



UNDERSTANDING THE YOLO SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

JANUARY 2025



What is SGMA?

The Sustainable Groundwater Management Act (SGMA) is California's first effort to regulate groundwater. Groundwater is water stored in underground aquifers, pumped via wells. Depending on the snow and rain available for surface water (lakes, streams, or reservoirs), groundwater accounts for 40-60% of our total annual water usage in California. During periods of drought, California especially depends on groundwater for its water supply.

Groundwater and surface water are interconnected but are regulated separately. Surface water has been regulated by the state since 1914, but not groundwater. In 2014, California was in a multi-year drought. As wells went dry and portions of ground started to sink, it became clear that in many parts of the state, groundwater was being used faster than it could be replenished. In response, SGMA was passed to ensure sustainable groundwater usage. Each groundwater basin that has been identified as "high" or "medium" priority must implement a basin-specific Groundwater Sustainability Plan.



Cover: Photograph of Saul Yañez, Yañez Farms (©Monika Kost)

Above: Photograph of Full Belly Farm (©Judith Redmond)

So what does this mean for my farm or ranch?

On average, agriculture uses 84% of the groundwater pumped in Yolo County. We know that growing food requires water, and still farmers will need to further conserve the amount of groundwater used during dry periods.

Be sure to check for leaks in your irrigation systems and reach out to UC Cooperative Extension for irrigation advice, particularly to make sure you are not overwatering. The Small Farms Advisor for Yolo, Sacramento & Solano Counties is Margaret Lloyd: mglloyd@ucanr.edu or 530-564-8642.

It's important to have a sense of your own water usage. Consider soil-building practices (such as compost, cover crops) that support soil water storage.

Report any dry agricultural or domestic well to the Yolo Subbasin Groundwater Agency (YSGA) so they are alerted to these issues.

Plan your crops with this information in mind. If you're considering tree crops, ensure there is sufficient water in both dry and wet years for your crop, and preferably plant them in areas with surface water access.

With the Underrepresented Communities Technical Assistance Program, CAFF can connect small farmers with free hydrologic services from Dudek Consulting and legal support from the UC Davis Water Justice Law Clinic. Contact us to check eligibility!

Almost all of Yolo County lies over the Yolo Subbasin. If you aren't sure, this GSA Map Viewer (<https://rebrand.ly/GSA-map-viewer>) can help you identify your GSA and subbasin.



How does SGMA work in Yolo County?

In Yolo County, planning and implementing groundwater management activities is the responsibility of the Yolo Subbasin Groundwater Agency (YSGA) and its 26 members (irrigation districts, city governments, county government, tribal government, environmental representative, and others). YSGA has the authority to allocate groundwater pumping, space wells, and levy assessments on landowners or pumpers, among other actions.

