



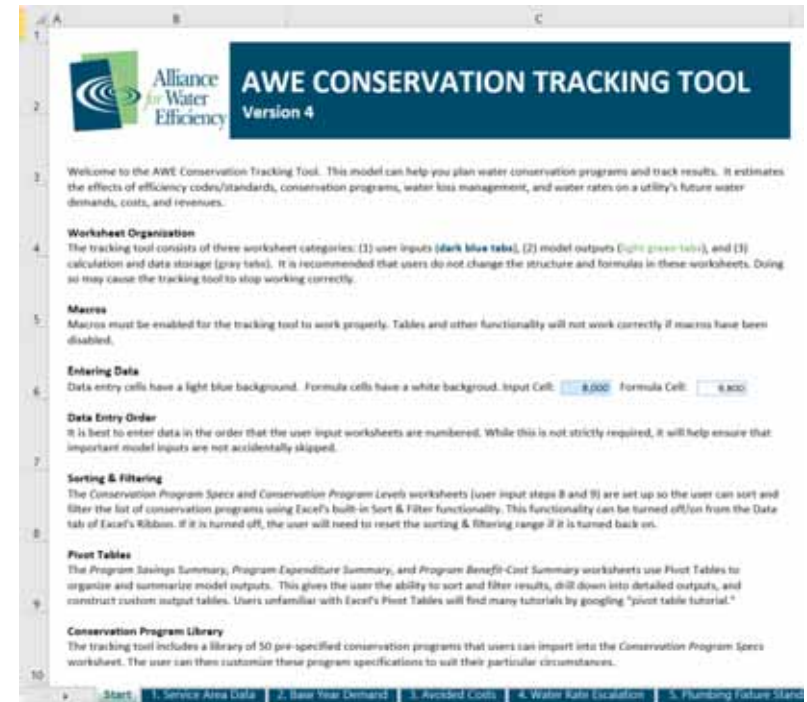
# WATER CONSERVATION TRACKING TOOL

Version 4

*Alliance for Water Efficiency*

# WHAT IS THE TRACKING TOOL?

- An Excel-based model that can be used to evaluate the costs and benefits of water conservation programs
- Includes detailed User Guide
- Graphic model outputs which are usable for manager and board presentations
- A free resource for AWE and CalWEP members



# HISTORY OF THE AWE TRACKING TOOL

- Version 1.0 first released in 2009
- Has been through a series of updates: Version 1.0, 1.1, 1.2, 2.0, 3.0... and now 4.0!
- Has had over 400 users
- AWE has worked directly with many of its members



# THANK YOU FUNDERS AND BETA TESTERS!



## Funders of the Version 4 California Edition

California American Water  
California Water Efficiency Partnership  
California Water Service Company  
East Bay Municipal Utility District  
Inland Empire Utilities Agency  
Irvine Ranch Water District  
Mesa Water District  
Metropolitan Water District of Southern California  
Municipal Water District of Orange County  
Regional Water Authority, California  
City of Sacramento, California  
San Francisco Public Utilities Commission  
City of Santa Barbara, California  
Santa Clarita Valley Water Agency  
Solano County Water Agency  
Sonoma Water  
Upper San Gabriel Valley Municipal Water District  
Western Municipal Water District

## Beta Testers

Nate Adams, Santa Margarita Water District  
Celine Benoit, Metropolitan North Georgia Water Planning District  
Dave Bracciano, Hazen and Sawyer  
Greg Bundesen, Sacramento Suburban Water District  
Margaret Hunter, American Water  
Mark Graham, Metropolitan Water District of Southern California  
Justin Finch, Moulton Niguel Water District  
Paula Paciorek, Houston Water  
Abbey Pizel, The City of Oklahoma City  
Whitney Ray, East Bay Municipal Utility District  
Robert Stefani, Austin Water  
Emma Thompson, C3 Water, a C3 Group Company  
Carl Yates, Yates Water Management



A Chapter of the Alliance for Water Efficiency

# VERSION 4.0 OF THE WATER CONSERVATION TRACKING TOOL

- Launched September 15, 2021
  - Standard North American Edition
  - California Edition
- Free resource for AWE/CalWEP members
- Request it here:  
<https://www.allianceforwaterefficiency.org/resources/topic/water-conservation-tracking-tool>



