

My New Cal Water Smart Water Meter (In 3 Chapters)

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Chap 1. Background

During the major drought circa 2013-14, the Town Council formed the Portola Valley Water Conservation Committee to find ways to conserve a precious resource and save residents from large bills due to lack of data. Of the several ideas floated, one emerged that galvanized the group: the installation of smart water meters that would help Portola Valley residents track their water usage and detect wasteful and expensive leaks. Easier said than done.

For eight long *years* (not months!), our former Assistant to the Town Manager, Brandi de Garreaux, and former Councilmember, Maryann Moise Derwin, worked with Cal Water staff, the Public Advocates Office (formerly the Office of Rate Payer Advocates) and the California Public Utilities Commission (CPUC) to advocate for approval of Cal Water's Advanced Metering Infrastructure (AMI) project. The Town participated as a "party" in the Cal Water's Rate Case and in 2018, Brandi testified on behalf of the Town before the CPUC. The CPUC finally gave approval of the Cal Water Infrastructure Improvement Plan, which includes the AMI project, on March 18, 2021.

Kudos to the dogged determination of Brandi de Garreaux, Maryann Moise Derwin, and all past and present members of the Town of Portola Valley Ad Hoc Water Conservation Committee/Water Conservation Committee/Sustainability and Environmental Resources Committee which has evolved into the current PV Sustainability Committee. Well Done!

Chap. 2. Meter installations

Technical and supply chain issues plus the difficulty in finding and hiring personnel caused a one-year delay for Cal Water, but the first meter was installed in May 2022. The current replacement plan is based on meter size and meter-reading routes for the most efficient use of equipment and personnel. Currently, Cal Water has completed about 34% of the conversions planned for Portola Valley. Due to the

personnel and supply chain issues, they are not able to provide a timeline for completion.

I live in Westridge, and my new water meter was installed on June 22, 2023. At 2:30 PM that day, I met Dan, the Cal Water installer, who handed me two items: a door hanger card entitled “New Water Meter Installed” and an 8x10 sheet entitled “Steps to Link an EyeOnWater Account.”

The exchange of the old analog meter for the new digital AMI meter took 45 minutes. Because my meter is at the bottom of a 400-foot driveway and my house sits 50 feet higher than the meter box, air was introduced into the main line during the install. Dan and I hiked to the highest hose bib on the property and bled the air from the water line after the installation.

I’m glad I watched the installation to understand how the process worked. I also contacted Cal Water to determine how they handle a situation if, for example, the homeowner is running a washing machine when an install happens. They responded, “As our employees prepare the meter box before the changeover, they will notify the customer that they will be changing the meter and need to turn the water off. If they see movement on the meter dial, which indicates water is being used, they will attempt to make direct contact with the customer. If contact cannot be made, they will prep the meter box, move onto the next meter, and come back.” Dan and another installer completed the exchange of all 6 homes on my street that afternoon.

Chap. 3. EyeOnWater and Leak Alerts

I set up my online EyeOnWater.com account by following the instructions on the sheet provided by the installer. Note that it may take a day or two after the AMI meter installation to have your online account set up by Cal Water. The EyeOnWater page is very detailed and user-friendly. Moreover, there is a **EyeOnWater Utility Customer Explainer Video** that walks you through the setup: <https://www.youtube.com/watch?v=RSW5FcB1nM0>. I strongly recommend watching this video.

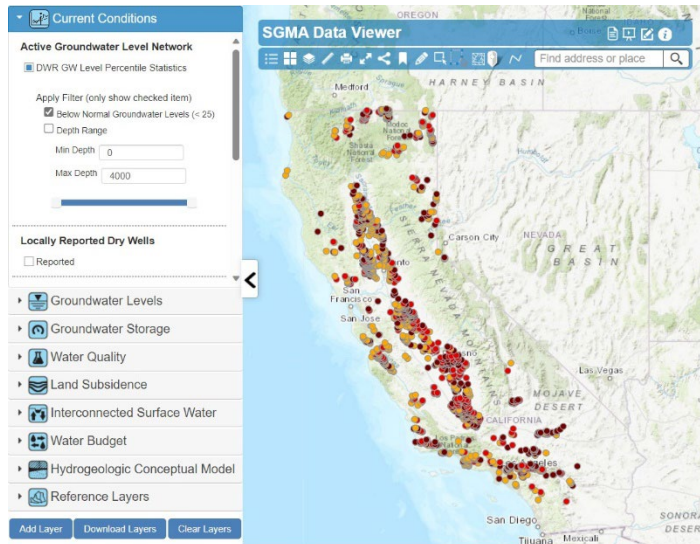
It's important to set alerts for leak detection so you get an email or text message if you have significant water usage. You can choose continuous or intermittent flow volume. Initially I set mine at 1 gal/hr, intermittent flow as recommended. However, I discovered this was not the best way to monitor for leaks with my usage pattern.

According to Cal Water, continuous flow is going to alert you to things like a hose being left on or a toilet flapper not working. Intermittent is if you are expecting a larger spike, like trying to catch a malfunction in your irrigation system. Most people set up continuous flow. My Alerts are now set to continuous flow with a minimum flow of 0.5 gal/hr and a maximum flow of 5 gal/hr. I check my usage every morning. The data can be very granular (15 min reads) or broad strokes (yearly comparisons). From the graphical data, I can identify my irrigation days and when I do laundry.

During the first week my meter was in operation, I received daily Leak Detection Alerts for 5 consecutive days. Most likely they were triggered by the residual air introduced into the system during the installation. To prevent similar issues, closing the main water valve at the house before the installation would have been a good strategy. I contacted Cal Water Service's Regional Customer Center (650) 558-7827 x77827 and the problem was resolved by reconfiguring the online account and by the return visit by Dan, the installer, who bled more air out of the system and confirmed it was operating properly.

The usage data is uploaded approximately every six hours on weekdays and once a day on weekends. Any leak alerts are posted to your email or phone at the end of a 24-hour period. This is a great improvement over the original meters where you only found out you had a leak at the end of your billing month, when your bill showed a large increase, or you happened to notice a leak as it was happening.

Despite having a good amount of rain this past winter and most of California exiting drought conditions, our ground water table and soil moisture levels are still very low, necessitating continued conservation of water.



Groundwater levels (red and yellow indicate 0-25% of normal levels)

California Natural Resources Agency (tinyurl.com/cnragdlevels) and California Department of Water Resources (tinyurl.com/cagdwater)

Much of Texas and the South are also in extreme and exceptional drought as global warming continues to change weather patterns across the planet. It's very likely California will again suffer droughts in the near future.

The EPA estimates that household leaks can waste nearly 1 trillion gallons of water annually nationwide, equivalent to 10,000 gallons per average household per year. Potable water is still a precious resource that we need to do as much as possible to protect. Identifying and repairing leaks is an excellent way to conserve water. Thanks to Cal Water's new smart AMI Meters, it's now easier to be aware of your water usage and any leaks. The EPA has a handy guide with suggestions to help locate the leaks, so you don't waste any more water. <https://www.epa.gov/watersense/fix-leak-week>.

You might also be interested in Cal Water's Smart Landscape Tune-Up Program, which helps eligible customers save water outdoors at no charge. You must have an active, functional irrigation system to be eligible for this program. <https://www.calwater.com/conservation/tuneup/>