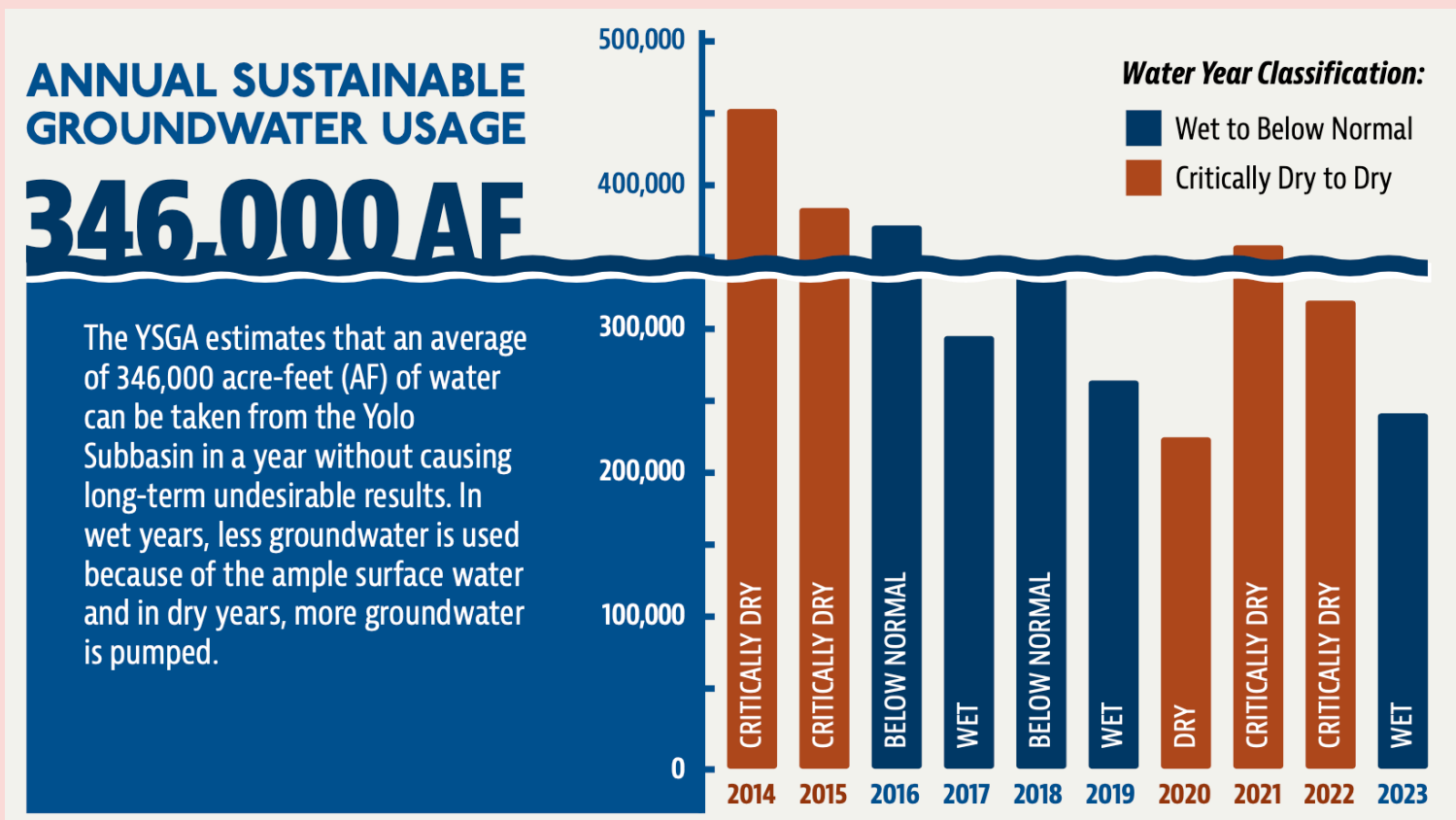
The approach of SGMA is to maintain local control over groundwater decisions. The Department of Water Resources (DWR) reviews the plans created by the YSGA. The State Water Resources Control Board acts as a backstop, stepping in to take control if local agencies are unable or unwilling to sustainably manage their groundwater basins.

How does Yolo define sustainable groundwater use?

YSGA estimates the sustainable amount of groundwater use is 346,000 acre-feet per year. As shown in *Figure 1*, Yolo has used less than this amount in wet years, but more than this amount in dry years. This indicates that long-term sustainable groundwater usage is possible in the county, if there is sufficient planning, storage, and water conservation.

YSGA does not meter or allocate how much water each farm can use. Instead, YGSA sets “minimum

thresholds,” which are levels the aquifer must stay above in order to maintain sustainability. It’s a way to define how low the aquifer’s water levels can go before serious problems emerge. If the water level drops below these thresholds, more severe action would need to be taken. This threshold varies around the county, but it ranges from 8 to 113 feet below ground depending on the location. You can check the groundwater level in your area on [YSGA’s online map \(https://sgma.yologroundwater.org\)](https://sgma.yologroundwater.org).



↑ Figure 1: Illustration by Dudek.

