



UC Small Farms Network
University of California
Agriculture & Natural Resources



Groundwater on your small-scale farm

Understanding the Sustainable
Groundwater Management Act

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Understanding Groundwater

Groundwater refers to water below the land surface. Groundwater is a part of the natural water cycle; some of the rainfall that lands on the ground surface moves downward into the subsurface through soils and rocks. With gradual movement, water fills up the openings in soil and rocks creating a saturated zone. Groundwater makes up the majority of liquid freshwater supply on earth. California has 515 groundwater basins and subbasins that contribute approximately 41 percent toward the state's total water supply and up to 60 percent of the statewide annual supply during dry years.

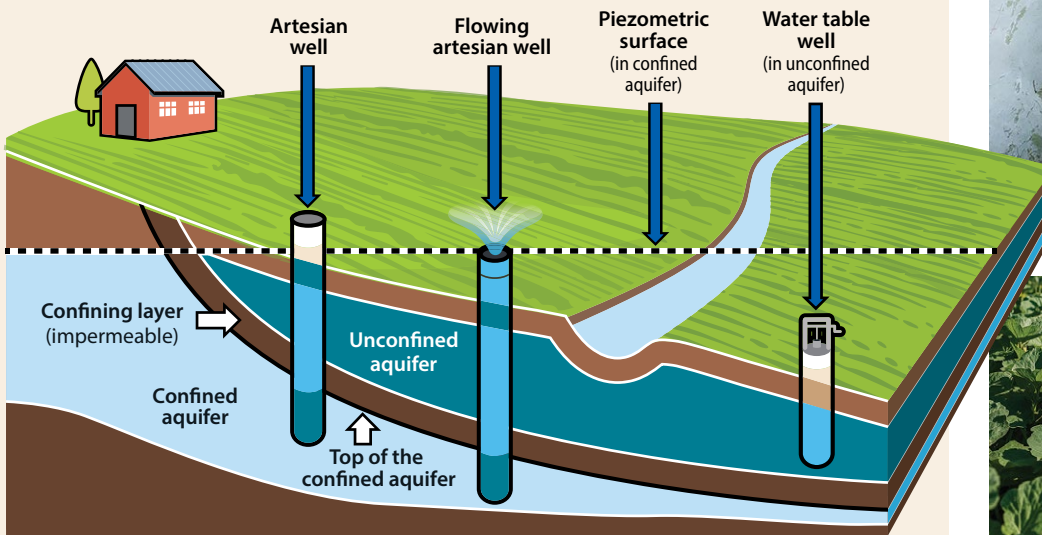


Figure 1: Groundwater flow



Groundwater Basin vs. Groundwater Subbasin

A basin generally refers to an aquifer or stacked series of aquifers with reasonably well-defined boundaries in a lateral direction. While a subbasin refers to any subdivision of a basin based on geologic boundaries.

California's Sustainable Groundwater Management Act (SGMA)

SGMA (commonly pronounced "sigma") is a 2014 groundwater management regulation signed into law by Governor Jerry Brown to protect and manage groundwater resources. The law requires high-and medium-priority subbasins to achieve sustainability by 2040 and 2042, respectively. SGMA is the first legislative act in California to protect groundwater resources.

Groundwater Sustainability Agencies (GSAs)

The statute requires local management of groundwater resources through the formation of groundwater sustainability agencies in high-and medium-priority basins. GSAs manage a specific portion of a subbasin implementing long-term plans for sustainability. GSAs are often made up of the county, city, water district, and irrigation districts in most regions.

Groundwater Sustainability Plans (GSPs)

Groundwater sustainability plans are long-term management strategies unique to each region. The GSPs are put together by GSAs with a clear description of groundwater conditions in a subbasin and innovative programs and actions to achieve groundwater sustainability within 20 years.



SGMA Sustainability Indicators

The law seeks to avoid these six undesirable results:



Agencies regulating SGMA

- **The California Department of Water Resources** (DWR) is a department in the California Natural Resources Agency. The department is responsible for providing oversight for SGMA implementation across the state. DWR reviews plans submitted by GSAs, provides guidance resources, facilitation support, translation support, and financial assistance to achieve the goals of SGMA.
- **The State Water Resources Control Board** is a board within the California Environmental Protection Agency that serves as the backstop agency for SGMA implementation. The State Water Board will temporarily intervene in groundwater management of a basin when the groundwater sustainability plan is found inadequate by the Department of Water Resources and referred to the state in a process called state intervention which may include designating a subbasin as probationary.

Groundwater Wells in the SGMA Implementation

- Report dry wells to the DWR dry well reporting tool. <https://mydrywell.water.ca.gov/report/> (not mandatory).
- Contact your local GSA to understand groundwater conditions before drilling new well. You can find information on your GSA by logging into the DWR's SGMA portal. <https://sgma.water.ca.gov/portal/#portal>

Resources

California Department of Water Resources

Underrepresented Communities, California Tribes, and Small Farmers Groundwater Technical Assistance (URCTA)

<https://water.ca.gov/urctaprogram>

University of California Small Farms Network

<https://ucanr.edu/statewide-program/uc-anr-small-farms-network>

References

What is groundwater? United States

Geological Survey: <https://www.usgs.gov/special-topics/water-science-school/science/groundwater-what-groundwater>

Groundwater, California Department of Water Resources: <https://water.ca.gov/water-basics/groundwater>

The Sustainable Groundwater Management Act, State Water Resources Control Board: https://www.waterboards.ca.gov/water_issues/programs/sgma/about_sgma.html

California's Groundwater Update 2020 (Bulletin 118), California Department of Water Resources: <https://data.cnra.ca.gov/dataset/california-s-groundwater-bulletin-118-archive>

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For more information on URCTA program:

<https://water.ca.gov/urctaprogram>
urcta@water.ca.gov

Contact UC SGMA Community Educator for more information on groundwater management in Fresno and Madera Counties.

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