

GSP ANNUAL REPORT: WY24

Introduction

The **California Department of Water Resources (DWR)** has categorized the **Sutter Groundwater Subbasin (Subbasin)** as a medium priority groundwater basin under the Sustainable Groundwater Management Act (**SGMA**). As such, the Subbasin's **Groundwater Sustainability Agencies (GSAs)** were required to submit a **Groundwater Sustainability Plan (GSP)** by January 31, 2022. GSPs are detailed plans to ensure long-term sustainable groundwater management in at-risk basins, measured by the status of six (6) key sustainability indicators. DWR requires **Annual Reports** on the status of GSP implementation to ensure basins are on track to meeting identified sustainability goals. **Water Year 2024 (WY 2024)** was the Subbasin's third year of GSP implementation and its fourth annual reporting year. During WY 2024, the Subbasin continued to operate under sustainable conditions.



SGMA Sustainability Indicator	Status
Groundwater Levels	Stable
Groundwater Storage	Decreased
Water Quality	Stable
Land Subsidence	Stable
Interconnected Surface Water	Stable

Note: The Seawater Intrusion Sustainability Indicator is not applicable for the Sutter Subbasin.

Sutter Subbasin Sustainability Goal

The Sutter Subbasin will maintain locally-managed groundwater resources for existing and future beneficial uses and users that are economically viable and sustainable by managing groundwater use within the sustainable yield, resulting in the avoidance of undesirable results.

Executive Summary

The Sutter Subbasin experienced a stable and productive Water Year (WY) 2024 (October 1, 2023-September 30, 2024). The Sutter Subbasin maintained stable groundwater levels and experienced a slight decrease in total volume of groundwater in storage. Furthermore, indicators of groundwater quality, land subsidence, and interconnected surface waters remained in sustainable condition. WY 2024 was the Subbasin's third year of Groundwater Sustainability Plan (GSP) implementation, and the Subbasin operated within the Sustainable Management Criteria (SMC) established in its 2022 GSP.

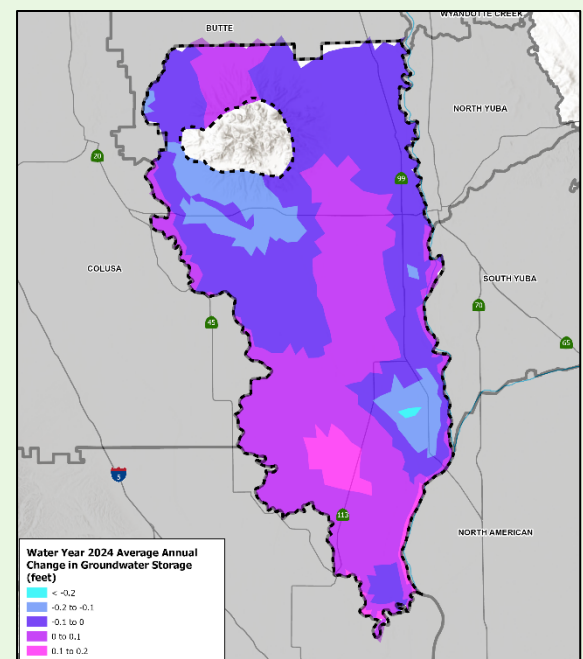
Water Use

Total WY 2024 water use in the Subbasin was 810,400 acre-feet (AF). Groundwater was 15% of total water use, and more than 90% of groundwater extracted was for agriculture.

Groundwater Levels & Storage

The Sutter Subbasin experienced normal seasonal fluctuations in groundwater levels during WY 2024. Groundwater depths exceeded minimum thresholds at one wells, but no undesirable results were observed. Groundwater levels remain stable overall.

During WY 2024, groundwater storage decreased in the Subbasin by 4,000 AF (out of an approximate 49 million AF of groundwater in storage). To the right is a map of interpolated storage changes. Changes in groundwater storage were positive on average.



Groundwater Quality

Groundwater quality was monitored at 18 wells within the Sutter Subbasin. These wells were sampled for **total dissolved solids (TDS)** and **nitrate**, both of which are impacted by agricultural runoff. The **minimum thresholds (MTs)** for TDS and nitrate in groundwater are based on drinking water standards of the upper Secondary Maximum Contaminant Level (MCL) of 1,000 milligrams per liter (mg/L) for TDS and Primary MCL of 10 mg/L for nitrate as N. In WY 2024, all groundwater samples collected were less than the established MTs, except for one TDS sample and two nitrate samples.

The Subbasin defines an undesirable result for degraded groundwater quality as “a causal nexus between groundwater-related activities... and a degradation in groundwater quality that causes a significant and unreasonable reduction in long-term viability of domestic, agricultural, municipal, or environmental uses” where more than 50% of samples are below their minimum thresholds; therefore, the Subbasin did not observe an undesirable result.

Groundwater Pumping

Total groundwater extraction was 126,500 AF during WY 2024. 91% of groundwater pumped was for agricultural use (115,900 AF). Municipal and domestic groundwater use accounted for an estimated 8,900 AF (7%). A little over 1% of the total volume of groundwater extracted was applied to managed wetlands (1,500 AF), and less than 0.2% was used in local industry (200 AF).

Up Next

In early 2024, the Sutter Subbasin entered into an agreement with DWR for Proposition 68 grant funding to further GSP implementation. These work efforts will be conducted in 2025 and 2026 and include Annual Reports, instrumenting wells, geophysical surveys, groundwater model updates, and a financing plan.

Other Sustainability Indicators

Land Subsidence

Land subsidence was measured using public **Interferometric Synthetic Aperture Imagery (InSAR)**. Minor amounts of vertical displacement were observed in the Subbasin during WY24, ranging from -0.1 to 0.1 feet.

Depletion of Interconnected Surface Water

The Subbasin's SMC for **interconnected surface waters** are established to maintain sustainable exchanges between groundwater and interconnected surface water courses, including the **Sacramento River, Feather River, and Sutter Bypass**. Groundwater/surface water exchange was measured using groundwater levels as proxy at 16 wells in WY 2024. Exchanges with interconnected surface waters were stable during WY 2024. No minimum threshold exceedances were observed in WY 2024. However, downward trends have been observed in 3 wells, which will be monitored to ensure undesirable results do not occur.

Ongoing Projects*	Agency
System Modernization: Upgrading local conveyance and SCADA infrastructure to improve system efficiency and reduce spillage.	Butte Water District
Dual-Source Irrigation Systems: Installing irrigation systems capable of using either surface or groundwater.	Butte Water District
Expanding Monitoring Well Network: Installation of additional shallow groundwater monitoring wells.	Multi-Agency/GSA
Advanced Treatment and Water Recycling: Feasibility study for recycled water facility for direct and in-lieu recharge	City of Yuba City
Aquifer Storage & Recovery and Second Well: Feasibility of aquifer storage recovery well	City of Yuba City



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SGMA

For more information, visit SutterSubbasin.org

*Additional ongoing project information can be found in the WY24 Annual Report, available at <http://suttersubbasin.org/assets/pdf/Sutter%20Subbasin%20WY%202023%20Annual%20Report.pdf>

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