvements

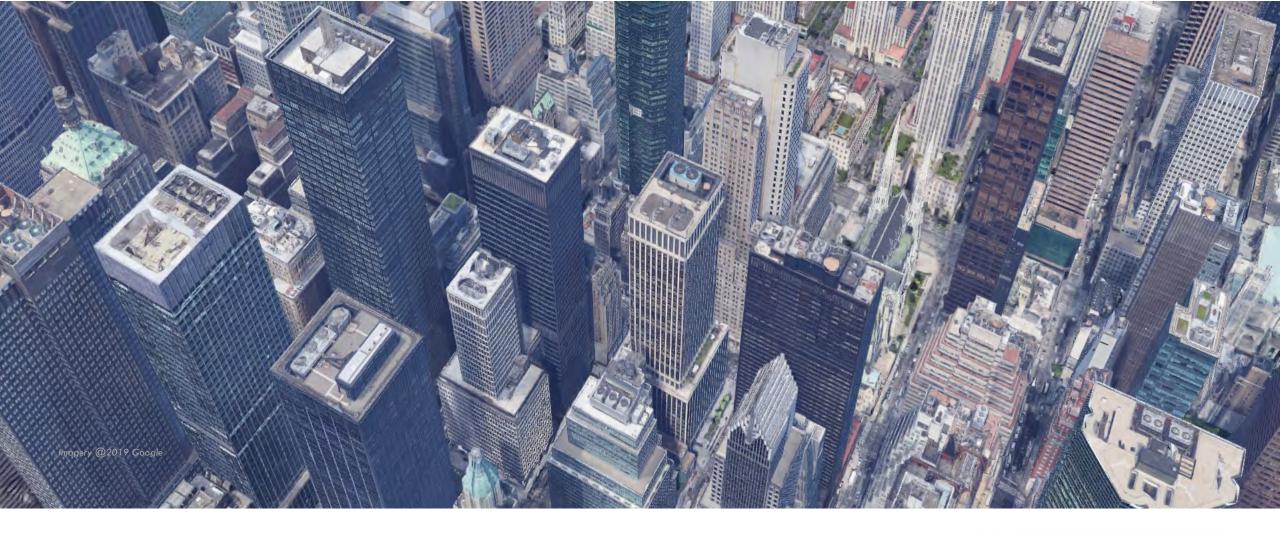
APPEAL OF RECENT DOE RULEMAKINGS

- DOE released in December two new rules to roll back water efficiency gains:
 - New showerhead definition specifying that multiple showerheads could flow at 2.5 gpm EACH
 - New clothes washer short cycle product class with no underlying water and energy efficiency standards
- AWE filed opposition letters with 60 organizations signing on
- DOE officially adopted both rules; in effect immediately
- AWE filed an appeal on January 27 in Federal Court



Program Update



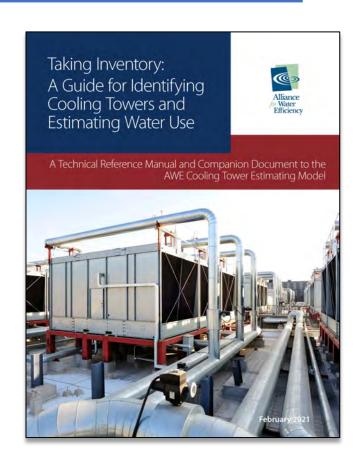


AWE Cooling Technology Study



COOLING TECHNOLOGIES STUDY

- Cooling Tower Estimating Model (CTEM) and Guide for Identifying Cooling Towers Released on February 24
- April 8 webinar (58 already registered!)
- CalWEP/AWE Member only benefit
- ComEd is commissioning a new task focused on direct energy savings
- Many thanks to the Metropolitan Water District & the Southern Nevada Water Authority for closing the project funding gap



