PARTNERSHIP UPDATE

Regional Water Authority Water Efficiency Program Advisory Committee

May 8, 2018
CA URBAN WATER CONSERVATION COUNCIL

- Created in 1991 with an MOU
- Voluntary partnership
- Core purpose: Define and implement cost-effective urban water conservation BMPs
- Governance by consensus voting
- Incubated the Alliance for Water Efficiency
- Sunsetted December, 2016
BUILDING ON THE COUNCIL’S SUCCESS

- Continue Core Activities
- Change Governance & Role of Reporting
- Evolve Into a New Organization
THE DYNAMIC HAS CHANGED

- The Group 1 vs Group 2 block voting is gone
- No conservation reporting required
- North-South dynamic has been replaced with collaborative strategies
- Goal is to get every water agency the help they need to cope with emerging legislative requirements
Continue leadership

New nimble framework

Continue expertise, tools, and publications

New non-BMP focus

Continue collaboration & peer-to-peer networking

New majority decision making

Continue training

New research and evaluation protocols

New collaboration with the Alliance for Water Efficiency
CALWEP BOARD OF DIRECTORS

Amy Talbot, Regional Water Authority (Chair)
Lisa Morgan-Perales, Inland Empire Utilities Agency (Vice-Chair)
Greg Bundesen, Sac Suburban Water District (Sec-Treasurer)
Joe Berg, Municipal Water District of Orange County
Charles Bohlig, East Bay MUD
Penny Falcon, LADWP
Justin Finch, Mesa Water District
Trathen Heckman, Daily Acts
Ken Jenkins, California Water Service
Paul Lierheimer, Rain Bird Corp.
Lisa Maddaus, Maddaus Water Management

Bill McDonnell, Metropolitan Water District
Sean McNeil, City of Santa Rosa
Carlos Michelon, San Diego County Water Authority
Kendra Olmos, UC Davis Center for Water-Energy Efficiency
Julie Ortiz, San Francisco Public Utilities Commission
Patrick Pilz, California American Water
Carrie Pollard, Sonoma County Water Agency
Rob Whipple, Western Municipal Water District
I’M BACK!

• Executive Director of the CUWCC from 1998-2007
• Active in CA water resource policy and planning efforts
• Former MWD employee
• Continuous southern CA resident since 1992
• Know CA water issues, stakeholders
• Founder and CEO of the Alliance for Water Efficiency with many California members and projects
OUR NEW FOCUS

• California’s unique issues, challenges and opportunities

• Getting the best resource and tools for our California membership

• Helping members meet new legislative/regulatory mandates (which will replace the original 20 x 2020 framework)
WE ARE NOW OFFICIAL!

• New Articles of Incorporation filed with the Secretary of State
• Revised Bylaws adopted
• Permanent Board member selection completed
• Quarterly Partner Plenary meetings will be held as before
• Peer to Peer Training scheduled for May 30-31 in San Francisco
• Formal Launch Celebration March 7
LAUNCH WAS A SUCCESS!

- Daytime Plenary meeting
- Keynote speakers: Ellen Hanak, David Mitchell, Kendra Olmos
- Opening remarks at Dinner by Steven Moore, Vice Chair State Water Resources Control Board
- Congratulatory Resolutions from State Water Resources Control Board, State Senate
- Over 150 people attended
GETTING THE PARTNERSHIP OUT THERE

- 2/14 Pacific Institute Advisory Council Meeting (San Francisco)
- 2/27 Water Efficiency Meeting of Santa Barbara/San Louis Obispo Counties
- 3/15 Imagine H2o/WEF Innovation Forum (San Francisco)
- 3/20 Water Conservation Showcase, Pacific Energy Center (San Francisco)
- 3/22 Water Policy Conference (Davis)
- 4/2 San Diego County Water Agency Meeting (San Diego)
- 4/19 UC Davis Energy Affiliates Forum (Davis)
- 5/3 Sustainable Water Resources Roundtable (Sonoma)
- 5/8 RWA Water Conservation Coordinators Group (Rancho Cordova)
- 5/8 ACWA Water Management Committee (Sacramento)
- 5/30-5/31 Peer to Peer (San Francisco)
NEW STRATEGIC PLAN

- Adopted by Board February 7, 2018
- Printed copies being mailed to membership with dues thank you letters
- Dynamic plan that will grow with needed projects and initiatives
1. Assist water supplier partners by providing as-needed information, expertise, and services that will enable them to meet municipal or utility-adopted water-use goals, as well as legislative and regulatory requirements.

