



## About WaterSense

WaterSense, a voluntary partnership program sponsored by the U.S. Environmental Protection Agency (EPA), is both a label for water efficient products and a resource for helping you save water.

The WaterSense label makes it simple to find water-efficient products, new homes, and programs that meet EPA's criteria for efficiency and performance. WaterSense-labeled products and services are certified to use at least 20 percent less water, save energy, and perform as well as or better than regular models. California's agricultural success would not be possible without irrigation. In an average year, approximately 9.6 million acres are irrigated with roughly 34 million acre-feet of water; an amount that would cover 31 million football fields with 1 foot of water. Most of this irrigation water is used very efficiently.

WaterSense partners with manufacturers, retailers and distributors, homebuilders, irrigation professionals, and utilities to bring WaterSense to your community. Our partnerships encourage innovation in manufacturing and support sustainable jobs for American workers.

### **Our Mission**

We are transforming the marketplace for products and services that use water, and promoting a nationwide ethic of water efficiency to conserve water resources for future generations and reduce water and wastewater infrastructure costs.

### **Our Vision**

All Americans will understand the importance of water efficiency and take positive actions to reduce their water use - in their homes, outdoors, and at work.

### **Water Use Facts**

Water is a finite resource - even though about 70 percent of the Earth's surface is covered by water, less than 1 percent is available for human use. Despite the water supply and infrastructure challenges faced by many communities across the US, each American uses an average of 82 gallons of water each day at home. Water managers in at least 40 states expect local, statewide, or regional water shortages to occur over the next several years.



### **Every drop counts:**

- Bathrooms are the largest use of water in the home, using more than 50 percent of all indoor water.
- Approximately 5 to 10 percent of US homes have easy-to-fix leaks that drip away 90 gallons a day or more.
- Residential outdoor water use across the US accounts for nearly 8 billion gallons of water each day, mainly for landscape irrigation.
- On average, a urinal in a public place gets flushed 18 times per day.
- Heating water is typically the second largest use of energy in a home (after space heating and cooling).

### **Did you know?**

- Replacing showerheads with WaterSense- labeled models can save 4 gallons of water every time you take a shower?
- Replacing old, inefficient faucets and aerators with WaterSense-labeled models can save 700 gallons of water per year?
- Replacing a clock-based controller with a WaterSense labeled irrigation controller can save your home up to 15,000 gallons of water annually?
- WaterSense-labeled faucets or aerators that can be installed on existing bathroom faucets are about 30 percent more efficient than standard faucets while still providing sufficient flow?
- Homes that earn the WaterSense label feature WaterSense-labeled plumbing fixtures, efficient hot water delivery, smart landscape design, and many other features to ensure that the home will save water for years to come?



## **DWR's Innovative Underground Aquifer Mapping Project** **Reaches Major Milestone: Data Now Available for** **Entire Central Valley**

The Department of Water Resources (DWR) innovative Statewide Airborne Electromagnetic (AEM) Survey Project has now released AEM data for the entire Central Valley of California, making a major milestone for the program. Over 11,500 line-miles of AEM data were collected within the Central Valley between December 2021 and May 2022 using this helicopter-based technology that scans the earth's subsurface. The AEM data is published on a continual basis, and the most recent release of data from the Northern Sacramento Valley completes the data release for the entire Central Valley. This remarkable dataset provides a never-before-seen continuous view of the structure below the earth's surface in one of the most groundwater-dependent areas of the world.

The State is fast-tracking investments in the latest technology, like AEM, to ensure we are prepared for the weather extremes that are playing out in the new climate reality. AEM data is vital in providing local agencies and the State with a better understanding of the complex underground aquifer systems in California. This data is invaluable for identifying the most suitable locations to implement groundwater recharge projects that can capture water from extreme rain events like we have just seen, and store that water for use during dry periods.

As California adapts to a new normal of climate extremes, we recognize that local groundwater sustainability agencies are going to have to adjust their groundwater sustainability plans over time to incorporate effects of extended dry periods and intense rain events," said Paul Gosselin, Deputy Director of DWR's Sustainable Groundwater Management Office. "DWR provides technical support to local agencies, including this vital AEM data, to help them reach their sustainability goals."



On the left, a helicopter- transporting Airborne Electromagnetic Survey (AEM) survey equipment is seen at a media event held at the Volo County Airport on April 25, 2022. On the right, the on line AEM Data Viewer provides a quick and easy way to visualize AEM data on this statewide map application.