- 1. Metropolitan Water District of Southern California, California, United States
- 2. Southern Nevada Water Authority, Nevada, United States
- 3. San Antonio Water System, Texas, United States
- 4. California Water Service, California, United States
- 5. City of Guelph, Ontario, Canada
- 6. Denver Water, Colorado, United States
- 7. Austin Water, Texas, United States
- 8. City of Dallas, Texas, United States
- 9. City of Tucson, Arizona, United States
- 10. City of Santa Fe, New Mexico, United States
- 11. Santa Clara Valley Water District, California, United States
- 12. City of Calgary, Alberta, Canada
- 13. East Bay Municipal Utility District, California, United States
- 14. SCV Water, California, United States
- 15. Western Municipal Water District, California, United States
- 16. Municipal Water District of Orange County, California, United States
- 17. Los Angeles Department of Water and Power, California
- 18. Commonwealth Edison, Illinois, United States































An Exelon Company





PROJECT TEAM

Research Team

 Pacific Northwest National Laboratory

Project Managers and Advisors

- Maureen Erbeznik & Associates
- Alliance for Water Efficiency
- Project Advisory Committee
 - Funders
 - H.W. Hoffman & Associates



SEVEN PROJECT TASKS

- 1. Initial Data Collection (complete)
- 2. Develop Best Practices for Identifying Water-cooled Facilities in Urban Areas (complete)
- 3. Develop Best Practices for Estimating Consumptive and Non-consumptive Water Demands for Cooling (complete)
- 4. Determine the Conservation Potential for Improvements to Existing Cooling Tower Systems (almost complete)



SEVEN PROJECT TASKS

- 5. Determine Water Savings Potential of Implementing Alternative Cooling Technologies (almost complete)
- 6. Assemble Final Report
- 7. Develop Practical Guides, Outreach Materials, and Utility Incentive Programs

For more information:

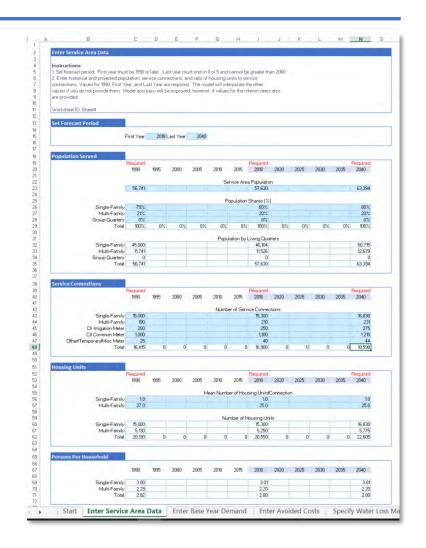
https://www.allianceforwaterefficiency.org/impact/our-work/awe-cooling-technology-study-cooling-tower-estimating-model



Photo: Oregon Department of Forestry

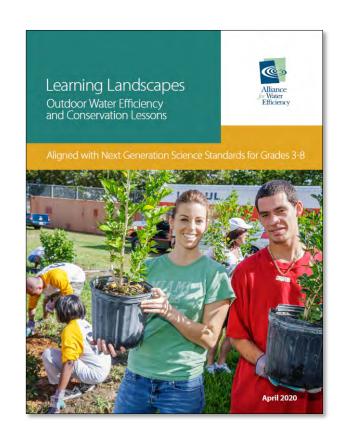
TRACKING TOOL VERSION 4 UPDATE

- Project underway as a partner project with CalWEP
- Biggest update since initial development
- Will update library of water conservation measures (50 measures)
- Water loss control functionality is being added for the first time
- National Version with Water Loss will be released first, California version will follow
- Mitchell Foundation providing \$19k in final funding
- Beta testing will begin at the end of March (City of Houston will be a first beta tester for the new water loss functionality)



SCOTTS MIRACLE-GRO FOUNDATION LEARNING LANDSCAPES

- Developed school lessons for grades 3-8 that align with Next Generation Science Standards
- Received 16 applications for Learning Landscapes grants
- Selected 8 grantees with the help of external reviewers
- Awarded \$40k in grants (\$5k each) to help build or improve demonstration gardens
- 3 of the 8 grantees were from California:
 - Pala Band of Mission Indians
 - Amigos de los Rios, Altadena
 - Riverside-Corona Resource Conservation District
- Final Reports from grantees due June 2021