2. Conduct and support research and evaluation efforts.

3. Transform markets for water-use efficiency-related products and services.

4. Assume a leadership role in building a statewide community of organizations focused on conservation, efficiency, resilience of water systems and watersheds, and leveraging the water-energy nexus.

5. Retain existing partners and increase overall membership.

6. Build organizational capacity to meet strategic planning goals.

7. Define advocacy principles and activities to meet strategic planning goals.
PARTNERSHIP LISTENING TOUR

• 4 Online Discussion boards: Wholesalers, northern retailers, southern retailers, smaller agencies
• 2 Boards week of April 9; 2 Boards week of April 16
• 4 In-depth telephone Interviews to be scheduled
• Quantitative Member Survey will be developed based on this input
• Analysis of data
• Final Report for September Board meeting
HOW WILL THE DUES WORK?

• Joint membership dues invoiced from Sacramento Office
• In 2018 there is a 10% reduction in CalWEP dues to encourage joint membership
• Combined dues are the same as the individual separate dues
• No longer an option to just join one
• Goal is to reduce the overall joint dues over time as economies of scale kick in
PROVIDING VALUE TO MEMBERS

- More technical assistance will be available
  - Landscape assistance from Sacramento
  - Conservation planning assistance from Chicago
- More research projects can be undertaken
  - Pooling funds means more money goes into joint research
  - Research agenda can be jointly managed
- Advocacy on the national level
  - Saving the Water Sense program
  - Tax-exempt status for water efficiency rebates
  - Provide a template policy for California-level advocacy
NEW CALWEP PROGRAMS

• Rate Case Study (LADWP)
• AMI-AMR Standards for Water Utilities bidding and operation
• Sustainable Landscape Market Transformation Plan: Accelerating the transition to multi-benefit, sustainable landscaping in California
• Online Wiki Tool Box and web site rebuild
• Peer to Peer Training
• Water-Energy programs
SUSTAINABLE LANDSCAPING MARKET TRANSFORMATION - HIGHLIGHTS

Marketing & Research

• CBSM survey implementation and findings (Participants: Long Beach Water Dept., EBMUD, and Rancho California Water District)
• Findings to be published this spring

Training

• CBSM training webinars (planned for 2018)
• Qualified Water Efficient Landscaper (QWEL) training partnership (Train-the-trainer support)
PEER TO PEER

• Builds and feeds the California network
• Creates opportunities for dynamic, interactive information exchanges for water conservation and efficiency professionals
• Promotes the latest successful practices and programs
WATER AND ENERGY COLLABORATION

- Frank Logue and Kendra Olmos of the UC Davis Center for Water and Energy Efficiency are partners with CalWEP
- Joint interest in helping water utilities better calculate embedded energy in water for funding and credit
- 5 competing methodologies (models by AWE, CPUC/Navigant, UC Davis, DWR, and Climate Registry)
- Need one consistent methodology to enable funding
- Proposal for Spring Workshops to train water utilities
- Goal is to get funding and credit for GHG emission reduction!
CREATING THE CHAPTER WITH AWE

- Bringing together two of the country’s major organizations focused on water efficiency
- Allows the open sharing of combined technical resources and research
- All members of CalWEP will automatically be members of AWE and vice versa
- 2018 membership invoice for CalWEP dues include membership in AWE
- Full membership benefits of both organizations for one membership price
MEMBERSHIP BENEFITS

- Both organizations will now provide joint membership benefits
- Leverages membership dollars, grant funding, and staff resources
- All work will be openly shared
- Benefits graph shows where member benefit occurs
- Will be mailed with 2018 invoices
SHARED AWE PROGRAMS

- Water Conservation Tracking Tool
- Financing Sustainable Water:
  - Rates Planning Assistance (Handbook and Model)
  - Consumer Messaging and Videos
  - Avoided Cost Case Studies
- Commercial Kitchens Water Efficiency Guide
- Outdoor Water Savings Studies
- Net Blue Water-Neutral Development Ordinance and Offset Methodology
- Graywater Cost-Effectiveness Study
AWE PROJECTS TO SHARE WITH CALWEP
AWE POLICY ADVOCACY