What does YGSA have planned for the future?

Groundwater recharge efforts, including putting excess water from storms onto land so that it can seep underground and help refill the aquifer.

Ensuring drinking water for domestic wells that go dry through a mitigation program.

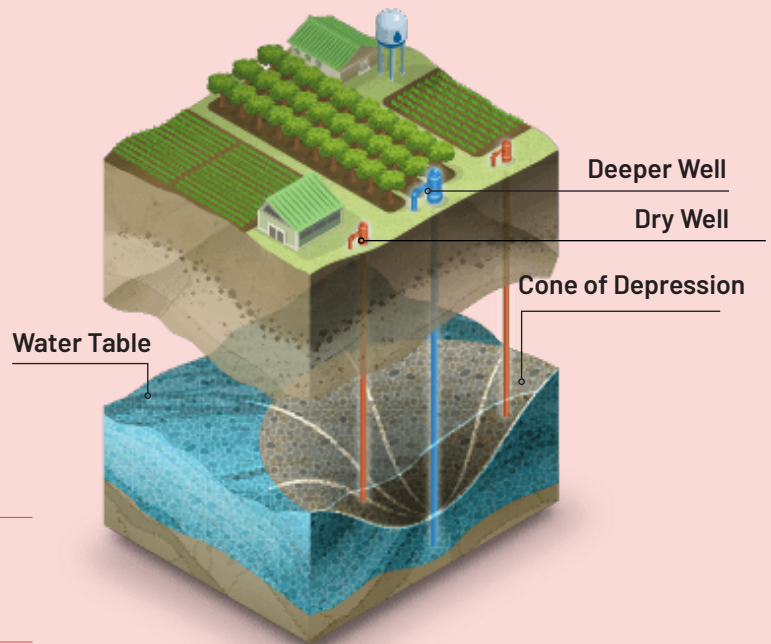
No metering or measuring of farmers' wells is currently planned.

No allocations of the amount of water that can be pumped are currently planned.

What wells have gone dry?

During the 2021-2022 drought, 54 domestic wells were reported as dry. In addition to the domestic wells, agricultural wells in some areas, especially the Hungry Hollow region, went dry or could be vulnerable to going dry in the future. We don't know the magnitude of this problem because many farmers and homeowners do not report their dry wells.

While overdraft can lead to these dry wells, loss of groundwater can also be caused by new neighboring wells drawing from the same aquifer. This is called "well interference," when a new (often deeper) well draws water that used to go to a different well (Figure 2).



↑ Figure 2: Illustration by Dudek.

WELL INTERFERENCE

Wells go dry or experience problems when groundwater levels decline. Another cause is when deep agricultural wells create a cone of depression that can impact shallower neighboring wells.