The screenshot shows the website for the Water Conservation Tracking Tool. The header includes the Alliance Water Efficiency logo and the tagline "PROMOTING AN EFFICIENT & SUSTAINABLE WATER FUTURE". A navigation menu contains links for IMPACT, RESOURCES, NEWS, EVENTS, MEMBERS, WATER SAVING TIPS, and ABOUT. The main heading is "Water Conservation Tracking Tool". Below this, there is a section titled "Section: Water Conservation Processes, Programs, and Evaluation". The text describes the tool as an Excel-based spreadsheet for evaluating water savings, costs, and benefits of urban water conservation programs. It includes a list of features and examples of how the tool can be used. A small image of the tool's cover is shown on the right. At the bottom, there is a section titled "How the Alliance Will Help" and a "Member-Only Benefit" section.

**Section: Water Conservation Processes, Programs, and Evaluation**

The AWE Water Conservation Tracking Tool is an Excel-based spreadsheet tool for evaluating the water savings, costs, and benefits of urban water conservation programs and for projecting future water demands. In addition to providing users a standardized methodology for water savings and benefit-cost accounting, the tool includes a library of 50 pre-defined, fully parameterized conservation activities from which users can construct conservation programs. Water managers can use the tool in a variety of ways to aid their water resource planning and operations.

**For example:**

- The tool can be used to quickly compare alternative conservation measures in terms of their water savings potential, impact on system costs, and potential benefits to utility customers.
- The tool can be used in the development of long-range conservation plans. It can be used to construct conservation portfolios containing up to 200 separate conservation program activities.
- The tool can be used as an accounting system for tracking the implementation, water savings, costs, and benefits of actual conservation activities over time.
- The California Edition of the tool can be used by California members to compare projected water use to their AB 1668/SB 606 water use objectives.

Version 4.0 of the tracking tool was released in September 2021. The latest update was done in collaboration with the California Water Efficiency Partnership, and the California Edition was supported by funders listed at the bottom of this page.

**How the Alliance Will Help**

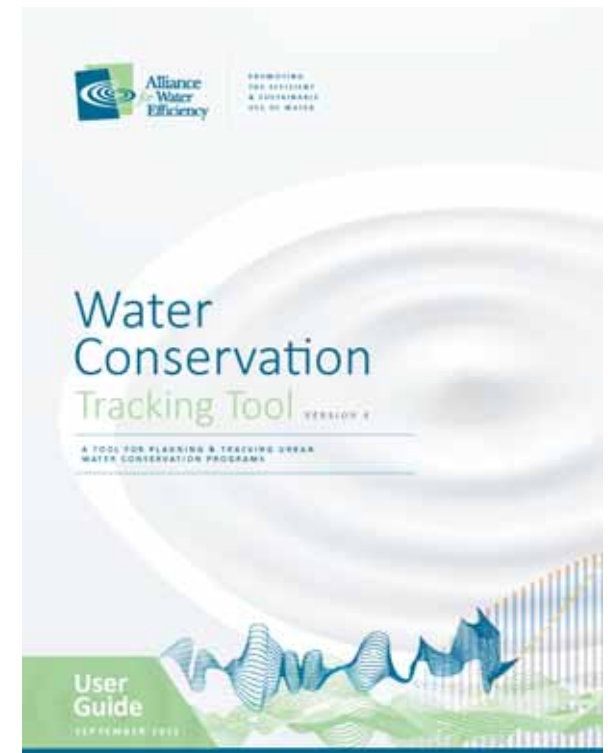
The Alliance will provide a detailed User Guide with the Tool, as well as one (1) hour of free technical assistance to any member using the Tool. Please let us know about your experiences with the Tool! We would like to feature successful examples of the Tool in use on our web site, so please let us know how it has worked for you.