### **DWR's Statewide AEM Surveys**

As a part of the Statewide AEM Survey Project, DWR is collecting AEM data in all high and medium priority groundwater basins in California, where data collection is feasible. The goal of the project is to improve the understanding of large-scale aquifer structure and support local development of Groundwater Sustainability Plans (GSP) and implementation of the Sustainable Groundwater Management Act (SGMA).



*Benefits of the Statewide AEM Survey Project include:*

- Providing a standardized, statewide dataset that improves the understanding of groundwater aquifer structures and groundwater basin hydrogeology
- Helping local groundwater sustainability agencies (GSAs) further develop and refine hydrogeologic conceptual models and groundwater models that are required elements in GSPs
- Helping local agencies determine areas in their basins where additional, more targeted surveys may be beneficial to fill data gaps
- Helping local agencies determine the best places to locate groundwater recharge projects, and other projects that support long-term groundwater sustainability and water supply resilience
- Providing this data to local agencies saves them the time and expense needed to gather this data themselves, and they can dedicate those resources instead to local projects and management actions that will help them reach their sustainability goals.

The replenishment of depleted groundwater basins is a key action that GSAs are implementing to reach sustainability, and an essential part of California's long-term water resilience and drought mitigation efforts, as seen in Governor Gavin Newsom's strategy document, California's Water Supply Strategy, "Adapting to a Hotter, Drier Future," which was released last summer. Local agencies must be ready to capture significant rainfall and flood flows for groundwater recharge when rain events come. Data obtained from DWR's AEM survey program helps state and local agencies find the best places to put groundwater recharge projects where they will provide the most benefit, making project implementation efficient and effective.

DWR does this work in coordination with GSAs, and state and federal agencies -- getting input on areas of interest prior to finalizing survey flight lines. This ensures the data collected is multi-benefit and supports a wide range of groundwater and geology related project types. DWR also engages with GSAs, practitioners, academia, and technical experts from across the U.S. and internationally through a Technical Advisory Committee (TAC). Engagement with the TAC ensures that the project is consistent with state-of-the-science practices and that the project goals meet GSA and practitioner needs.

The AEM data is made publicly accessible and can be viewed on DWR's AEM Data Viewer. This online, GIS-based tool displays AEM data in a three-dimensional space and allows the user to interact with the data by zooming and viewing the data from various angles. The tool can be accessed on a computer or mobile phone and does not require data to be downloaded or the use of specialized software. AEM data, and supporting data like newly digitized well lithology logs and geophysical logs (e-logs), can also be accessed on the California Natural Resources Agency Open Data Platform.



## Agricultural Water Use Efficiency

California is one of the most productive agricultural regions in the world, and is the major producer of many nuts, fruits, and vegetables. In fact, California is the only producer of 13 commodities and is a top producer of more than 74 different commodities in the U.S. The state exports a huge quantity of agricultural products, bringing more than \$20 billion into California's economy.

California's agricultural success would not be possible without irrigation. In an average year, approximately 9.6 million acres are irrigated with roughly 34 million acre-feet of water; an amount that would cover 31 million football fields with 1 foot of water. Most of this irrigation water is used very efficiently.



A view of water-efficient drip irrigation. DWR/2016

What do we mean by "used efficiently?" This means that water that isn't used on one farm is used on another, so that the same amount of water can be used to produce more crops. Also, this water can be used to help recharge groundwater.

Yet, considering that agriculture accounts for approximately 80 percent of all the water used in California, even small improvements in agricultural water use efficiency can be significant.

We work with the agricultural community and other stakeholders to find solutions for improving agricultural water-use efficiency and to meet State agricultural water management and measurement requirements.



## Groundwater Recharge - Capturing Water from Storms to Replenish Stressed Groundwater Basins

The wet winter storms in January 2023 have brought a lot of water that has the potential to be stored underground to replenish groundwater basins and help mitigate prolonged drought effects. Extended and extreme periods of drought driven by climate change have placed a high demand on groundwater resources, and the last three consecutive years of drought have led to declining groundwater levels throughout the state. California's agricultural success would not be possible without irrigation. In an average year, approximately 9.6 million acres are irrigated with roughly 34 million acre-feet of water; an amount that would cover 31 million football fields with 1 foot of water. Most of this irrigation water is used very efficiently.