- WaterSense® authorization
- Tax-free water conservation rebates
- Eliminating accounting barriers to efficiency investments
- Water/energy nexus research
- Standards and codes
- Testifying in Congress
- Assisting states with their legislative priorities on efficiency
AWE TRACKING TOOL

Water Conservation Scenario Planning Tool
Free to all members
Built by David Mitchell of MCubed
Designed for CA water agency tracking needs
Version 3 launched in 2016
Will be updated to measure any emerging Conservation Framework requirements
BASELINE DEMANDS

Specify demands: On this worksheet you specify your baseline demand forecast. This is forecasted demand before any adjustment for planned conservation activities. This forecast is important because it provides the reference for calculating the percentage change in demand from planned conservation, as well as benefits of planned conservation and the impact of conservation on rates and revenue requirements.

Peak Demand Season

Most utilities have low and high demand seasons. The high demand season typically correlates with the summer months. The tracking

Peak Demand Season

<table>
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<tr>
<th>Begin Date</th>
<th>End Date</th>
<th>Peak Days</th>
<th>% of Year</th>
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<tr>
<td>1-May</td>
<td>30-Sep</td>
<td>152</td>
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Baseline Demand Forecast

The baseline demand forecast is the projection of demand before any adjustments for planned conservation activities. Use the following table to enter the baseline demand forecast for each customer class. Also enter the forecast of baseline system loss. Do not adjust system loss for future leak detection if leak detection will be included as a planned conservation activity in the model. Doing so will result in double counting savings from leak detection.

Options for Generating the Baseline Demand Forecast:
1. Enter your own forecast values (recommended)
2. Enter values for first year and extrapolate future values using population forecast (use only if Option 1 not possible)
3. Enter values for first year and extrapolate future values using accounts forecast (use only if Option 1 not possible)

Peak Season % of Annual: In the column to the right of the table, enter the percentage of annual demand occurring in the peak season.

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<th>Annual Sales Units</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
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<td>44,404</td>
<td>45,605</td>
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<td>50,033</td>
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<td>7,017</td>
<td>7,338</td>
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Adjust Baseline Demand Forecast for Future Effects of Plumbing/Appliance Standards

Plumbing/appliance standards for toilets, clothes washers, and dishwashers will affect future indoor water use. The tracking tool includes models that calculate the magnitude of these effects. You can have the tracking tool adjust your baseline demand forecast for these effects by selecting "Yes" from the drop-down list. If your baseline demand forecast already adjusts for these effects, or you do not want the tracking tool to make this adjustment, select "No."
Define conservation activities: Click the Define/Edit/Delete button to setup and edit conservation activities. You can use the form to define your own activities or import activities from the tracking tool's library. Once imported, library activities can be customized. Conservation activity specifications are stored in a table on this worksheet. This table is hidden by default. You can unhide the table by clicking the "Show Activities Table" button. You can edit activities directly in the table if you find this easier than using the form. HOWEVER, DO NOT DELETE TABLE ROWS. ONLY USE THE FORM TO DELETE CONSERVATION ACTIVITIES.

NOTE: You can define activities in the table rather than using the form, BUT ONLY USE THE FORM TO DELETE ACTIVITIES.
Enter annual conservation activity: Use this worksheet to enter the annual activity levels for the conservation activities you defined on the Define Activities worksheet. You can enter activity through the end of your forecast period, but this is not required. It is okay to enter activity for shorter periods. You also can start an activity in any year in the forecast period. You do not have to start it at the beginning. It is also okay to skip years, for example if an activity is operated every other year, or every third year. If you have annual conservation program costs that are not accounted for in your activity definitions, you can enter these costs in the Annual Program Overhead Cost table. Any overhead cost you enter will be incorporated into the utility benefit cost analysis.

### Enter Annual Conservation Activity

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### Annual Program Overhead Cost (2014 dollars)

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Enter additional program cost not included in activity definitions: $25,000, $25,000, $25,000, $25,000, $25,000, $25,000, $25,000, $25,000

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Model calculation tables below this line. Do not delete or modify.

