



GROUNDWATER LEVELS

What Do They Tell Us?

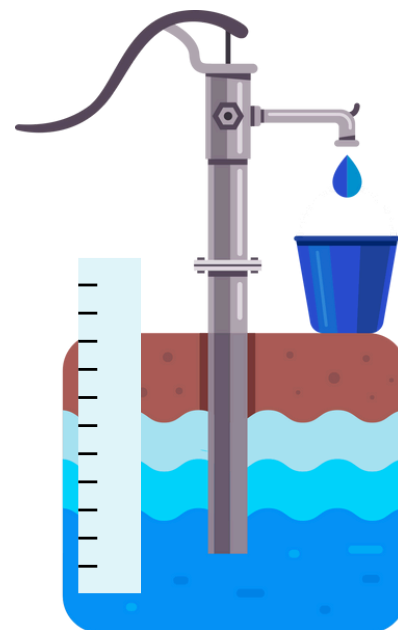
Groundwater, stored in underground aquifers, is the primary source of water supply for communities and agriculture. The Vina Groundwater Sustainability Plan (GSP) sustainability goal is to ensure that groundwater is managed to provide a water supply of adequate quantity and quality to support rural areas and communities, the agricultural economic base of the region, and environmental uses now and in the future. Groundwater levels are one of the primary indicators used to demonstrate groundwater sustainability.

What Are Groundwater Levels, And Why Do They Matter To You?

Groundwater level is the depth from the ground surface down to the water in a well, measured in feet. Shallower depths generally mean easier access and lower pumping costs. When the levels are stable, wells have access. When levels drop too low, water becomes harder to access, especially for those with shallow wells.

Groundwater levels are monitored to understand how conditions change over time. Maintaining sustainable groundwater levels helps:

- Prevent domestic wells from going dry
- Keep groundwater affordable to pump
- Support water for agriculture
- Maintain water for plants and trees with deep roots
- Support river and streamflows



How Groundwater Levels Are Measured

Groundwater levels are regularly tracked using monitoring wells located throughout the Vina Subbasin. Levels rise and fall each year with seasons and wet/dry year cycles. Groundwater levels are monitored for multiple years to understand trends. Measurements are taken by agency partners, Butte County, and the California Department of Water Resources, and are uploaded to an online database.

Observed groundwater conditions are used to gauge the success of groundwater management by comparing measured levels to specific targets defined in the 2021 adopted GSP for each monitoring well:

Problem Point: Undesirable Result

Occurs when two monitoring wells in a management area fall below the established Minimum Threshold for two non-dry years in a row.

Warning Level: Minimum Threshold

The lowest groundwater level that, if surpassed, could result in undesirable conditions. Minimum Thresholds are set to protect sustainably constructed domestic wells.

Check-ins: Interim Milestones

Five-year check-ins to make sure the Groundwater Sustainability Agency (GSA) is on track to manage the subbasin in accordance with established goals.

Target: Measurable Objective

The target groundwater level, based on historical data, reflects the level needed to achieve the sustainability goal of the subbasin.






How The Subbasin Stays Sustainable


Monitoring and managing groundwater levels directly supports the Vina Subbasin’s overarching sustainability goal. By actively tracking groundwater levels, the GSA knows when action is needed to ensure this resource remains available.


How Thresholds Are Set

The GSA and partner agencies studied thousands of domestic well records across the subbasin and grouped them by monitoring area. The GSA specifically analyzed domestic wells' depths and developed Minimum Thresholds that would protect most wells. The analysis accounted for different ground elevations in the Subbasin.

What The GSA Is Doing To Protect Your Groundwater

 **Constant Monitoring:** Regularly tracking groundwater levels across the subbasin. Groundwater level data is available online at wdl.water.ca.gov/waterdatalibrary/Map.aspx.

 **Forward Thinking:** Developing projects to reduce groundwater use and enhance recharge.

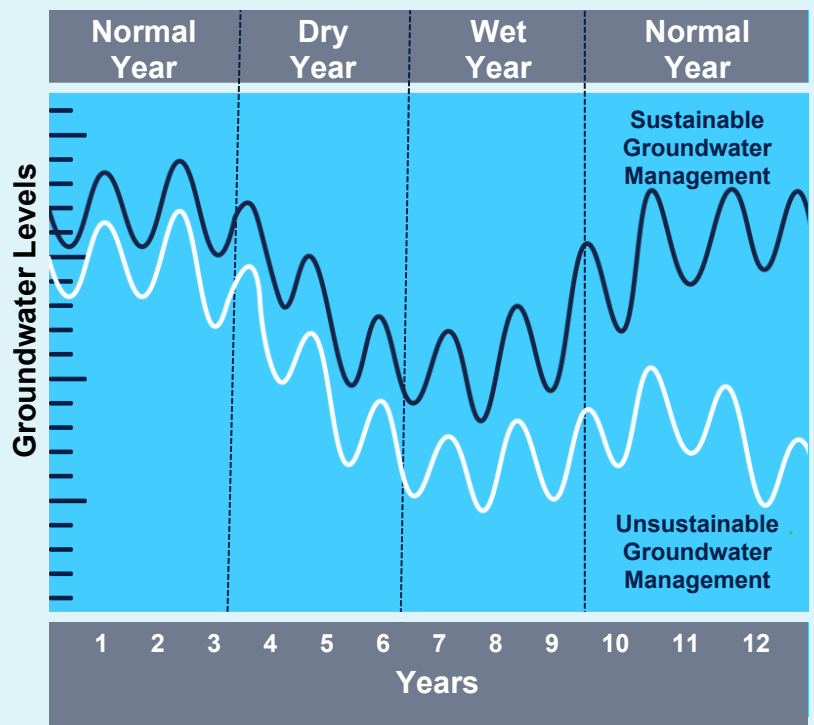
 **Reporting Progress:** Regularly sharing findings in Annual Reports and Groundwater Sustainability Plan Periodic Evaluation (next evaluation due in 2027).



This work to fill data gaps of groundwater levels is funded by the Department of Water Resources’ Sustainable Groundwater Management Grant Program

Sustainable Vs. Unsustainable Management

Groundwater levels naturally fluctuate. Sustainable groundwater management ensures that levels recover over time, as depicted in the chart below.



How You Can Help Protect Vina’s Groundwater



Water Wisely
Use water efficiently at home and on your property.



Join the Conversation
Participate in community meetings and workshops.



Stay Informed
Keep up-to-date on available data and communications.



Get Involved
Visit www.vinagsa.org to learn more and help protect our groundwater!