Groundwater is a critical component of California's water storage, accounting for up to 60 percent of the state's total water supply during dry conditions. During the recent series of storms across California, groundwater recharge is taking place naturally where water seeps into the ground, greatly benefiting our unseen aquifers.

Groundwater is heavily relied upon by communities, agriculture and the environment during dry years when there is less precipitation, while during normal and wet years, groundwater basins are replenished through groundwater recharge.



Standing water is seen at this groundwater recharge Flood MAR site in the Dunnigan area of Yolo County. Photo taken January 1.a. 2023.

The state is committed to expediting groundwater recharge to maximize the capture of stormwater and the potential of the natural underground water storage capacity. Groundwater basins have the ability to hold 8 to 12 times more water than the state's surface water storage and reservoirs. This is a key action in the Governor's "Water Supply Strategy: Adapting to a Hotter, Drier Future" that was released in August 2022, outlining the necessary strategies to secure a more reliable water supply in the face of aridification and climate change.



Groundwater recharge can occur in two ways - through natural percolation of water into the land surface, which is occurring during these storms, or by diverting and conveying water to specific areas through managed recharge projects. Managed projects can capture water in rivers and streams at higher flows and move that water to various recharge facilities, such as open or agricultural lands to spread out and percolate into the ground, or specially designed percolation ponds. Groundwater Sustainability Agencies (GSA) throughout the state are planning a variety of groundwater recharge projects in their efforts to meet their long-term sustainability goals under the Sustainable Groundwater Management Act.

The process to divert and capture excess water for groundwater recharge requires planning, permits, infrastructure, and an understanding of the aquifer, underlying geology, and soil properties. These projects can provide multiple benefits including improving long-term groundwater sustainability, supporting environmental benefits, and capturing excess water during flood season to prepare for prolonged drought periods.

These projects need to be expedited and DWR is doing just that, in coordination with the State Water Resources Control Board (State Board), by conducting a pilot program to streamline regulatory approaches to accelerate groundwater recharge. In the first pilot study in Merced County, with the Merced Irrigation District and the Merced Irrigation-Urban GSA, DWR coordinated with the State Board to issue a temporary permit for the local agencies to coordinate the diversion of high flows from Mariposa Creek and store the water underground for later irrigation use. The State Board issued this temporary permit on January 6, in consultation with the California Department of Fish and Wildlife, who work to ensure environmental considerations are met. This Pilot Study is providing insight to the agencies to support further streamlining of the permitting process.

### **State Support For Local Groundwater Recharge Projects**

The State is committed to increasing groundwater replenishment by 500,000 acre-feet of potential recharge capacity. DWR is investing \$1.2 million in Prop. 68 funding to conduct helicopter surveys -called aerial electromagnetic (AEM) surveys - to scan the earth's surface, like an MRI, to understand where the most suitable locations exist for groundwater recharge. All of the data and analyses from the AEM surveys are made publicly available, especially for local groundwater sustainability agencies who have proposed more than 340 groundwater recharge projects. DWR oversees local groundwater agencies in developing groundwater sustainability plans and carrying out projects, such as groundwater recharge, over the next two decades to meet the requirements of the Sustainable Groundwater Management Act, which is to achieve local groundwater basin sustainability goals in 20 years.

DWR has already begun advancing these local projects through financial assistance. In 2021, and 2022, DWR awarded \$68 million to 42 groundwater recharge projects that provide nearly 1.1.7,000 acre-feet of potential recharge capacity. DWR will award additional grants in 2023 based on available funding. So far, applications for this funding include 52 proposed groundwater recharge projects, totaling \$211 million in cost. These projects, once vetted, permitted, and constructed, will increase the potential capacity of getting more water underground.





## Conservation Tips

Water is a precious and limited resource, especially in drought-prone California where the next dry period could be right around the corner. As a result, water conservation and the efficient use of California's water supply are major priorities for the State.

In coordination with the Association of California Water Agencies, we organized the Save Our Water program to help Californians learn ways to save water at home to reduce the effects of drought. Even the simplest changes to daily routines can have a significant impact. By making conservation a way of life in California, we save water, minimize water waste, rebuild our underground aquifers, prepare for the uncertainties of climate change, and minimize the harmful effects of drought.

