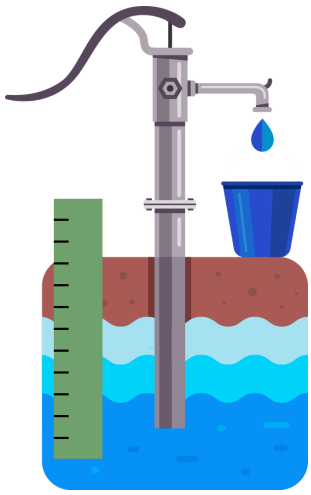
GROUNDWATER LEVELS
What Do They Tell Us?

Wyandotte Creek
GROUNDWATER SUSTAINABILITY AGENCY

Groundwater, stored in underground aquifers, is the primary source of water for communities and agriculture in the Wyandotte Creek Subbasin. The Wyandotte Creek Groundwater Sustainability Plan (GSP) sustainability goal is to manage groundwater to ensure a reliable supply of adequate quantity and quality to support rural areas, communities, agriculture, and environmental uses now and in the future. Groundwater levels are one of the primary indicators used to demonstrate groundwater sustainability in the subbasin.

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 subbasin. Levels rise and fall each year with seasons and wet/dry year cycles. Groundwater levels are monitored for multiple years and over decades to understand trends. Measurements are taken by the California Department of Water Resources, Butte County, and agency partners, 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 proposed amendments to the 2022 GSP for each monitoring well:

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.

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.

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.

More information at wyandottecreekgsa.com

How the Subbasin Stays Sustainable

Monitoring and managing groundwater levels directly supports the Wyandotte Creek 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 hundreds 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.

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 sgma.water.ca.gov/portal/gsp/preview/99

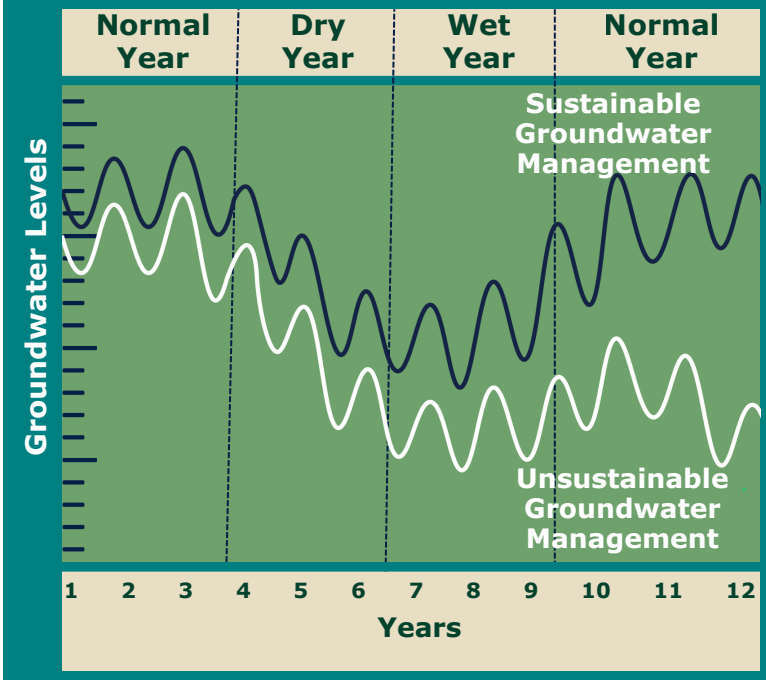
Forward Thinking: Developing projects to reduce groundwater use and enhance recharge.

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

The GSA's groundwater level work is funded by the California Department of Water Resources' Sustainable Groundwater Management Grant Program (2024-2026).

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 Wyandotte Creek'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 wyandottecreekgsa.com to learn more.

February 2026