Effective Conservation Activity
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### Per Capita Demand

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### Water Savings Summary
AWE CONSERVATION TRACKING TOOL: UTILITY REVENUES & RATES WORKSHEET

Review revenue requirement and rate impacts: This worksheet calculates the impact of planned conservation on annual revenue requirement, average rates, and average bills. It assumes the volumetric revenues generated by the baseline demand and rate forecasts correspond to the utility's volumetric revenue requirement. It then adjusts forecasted annual water sales and revenue requirement using the water savings, conservation program cost, and utility avoided cost estimates calculated earlier. The adjusted revenue requirement equals the baseline revenue requirement plus annual conservation program costs minus annual avoided water supply cost. The adjusted average volumetric rate equals adjusted revenue requirement divided by adjusted annual water sales. The adjusted average monthly volumetric rate equals adjusted revenue requirement divided by number of accounts divided by 12. Calculations are done for two alternative financing strategies for planned conservation. The first strategy treats planned conservation as an operating expense. The model assumes planned conservation is paid for in the year it occurs (Pay-As-You-Go). The second strategy treats planned conservation as a capital expense. The model assumes planned conservation is funded through a capital loan. You can set the debt financing term using the drop-down list.

Select Chart to View

Change in Rate Reg
Revenue Requirement
Avg. View Rate
Avg. View Bill
Change in Water Rate
Change in Bill

Debt Financing Term (Yrs) 15
Years to Display in Chart 15

Change in Annual Volumetric Revenue Requirement Due To Utility Conservation Program

Baseline Volumetric Revenue Requirement, Average Rate, & Average Bill

Baseline Water Sales Forecast (from 2. Specify Demands)

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Conservation Activities Sorted by Utility Unit Cost
(only measures for which unit cost is defined are shown)
Water loss control programs to reduce system physical losses can be one of the more cost-effective ways utilities can save water. The chart on this worksheet shows how your conservation measures rank compared to the range of typical cost for water loss control programs.

Unit Cost Range for Typical Utility Water Loss Control Program

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Unit cost ranking of water loss relative to your defined conservation measures

11 of your conservation measures have unit costs above the high-end of the water loss control cost range.

Water Loss Control Unit Cost Ranking
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<th>B/C Ratio</th>
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<td>2,312,552</td>
<td>NA</td>
</tr>
<tr>
<td>Multi Family</td>
<td>Residential Surveys, MF</td>
<td>1,115,025</td>
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</tr>
<tr>
<td>Single Family</td>
<td>Residential HE Toilets, SF</td>
<td>963,281</td>
<td>4.9</td>
</tr>
<tr>
<td>Multi Family</td>
<td>Residential HE Toilets, MF</td>
<td>314,588</td>
<td>6.5</td>
</tr>
<tr>
<td>Single Family</td>
<td>Residential LF Showerhead, SF</td>
<td>2,071,269</td>
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</tr>
<tr>
<td>Single Family</td>
<td>Residential 4-WP Washer, SF</td>
<td>388,471</td>
<td>2.8</td>
</tr>
<tr>
<td>Multi Family</td>
<td>Residential 4-WP Washer, MF Common A</td>
<td>361,950</td>
<td>3.4</td>
</tr>
<tr>
<td>Single Family</td>
<td>Residential Irrigation Controller, SF</td>
<td>(645.49)</td>
<td>0.2</td>
</tr>
<tr>
<td>Single Family</td>
<td>Residential Efficient Irrigation Nozzles, SF</td>
<td>(622.58)</td>
<td>0.4</td>
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<tr>
<td>Single Family</td>
<td>Residential Efficient Irrigation Nozzles, SF</td>
<td>(2,755,012)</td>
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</tr>
<tr>
<td>CII</td>
<td>CII 1/2 Gallon Vial</td>
<td>5,103.95</td>
<td>NA</td>
</tr>
<tr>
<td>CII</td>
<td>CII Valves-Type HE Toilet</td>
<td>684,477</td>
<td>4.7</td>
</tr>
<tr>
<td>CII</td>
<td>CII Laundrymat</td>
<td>684,042</td>
<td>3.9</td>
</tr>
<tr>
<td>CII</td>
<td>CII Dishwasher</td>
<td>2,679,759</td>
<td>19.9</td>
</tr>
<tr>
<td>CII</td>
<td>CII Spray Rinse Valve</td>
<td>2,859,591</td>
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</tr>
<tr>
<td>Irrigation</td>
<td>Large Land, Irrigation Controller</td>
<td>(67,905)</td>
<td>0.9</td>
</tr>
<tr>
<td>Irrigation</td>
<td>Large Land, Turf Replacement</td>
<td>(586,014)</td>
<td>0.1</td>
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<tr>
<td>Utility</td>
<td>Utility Leak Detection</td>
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<td>NA</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>$15,535,084</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Select Chart to View
NPV Sorted