We encourage all Californians to embrace wise water use as a daily habit, whether we are experiencing a year of heavy or meager rain. Start by following the water conservation tips below, and visit [Save Our Water](#) and your local water agency for more tips, tools, and incentives - including rebates. You can also view photos of our past [California State Fair](#) water-wise garden exhibits for ideas on how to create your own low-water use landscape.



Mulch and micro irrigation help to reduce watering. effects of drought. DWR/2014.

### *Indoor Conservation Tips*

- Fix leaks, including leaky toilets
- Install high-efficiency toilets, aerators on bathroom faucets & water-efficient shower heads
- Take shorter (5 minute) showers
- Track your water bill and meter to curtail water use
- Turn off water when brushing teeth or shaving
- Use dishwashers and washing machines with full loads only

### *Outdoor Conservation Tips*

- Plant drought-tolerant/resistant plants and trees
- Recycle indoor water to use on plants
- Refrain from watering your home landscape when it rains
- Replace your grass/turf with water-wise plants
- Use a broom to clean driveways, patios, and sidewalks instead of water from a hose
- Water your outdoor landscape earlier in the day when temperatures are cooler



# Around the House

Learn simple habits to help reduce water use inside your home



## Fill Bathtub Halfway or Less

Filling up your bathtub halfway or less can save 17-25 gallons of water per person every bath.



## Fix Leaks

Fixing leaks inside and outside the home can save 27 to 90 gallons of water each day.



## Install Aerators

Installing aerators can save .7 gallons per minute.



## Install High-Efficiency Toilets

Installing high-efficiency toilets can save 6-35 gallons per day.



## Recycle Indoor Water and Irrigate Your Garden

Recycling indoor water to use outdoors can cut water use by 30%.



## Take 5-minute Showers

Keeping showers under 5 minutes can save 12.5 gallons per shower when using a water-efficient showerhead.



## Turn Off Water When Brushing Teeth, Shaving

By turning off the water when brushing teeth or shaving you can save 8 gallons of water per person per day.



## Wash Full Loads of Clothes and Dishes

Washer: saves 15-45 gallons per load.  
Dishwasher: saves 5-15 gallons per load.

# Around the Yard

Learn simple habits to help reduce water use outside your home



## Use Water-wise Plants

Check with your local water agency on the best plants for your area. It is best to use water-wise, California-native plants when possible.



## Install Drip Irrigation & Add a Smart Controller

Installing a drip irrigation system and a smart controller can save 15 gallons each time you water.



## Reimagine Your Yard

Feed your vegetables and fruits water first because they feed you! Water-wise plants and shade trees use little or no water once established. Thirsty plants such as lawn and container plants are the lowest priority.



## Use a Broom to Clean Outdoor Areas

Using a broom to clean outdoor areas can save 6 gallons every minute.



## Use Drought-resistant Trees, Plants

Using drought-resistant plants and trees can save 30-60 gallons per 1000 sq. ft. each time.



## Set Mower Blades to 3"

Setting mower blades to three inches encourages deeper roots and saves 16-50 gallons per day.



## Adjust Sprinkler Heads & Fix Leaks

Saves 12-15 gallons each time you water and a leak about as small as the tip of a ballpoint pen can waste about 6,300 gallons of water per month!

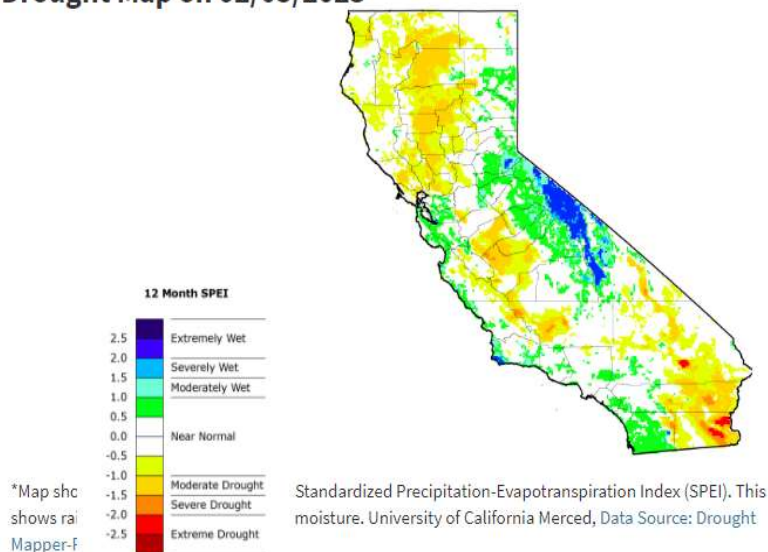


## Use Mulch

Using mulch can save 20-30 gallons of water per 1000 sq. ft. each time you water.