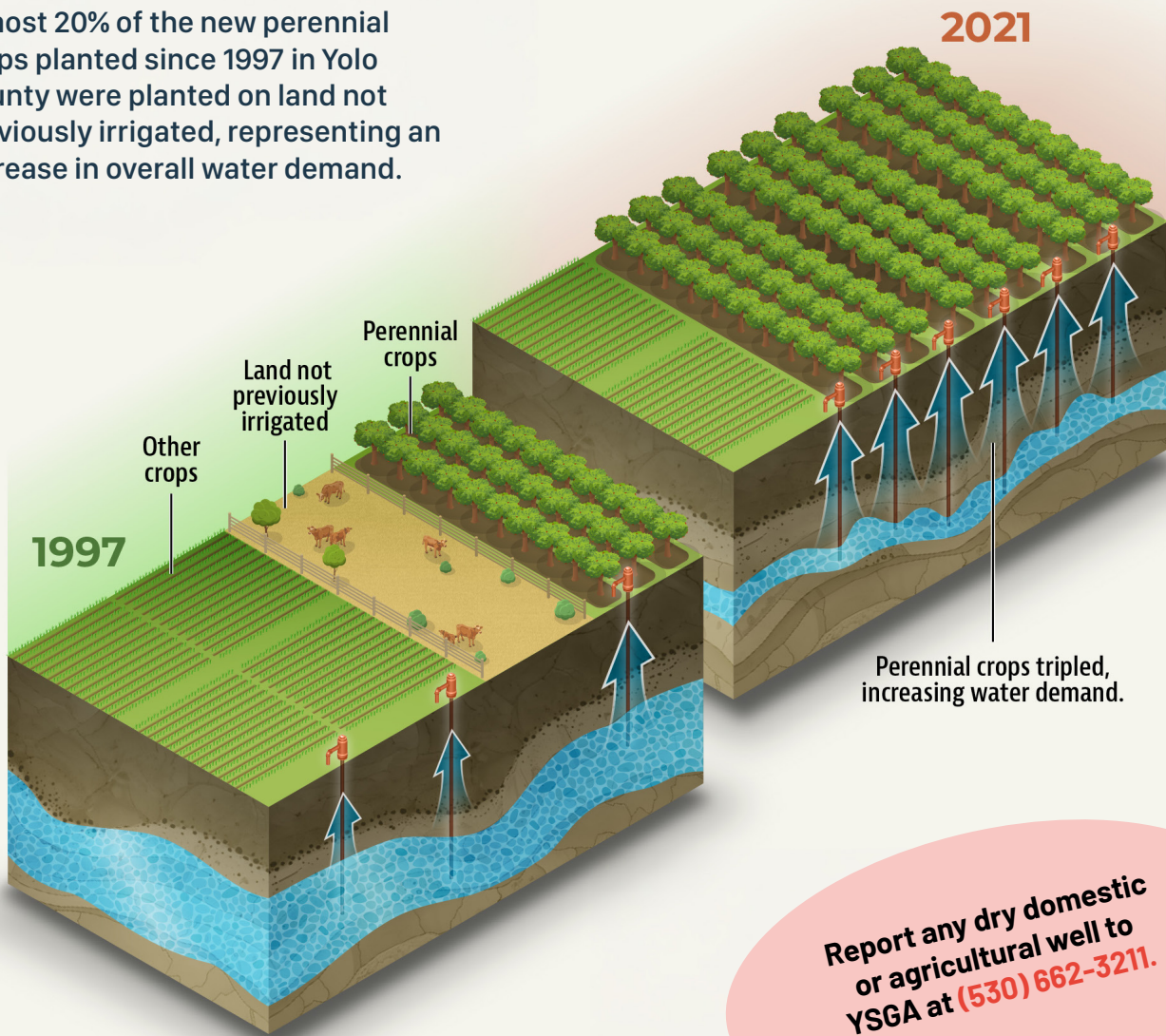
The significant increase in perennial crop plantings since 1997 has exacerbated this problem, because orchards cannot be fallowed when water is scarce and many of the new orchards were planted on land that was previously unirrigated and had no access to surface water (Figure 3). This has resulted in additional overall demand on groundwater.

RISING WATER DEMAND WITH INCREASED PERENNIAL CROP PLANTING

The number of acres planted to perennial crops in Yolo County nearly tripled between 1997 and 2021. Because perennial crops require high initial investments and cannot be fallowed, the increase in orchard plantings has resulted in a “hardening” of demand for groundwater.



Almost 20% of the new perennial crops planted since 1997 in Yolo County were planted on land not previously irrigated, representing an increase in overall water demand.



Report any dry domestic or agricultural well to YSGA at (530) 662-3211.