**Member-Only Benefit**

The Tool is available free of charge to AWE members, as a member-only benefit, but it is subject to your agreement to the Water Conservation Tracking Tool Terms of Use. If not already, sign in below to gain access to the Terms of Use form. [Visit a current member page now!](#)

## WHAT'S NEW IN VERSION 4

- Redesigned User Interface
- Ability to specify up to 200 programs
- Expanded program library with 50 pre-defined programs
- Updated plumbing fixture efficiency module
- New landscape standards module
- New price response module
- New water loss management module
- New AB 1668/SB 606 Module



# DATA INPUT WORKSHEETS

User Input Worksheets	What it does
1. Service Area Data	You set the forecast period and enter service area data the tracking tool needs to project future water demands on this worksheet.
2. Base Year Demand	You enter your water demand in the base year of the forecast period on this worksheet. This is the starting point of the demand forecast the tracking tool generates.
3. Avoided Costs	You enter information on water supply, wastewater treatment, and energy costs for your service area on this worksheet. The tracking tool uses this information to calculate the economic benefits of conservation.
4. Water Rate Escalation	You enter information on the expected rate of increase in water rates on this worksheet. The tracking tool uses this information to calculate changes in future demand driven by real increases in the cost of water service.
5. Plumbing Fixture Standards	You specify plumbing fixture standards for your region on this worksheet. The tracking tool uses this information to estimate the change in future water demand due to improving efficiency of the stock of plumbing fixtures.
6. New Landscape Standards	You specify expected water savings from landscape efficiency standards for new development. The tracking tool uses this information to estimate the change in future water demand due to improving efficiency in landscape water use.
7. Water Loss Management	You enter information about your distribution system and water loss interventions and costs. The tracking tool uses this information to estimate the costs and benefits of water loss management and the expected change in water losses over the forecast periods.
8. Conservation Program Specs	You specify the conservation programs that will be analyzed on this worksheet. You can also import program specifications from the Conservation Program Library, which you can then customize.
9. Conservation Program Levels	You specify the implementation levels of the specified conservation programs on this worksheet. The tracking tool uses this information to estimate the costs and benefits of the specified conservation programs and the expected change in water demand over the forecast period.



# DATA OUTPUT WORKSHEETS



Model Output Sheets	What it does
Demand Projection	This worksheet holds the baseline and adjusted demand projections. The adjusted projection shows the effect that efficiency standards/codes, water rates, and conservation programs are projected to have on demand.
Plumbing Fixture Efficiency	This worksheet shows the estimated change in plumbing fixture efficiency over the forecast period due to the effects of plumbing fixture standards and conservation programs.
Program Savings Tables	This worksheet uses a Pivot Table to summarize expected conservation program water savings over the forecast period. Users can use Excel's Pivot Table functionality to sort and filter programs, hide or reveal detail, or create custom summaries of program water savings.
Program Savings Charts	This worksheet uses a Pivot Chart to summarize expected conservation program water savings over the forecast period. Users can use Excel's Pivot Chart functionality to sort and filter programs, hide or reveal detail, or create custom graphical summaries of program water savings.
Program Expenditure Summary	This worksheet uses a Pivot Table to summarize expected conservation program expenditure over the forecast period. Users can use Excel's Pivot Table functionality to sort and filter programs, hide or reveal detail, or create custom summaries of program expenditures.