SCOTTS MIRACLE-GRO RESOURCE POSITIVE LANDSCAPES

- New 3-year grant from Scotts Miracle Gro
- Update of existing Learning Landscapes lesso
- One new lesson to be added
- New round of grants (5 grants of \$5k each)
- Improvements to Home Water Works Web site
 - Mobile Responsiveness
 - Spanish translation
 - New calculator graphics
- Partner with Utah State University on "Resource Positive Landscapes" to create a life cycle assessment approach to identifying landscape design, plant materials, and management practices for the development of residential resource-positive landscapes



NET BLUE IN BOZEMAN, MONTANA

- Turner Foundation Grant
- AWE assembled a team of land use experts to work on Net Blue offset measures for adoption in Bozeman
- Bozeman Planning Commission and City Commission adopted necessary authority changes
- Virtual Stakeholder Workshop held on December 11, 2020
- Bozeman staff will make final changes to the City's Water Adequacy Manual to incorporate Net Blue provisions
- California should do this too!





Join the City of Bozeman and the Alliance for Water Efficiency to learn about recently-adopted changes to water adequacy requirements in the Bozeman Municipal Code (Sec. 38.410.130), and draft changes to the City's Water Adequacy and Administrative Procedures Manual. Draft changes will provide developers with additional options for meeting water adequacy requirements through water efficiency offset projects in order to encourage sustainable growth in Bozeman.





This virtual workshop is FREE to attend and is open to all.

December 11, 2020

10:00 - 12:00 p.m. Mountain Time Virtual Meeting through GoToWebinar

AGENDA

- Welcome, Logistics and Introduction to Bozeman's Water Supply Issues
 Jessica Ahlstrom, City of Bozeman
- Introduction to Net Blue and Water Neutral Development
 Mary Ann Dickinson, Alliance for Water Efficiency
- City of Bozeman Water Adequacy Policy Brian Heaston, City of Bozeman
- 4. Code Amendments & Draft Updates to the Water Adequacy Procedures Manual

Cash in lieu of water rights

- Brian Heaston, City of Bozeman

 Baseline Water Demand Calculator

 Jessica Ahlstrom, City of Bozeman Water Efficiency Offsets

 Brian Heaston, City of Bozeman Water Rights Transfers &
- Tie in to Bozeman City Plans
 Jessica Ahlstrom, City of Bozeman
- 6. Benefits for Developers in this Approach Dwight Merriam, Attorney at Law
 - 7. Comments and Q&A
 - Jessica Ahlstrom, City of Bozeman

Click here to register: www.Watersmartgrowth.eventbrite.com



WATER AFFORDABILITY IN LONG BEACH, CA

- AWE working with Metropolitan Water District of Southern California and Long Beach Water
- MWD and Long Beach very engaged in project
- Conducting a water affordability assessment
- Evaluating the impact of a rate restructure on water affordability
- Evaluating conservation's role in lowering bills and future options
- Draft report nearly complete





AMI LEAK NOTIFICATION PROJECT

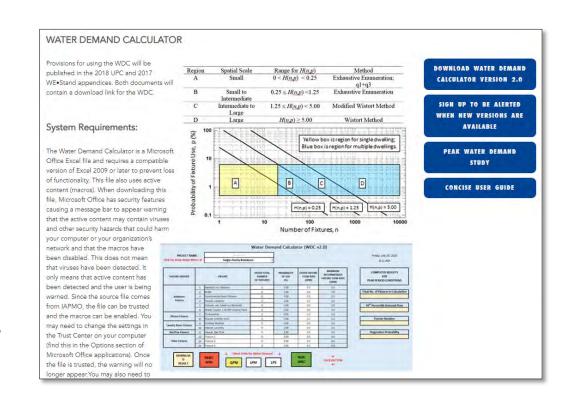
- Received \$50k from Metropolitan Water District of Southern California's Innovative Conservation Program
- Project will estimate water savings resulting from AMI-enabled customer leak notifications
- Project will also explore barriers to leak notifications in the CII sector
- Project will outline methods other utilities can employ for similar analysis
- Need at least \$50-60k in additional funding from participating utilities
- Working with David Mitchell and AMI Expert Don Schlenger