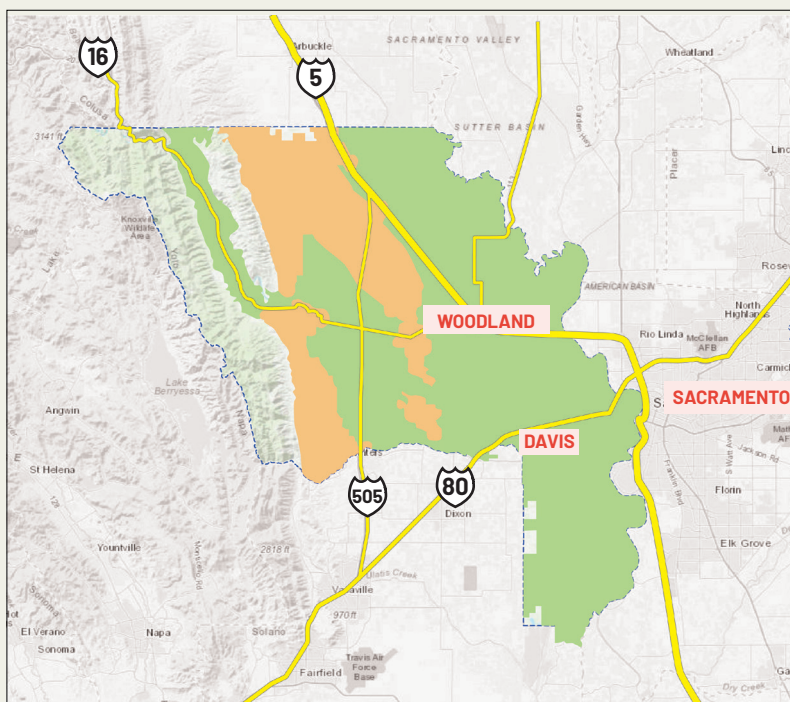
↑ Figure 3: Illustration by Dudek.

Focus areas

Specific requirements must be met before permits for new wells, or for improvements to existing wells, will be granted in the Focus Areas. This is necessary to protect existing farm activities.

Water Year Classification

- Wet to Below Normal
- Critically Dry to Dry



↑ Figure 4: Focus area map

How does Yolo County handle new wells?

To dig a new well in Yolo, you have to (1) comply with the new spacing requirements and (2) get verification from YSGA that the well is consistent with the Yolo Groundwater Sustainability Plan. The spacing requirements were created to make sure that any new wells won't negatively impact

the existing wells in that area. Certain proposed wells, if they are located within Focus Areas (Figure 4) where groundwater issues have been identified, will have to undergo additional analysis and farmers will have to take surface water if it is available.

What happens if we use too much groundwater?

Declining groundwater levels

Wells go dry as the water level of an aquifer drops.

Diminished groundwater storage capacity

An aquifer cannot be recharged as much as before. Long term water level decline can lead to permanent reduction of aquifer pore space that stores water.

Land subsidence

As water is pumped, the surface of the earth above it can sink, known as subsidence. Sinking land can break expensive infrastructure like roads and canals.

Seawater intrusion

This pollutes groundwater and is an issue for coastal communities.

Impacted surface water systems

Groundwater cannot sufficiently replenish streams, creeks, rivers, and wetlands that support wildlife and critical habitat.

Degraded water quality

As water level declines, water quality may deteriorate. If you drill down far enough in the Sacramento Valley you may hit salt water, and monitoring indicates that this has occurred in parts of Butte County, resulting in increased salinity of pumped water.



Photograph of Hope Sippola, Fiery Ginger Farm (©Monika Kost)

How do I get more information?

Stay connected with our small farmer outreach efforts or send questions, thoughts, concerns to CAFF by emailing SGMA@caff.org or calling **559-424-3667**. CAFF can also connect small farmers with legal advice and technical hydrological services with our partners in this project, UC Davis Water Justice Law Clinic and Dudek.

Connect with the Yolo Subbasin Groundwater Agency (YSGA) by attending their public meetings, joining an Advisory Committee, or reviewing their projects on their website yologroundwater.org or calling **530-662-3211**.

Check out the groundwater in your area by viewing the monitoring well closest to you: sgma.yologroundwater.org

Resources



Community Alliance with Family Farmers
SGMA@caff.org
559-424-3667



Yolo Subbasin Groundwater Agency
info@yolosga.org
530-662-3211



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