## California is in drought: Here are the conditions

### Drought Map on 02/05/2023



Climate change has fundamentally altered our state's hydrologic system – intensifying extreme weather and leading to longer, drier periods. We are entering a fourth year of drought and need to use less water.

We ended Water Year 2022 on Sept. 30 following a year featuring continued extreme drought with historically dry months and a record-shattering heatwave.

The 2022 Water Year ended with total annual average statewide precipitation at **17.9"** and 76% of percent of historical average. Statewide reservoir storage ended the water year at **14.70** Million Acre Feet and 69% of historical average.

A growing body of evidence is starting to show that our current drought is an extension of the 2012-2016 drought, interrupted by just a few wet years.

[Understanding Our Drought](#)

[Hydrology Update](#)

### Do we have enough water stored?

In drier seasons, we rely on other sources of water. These include reservoirs and melted snowpack. But climate change is causing extreme weather and changing the amount of rain and snow we get, impacting how we are able to capture and distribute water. Reservoir levels, which receive water from melting snowpack, have been impaired the last three years by a declining snowpack.

Californians must adapt to this new normal and adopt conservation as a way of life to make the most out of our limited water supplies across the state.

### Major reservoir levels

Reservoirs get us through the dry months



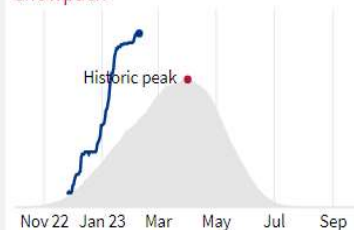
Updated daily

[More about reservoirs](#)

### Statewide snowpack levels

Snow melt feeds our reservoirs & rivers

**136%** of average peak snowpack



Updated daily

[More about snowpack levels](#)

### What about our groundwater supply?

Groundwater is a vital resource in California and accounts for almost 60 percent of our State's water supply in drought years.

Three years of drought in California are putting a strain on groundwater wells. The data on the right show the number of monitoring wells that have water levels below average and the number of unresolved well outages across the state reported to DWR. Visit [California Groundwater Live](#) for more real-time well data.

Monitoring Wells  
Below Normal Level

**64%**

Dry Wells Reported - Year to Date

**59**





# Water Tank Program



**The ongoing drought** has left many homes with dry or poor water quality wells. In response, the Department of Water Resources has developed a new drought relief grant program with funding from the Budget Act of 2022. Implemented under the Small Community Drought Relief Program, DWR's Tank Program will provide tanks and hauled water to communities that are in immediate need of water supplies.

## Eligible Applicants Include:

- ☉ Public agencies
- ☉ Public utilities
- ☉ Special districts
- ☉ Colleges and universities

- ☉ Mutual water companies
- ☉ Nonprofit organizations – 501(c)(3)
- ☉ Federally recognized Tribes
- ☉ State Tribes listed on the Native America Heritage Commission's California Tribunal Consultation List

DWR will provide the tank, cover the cost of tank delivery and installation, water purchase (if applicable), water hauling, decommissioning of tank, and grant administration.

For more information, contact:

**[SmallCommunityDrought@water.ca.gov](mailto:SmallCommunityDrought@water.ca.gov)**  
or **Alena Misaghi** at **(916)803-9251**







# Water Tank Program

## Water Tank Installation Process



1

Tanks that are pre-purchased by DWR will be ready to be delivered to homeowners who have reported their dry wells.



2

The Water Tank Program includes funding for the tanks to be delivered and installed on the resident's property. Tanks will be 2,500 gallons and will be installed once the homeowner contacts the implementing agency.



3

The tank program includes funding for purchase and installation of a small pump and plumbing to connect the tanks to the home's plumbing so that residents can have access to water during the current drought.



4

Once the tanks are installed, the Tank Program will provide funding for hauled water. Water haulers will come and fill up the resident's tanks to ensure basic health and sanitation needs are met.

*in Partnership with*



**Cal OES**  
GOVERNOR'S OFFICE  
OF EMERGENCY SERVICES

**DGS**  
CALIFORNIA DEPARTMENT OF  
GENERAL SERVICES



**California Department of Water Resources**

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