AWE AND IAPMO METER SIZE CONNECTION FEES, RATES, AND CHARGES RESEARCH

- Collected data on connection fees, rates and charges by meter size for 50 communities
- Evaluated financial implications for theoretical changes in meter size for new connections, based on the IAPMO Water Demand Calculator
- Created a database containing the data collected and a report documenting the work and the findings
- Finalizing report for co-publication with IAPMO



- 1. January 14 Water and Planning Network: Source Water Protection
- 2. February 25 AWE Innovations in Efficiency Series: Affordable CII Water and Energy Savings Initiatives
- 3. March 11 EPA/AWE Outdoor Water Webinar Series: The Benefits of Soil Moisture Sensors
- **4. March 25** Water and Planning Network: Water and Comprehensive Planning --- Theory to Practice
- 5. April 8 AWE Cooling Technology Study: Identifying Cooling Towers and Estimating Water Use (already has 44 registered)

Upcoming Events

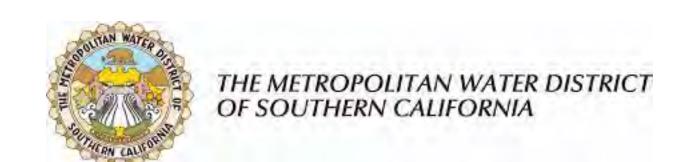
- 1. March 16-17 Rates Workshop in Connecticut (virtual)
- March 17 Discussion with New Mexico Water Conservation alliance about Chapter status
- 3. April 1 1st meeting of Corporate Advisory Council (virtual)
- 4. April 27 Water Conservation Showcase talk on Federal legislative issues
- 5. May 11-12 Emerging Water Technologies Symposium (virtual)
- 6. June 2-3 CalWEP Peer to Peer
- 7. June 4 Next Generation Water Summit (virtual)



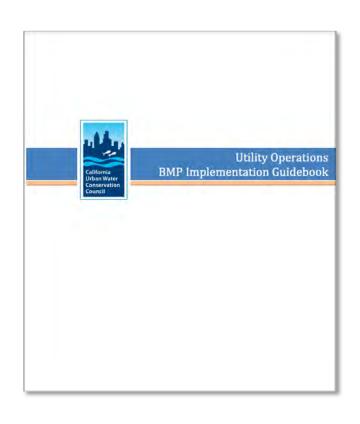
A Chapter of the Alliance for Water Efficiency

CalWEP's New Implementation Guides





Why did we update BMP Guidebooks?



- Useful legacy material from past CUWCC member efforts
- Desire a landing place for great examples from CalWEP members
 - Peer to Peer
 - Plenary
 - Program and R&E Committees
- Resource to train new staff members
- Ability to retool/rethink existing programs
- Aligned with the AWWA WUE G480 Standard
- Generate Plans and Programs eligible for the AWE Leaderboard

Key Contributions



Section Leads

- Landscape and Outreach: Krista Guerrero Metropolitan WD and Lisa Cuellar, CalWEP
- CII: Jennyfer Vasquez, West Basin MWD
- Residential: Diana Williford, City of Brentwood
- Water Loss: Sue Mosburg, AWWA CA-NV Section

Project Team

- Lisa Maddaus and Team, Maddaus Water
- CalWEP Staff

Future Vision

- Dynamic Resource for all CalWEP members
- Ability to add comments and examples by members
- CalWEP Training Support
- Future content from Program
 Committee and all members
 - AMI Strategies
 - Conservation Pricing
- CalWEP staff maintained



Visit calwep.org/guide



SHOWER STREAM

SMARTER SHOWERS FOR HOTELS

Priya Thomas, PhD Research Scientist & Co-Founder



20% SHOWER UTILITY COSTS WASTED!