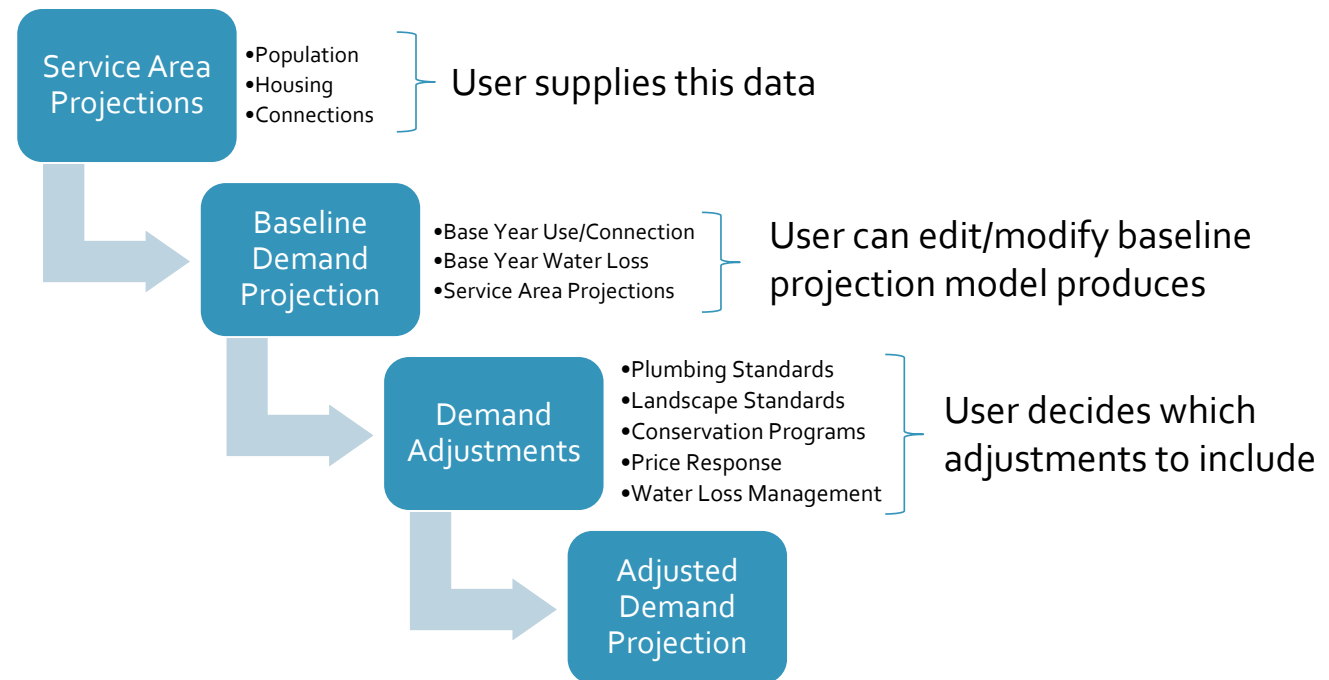
Model Output Sheets	What it does
Program Benefit-Cost Tables	This worksheet uses a Pivot Table to summarize conservation program benefits and costs. Users can use Excel's Pivot Table functionality to sort and filter programs, hide or reveal detail, or create custom summaries of program benefits and costs.
Program Benefit-Cost Charts	This worksheet uses Pivot Charts to summarize expected unit costs and benefit-cost ratios of conservation programs. Users can use Excel's Pivot Chart functionality to sort and filter programs, hide or reveal detail, or create custom graphical summaries of unit costs and benefit-cost ratios.
Variable Cost per Service	This worksheet compares the variable cost of service under the baseline and adjusted demand projections. The comparison shows whether water loss management and conservation programs are expected to lower or raise utility costs over the forecast period. All else equal, lower variable cost means lower customer water bills.
GHG Reduction	This worksheet calculates GHG reduction (in tons of CO2 equivalent) over the forecast period due to reductions in water supply production, wastewater treatment, and water heating.
CA Water Use Objective	This worksheet provides a calculator that enables California retail urban water suppliers to compare their projected water use to California's pending retail urban water supplier water use objective.