Conservation Activities Sorted by Participant NPV
FINANCING SUSTAINABLE WATER

Building Better Rates in an Uncertain World: A Handbook to explain key concepts, provide case studies and implementation advice

AWE Sales Forecasting and Rate Model: Innovative, user-friendly tool to model scenarios, solve for flaws, and incorporate uncertainty into rate making

Tools developed by Tom Chesnut and avid Mitchell

FinancingSustainableWater.org: Web-based resources to convene the latest research and information in one location
Financial Instruments to Manage Revenue Risk
A new white paper explores opportunities for utilities to use financial instruments - such as derivatives, insurance and bonds - to manage weather-related revenue risk in an increasingly volatile climate.

Rates. Revenue. Resources.
Financing Sustainable Water is an initiative of the Alliance for Water Efficiency that was created to provide practical information to guide utilities from development through implementation of rate structures that balance revenue management, resource efficiency and fiscal sustainability. Headquartered in Chicago, the Alliance serves as a North American advocate for water efficient products and programs, and provides information and assistance on water conservation efforts. Learn More
Water: What You Pay For

A4WE

Subscribe 284

1,924
NET BLUE

Water Neutral Development Ordinance and Offset Methodology

Based on successful examples, many in California

Launched May 1, 2017

Methodology Workbook updated to Version 2.2

Looking for a California community to adopt a water-neutral development ordinance using Net Blue tools and resources
GRAYWATER STUDY

Evaluates the water savings potential and cost-effectiveness of residential graywater residential retrofit systems

Includes easy-to-follow steps for determining the cost-benefit ratio for utility rebate programs

Recorded webinar available
COMMERCIAL KITCHENS GUIDE

• Prepared by the Food Service Technology Center in San Ramon
• Target audience is restaurant manager
• Member-only availability
• Free PDF
• Printed copies for $6 apiece, bulk order pricing can be arranged
TRANSFORMING WATER REPORT

Evaluates the national economic benefit of water efficiency infrastructure investments

Updated version of original 2008 Report

Prepared by David Mitchell of M Cubed

Released December 14, 2017 with recorded webinar

Distributing printed copies to lawmakers and AWE members (including CalWEP!)
OUTDOOR WATER STUDIES

Landscape Transformation
• Work underway by A&N Technical Services
• 15 participating and funding agencies, mostly from CA
• Expected completion Summer 2018

Drought Restrictions
• Work underway by Western Policy Research and Maddaus Water Management
• 14 participating and funding agencies, mostly from CA
• Expected completion Fall 2018
Non-Potable Water Policy for California – $25,000 prize awarded to SFPUC and AWE

Work is completed

Held three stakeholder workshops in November 2017

Report recently released

Related legislation recently introduced in CA (SB 966, 1/28/2018)
2017 STATE SCORECARD

AWE Water Efficiency and Conservation Scorecard
Final report launch and webinar on March 21

California is the top scorer!

Additional resources will be created and distributed

✓ State summary pages
✓ Factsheets
✓ Maps
JOINT RESEARCH

- Combined research plan with AWE
- Outdoor Water Savings Studies with major California participation
- Cooling Tower Study with major California participation
- Avoided Cost Studies of California communities showing the benefits of conservation
CONSUMER INFO

- **www.H2ouse.org** is no longer – site has been hijacked by a private vendor! Remove your links to it!

- **www.home-water-works.org** can be a substitute if you need a consumer website

- Save Our Water website no longer has a calculator and HWW is very accurate – ET database by zip code

- Can be customized to your utility
NEWS: WATERSENSE STILL IN JEOPARDY

• Trump FY19 Budget still “zero funds” WaterSense
• AWE Letter to EPA Administrator Pruitt asking him to fund it
• $2 million a year in discretionary EPA funding
• Congress approved FY18 budget on March 23 to avoid government shutdown – and WaterSense funding is in it!
• But Congressional authorization still necessary to allow Congress to directly fund WaterSense
• Best option is S 1137: Clean Safe Reliable Water Infrastructure Act
• Bipartisan negotiations to add Water Resources Development Act amendments to S 1137
• WaterSense authorization language is included