350 BILLION GALLONS OF WATER + 48 BILLION kWh ENERGY

\$33 BILLION
WASTED EACH YEAR!







SHOWER HEAD ADAPTER



MOTION ACTIVATED



QUICK INSTALLATION

SAVINGS REPORTING

MAINTENANCE DATA



December Report
Dec 1 - Dec 31 2019
Motel6 Dallas-Lewisville



Waste Data

Water





36,148 Gal

Sewer Water



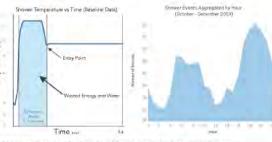
Utility Waste

117 Therms

\$368.1

• 9.4 min Average Shower Length

- · 2.5 min Average Unoccupied Time
- 11% of showers were >45 minutes
- We are observing 2.9 showers per occupied room per day
- Most showers occurred between 5:00pm and 9:00pm



These calculations are based on data collected from Shower Stream units and projections from historic data. See further details on our assumptions in the <u>Public Utility Commissions TRM</u>.

Maintenance Data

- 3 showers produced water measured over 130 degrees F. (Possible scald risk)
- 0 showers never produced water below 102 degrees F.
- All showers measured produced an acceptable pressure and flow rate.

Guest Satisfaction Data



Checked in with Jared Keel, General Manager: "Zero complaints regarding Shower Stream units. Overall the trial seems to be going well."

In-person Guest Interviews

- We conducted 0 hotel guest interviews
 across the month
- We will resume in-person interviews when we resume active savings.

Rating Platform	Number of Reviews (December 2019)	Rating	Number of Reviews that Mention Shower
Google	13	4.3/5	0
Hotels.com	3	2/10	0
TripAdvisor	1	2/5	0



UTILITY SAVINGS: \$100 / SHOWER / YR \$30,000 / HOTEL / YR \$25M+ / FRANCHISE / YR

UTILITY REBATES: \$3,000+ PER HOTEL







- Corporate Franchise Pilots
- 120 installed units
- 10,000+ unique hotel guest users
- 100,000+ gallons of hot water saved





Greg Floyd Founder, CEO



Ian Howard Co-Founder



Priya Thomas, PhD Research Scientist











- California Pilot in Motel6 this summer
- Share findings with water utilities via CalWEP





THANK YOU CalWEP!!

ABSTRACT ENGINEERING, INC.