# SORT/FILTER PROGRAM RESULTS BY

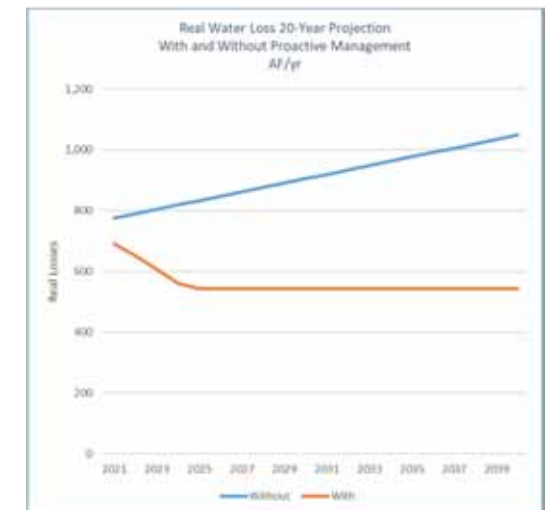
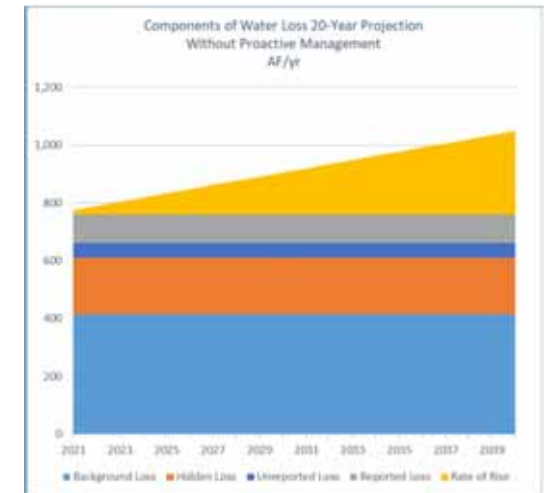
	Programs	Program Count	Utility Unit Cost (\$/AF)	Utility Unit Benefit (\$/AF)	Utility BCR	Society Unit Cost (\$/AF)	Society Unit Benefit (\$/AF)	Society BCR
<b>Customer Class</b>	<input checked="" type="checkbox"/> CII Common Meter	1	\$271	\$850	3.1	\$271	\$850	3.1
	<input type="checkbox"/> Multi-Family							
<b>Program Category</b>	<input checked="" type="checkbox"/> HET	1	\$258	\$850	3.3	\$258	\$850	3.3
	<input checked="" type="checkbox"/> Irrigation Systems & Devices	1	\$713	\$775	1.1	\$713	\$775	1.1
	<b>Multi-Family Total</b>	<b>2</b>	<b>\$259</b>	<b>\$850</b>	<b>3.3</b>	<b>\$259</b>	<b>\$850</b>	<b>3.3</b>
	<input type="checkbox"/> Single-Family							
<b>Individual Program</b>	<input type="checkbox"/> Audits & Rpts							
	<input checked="" type="checkbox"/> SFR Home Water Report	1	\$607	\$805	1.3	\$607	\$1,202	2.0
	<input type="checkbox"/> SFR AMI Leak Alert	1	\$1,275	\$813	0.6	\$1,275	\$813	0.6
	<b>Audits &amp; Rpts Total</b>	<b>2</b>	<b>\$628</b>	<b>\$805</b>	<b>1.3</b>	<b>\$628</b>	<b>\$1,189</b>	<b>1.9</b>
	<b>Single-Family Total</b>	<b>2</b>	<b>\$628</b>	<b>\$805</b>	<b>1.3</b>	<b>\$628</b>	<b>\$1,189</b>	<b>1.9</b>
	<b>Grand Total</b>	<b>5</b>	<b>\$511</b>	<b>\$819</b>	<b>1.9</b>	<b>\$511</b>	<b>\$1,082</b>	<b>2.4</b>

# DEMAND PROJECTION & DECOMPOSITION



# WATER LOSS MANAGEMENT

- Module Developed by Water Systems Optimization
- Based on Industry Standard Approach (AWWA M36)
- Leverages information from your water audits (AWWA audit software)
- Models three interventions
  - Leak detection & repair
  - Pressure reduction
  - Accelerated repair of reported leaks
- Calculates expected savings, costs, benefits
- Integrates with Demand Projection



# AB 1668/SB 606 MODULE

- Compares projected demand to Water Use Objective
- Water Use Objective based on Efficiency Standards for
  - Residential Indoor/Outdoor
  - CII DIM
  - Real Water Loss
  - Variances & Potable Reuse Credits
- User can do “What-ifs” – e.g., what if indoor standard is X not Y
- Based on Draft Standards – Will be updated as necessary when final standards adopted

## Projected vs Objective Water Use

<u>Water Use in 2025</u>	<u>Projected</u>	<u>Objective</u>	<u>Difference</u>
Residential	9,532 AF	10,037 AF	-504 AF
+			
Irrigation Meters	955 AF	969 AF	-14 AF
+			
Real Water Losses	547 AF	608 AF	-61 AF
+			
Variances		0 AF	0 AF
+			
Credits		257 AF	-257 AF
=			
<b>Total</b>	<b>11,035 AF</b>	<b>11,872 AF</b>	<b>-837 AF</b>
Over/Under Objective			<b>UNDER OBJECTIVE</b>
% Over/Under Objective			-7%

# TRAINING WEBINAR

- Wednesday, October 27 at 11:00 a.m. PDT
- 90-minutes
- Detailed overview of Version 4.0 of the Tracking Tool
- Please review ahead of time and bring your questions
- Registration will be available soon





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<https://www.allianceforwaterefficiency.org>

# Alliance *for* Water Efficiency

## *Thank You!*