9415 Burnet Rd. Suite 322C Austin TX priya@showerstream.net | 516-974-4945 facebook.com/showerstream

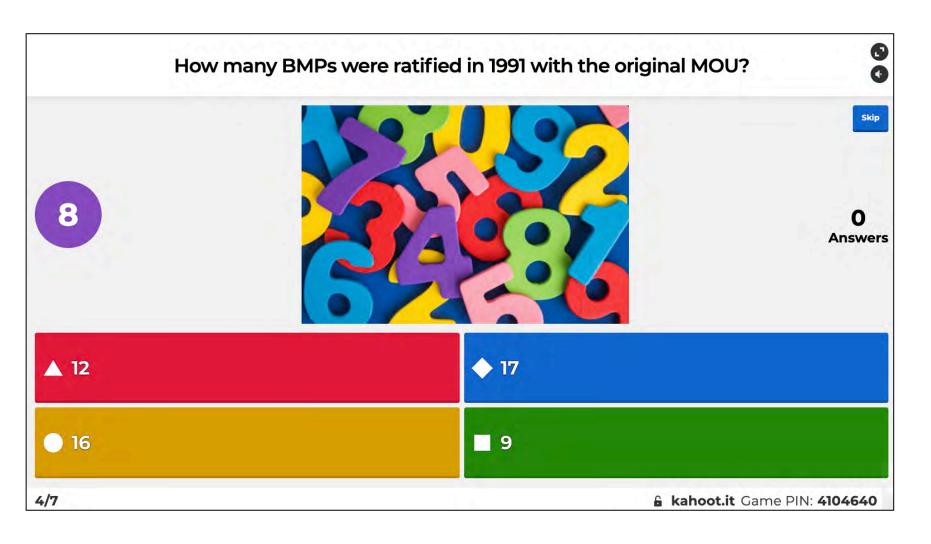
twitter.com/showerstream

in linkedin.com/showerstream

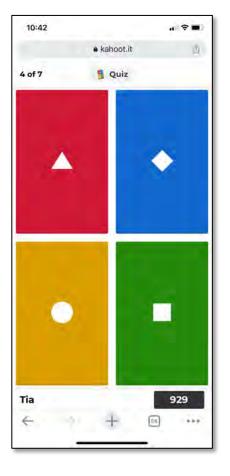
Introducing CalWEP's newest virtual addition.....



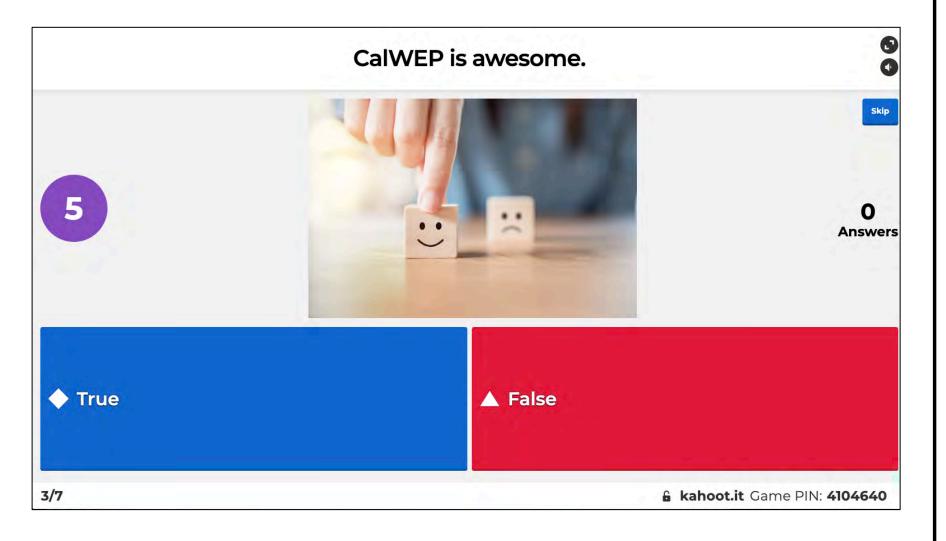
What you see on the webinar screen



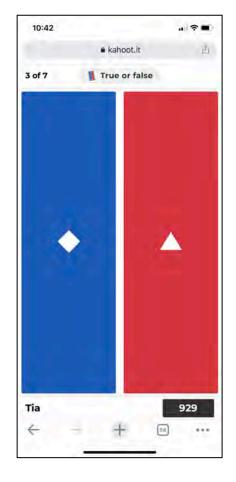
What you see on your phone screen



What you see on the webinar screen



What you see on your phone screen





In your phone's browser open kahoot.it

Once we launch the game you will see a pin and be asked to enter your name.

Then....we play.

Upcoming Events

Upcoming AWE Events

EPA/AWE Outdoor Water Webinar Series:The Benefits of Soil Moisture Sensors

March 11, 2021

AWE Cooling Technology Study: Identifying Cooling Towers and Estimating Water Use

April 8, 2021

Save the dates for CalWEP's Upcoming Events:

Peer to Peer 2021 June 2-3, 2021

CalWEP Fall Plenary
September 21, 2021 | 10:00 AM-12:00 PM

CalWEP Winter Plenary
December 9, 2021 I 10:00 AM-12:00 PM