Sustainable Groundwater Management Implementation

Spring 2025 Newsletter | Corning, Red Bluff, Los Molinos, and Antelope Subbasins

The California Department of Water Resources (DWR) awarded a total of $15 million to the Corning, Red Bluff, Los Molinos, and Antelope Subbasins for the Tehama County Flood Control and Water Conservation District Groundwater Sustainability Agency (TCFCWCD GSA) and Corning Sub-basin GSA (CSGSA) to implement the Corning, Red Bluff, Los Molinos, and Antelope Groundwater Sustainability Plans (GSP) and advance critical projects and management actions to achieve long-term groundwater sustainability. **This newsletter provides an update on the progress made by the GSAs and the consulting team led by Luhdorff & Scalmanini Consulting Engineers (LSCE) to complete this grant-funded work by its scheduled end date in March 2026.**

Key Milestones Reached

✓ **February 27, 2025** – The Corning, Antelope, Red Bluff, and Los Molinos Subbasin GSPs are approved by DWR. These approvals mark a significant milestone in the collective efforts to manage groundwater sustainably!

✓ **April 1, 2025** – 2024 Annual Reports (spanning October 2023 to September 2024) are submitted to DWR and provide a comprehensive assessment of groundwater conditions the subbasins.

GSPs have been Approved!

On February 27, 2025, DWR approved the Groundwater Sustainability Plans (GSPs) for the Corning, Antelope, Red Bluff, and Los Molinos Subbasins! The plans outline strategies and actions to achieve groundwater sustainability by 2042 and prioritize balancing groundwater extraction with replenishment and protecting water quality.

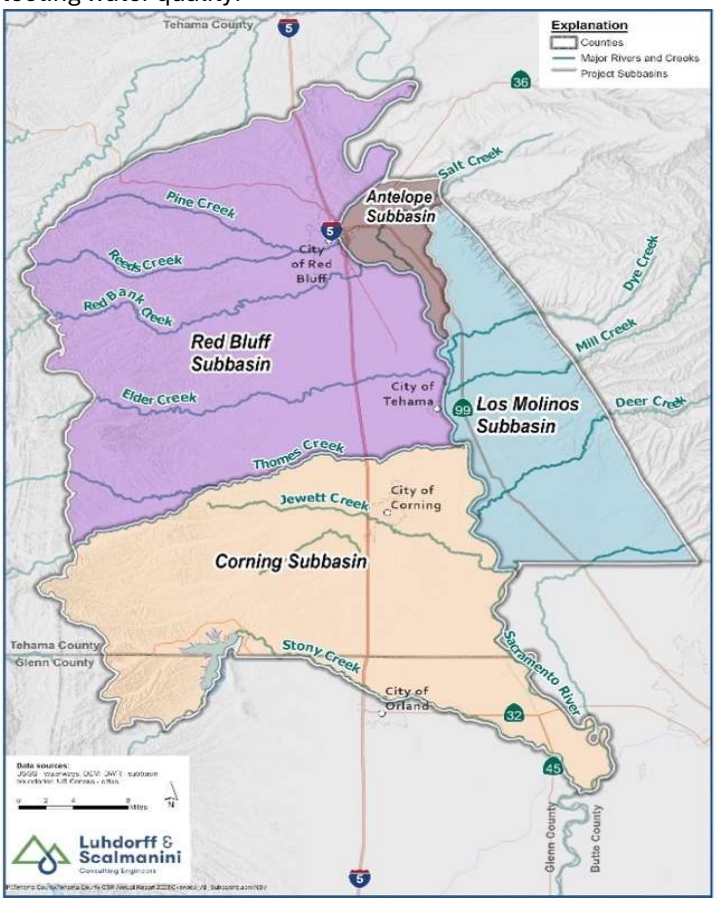
Corning Subbasin GSP:

https://sgma.water.ca.gov/portal/gsp/preview/94

Antelope Subbasin GSP:
https://sgma.water.ca.gov/portal/gsp/preview/134

Red Bluff Subbasin GSP:
https://sgma.water.ca.gov/portal/gsp/preview/140

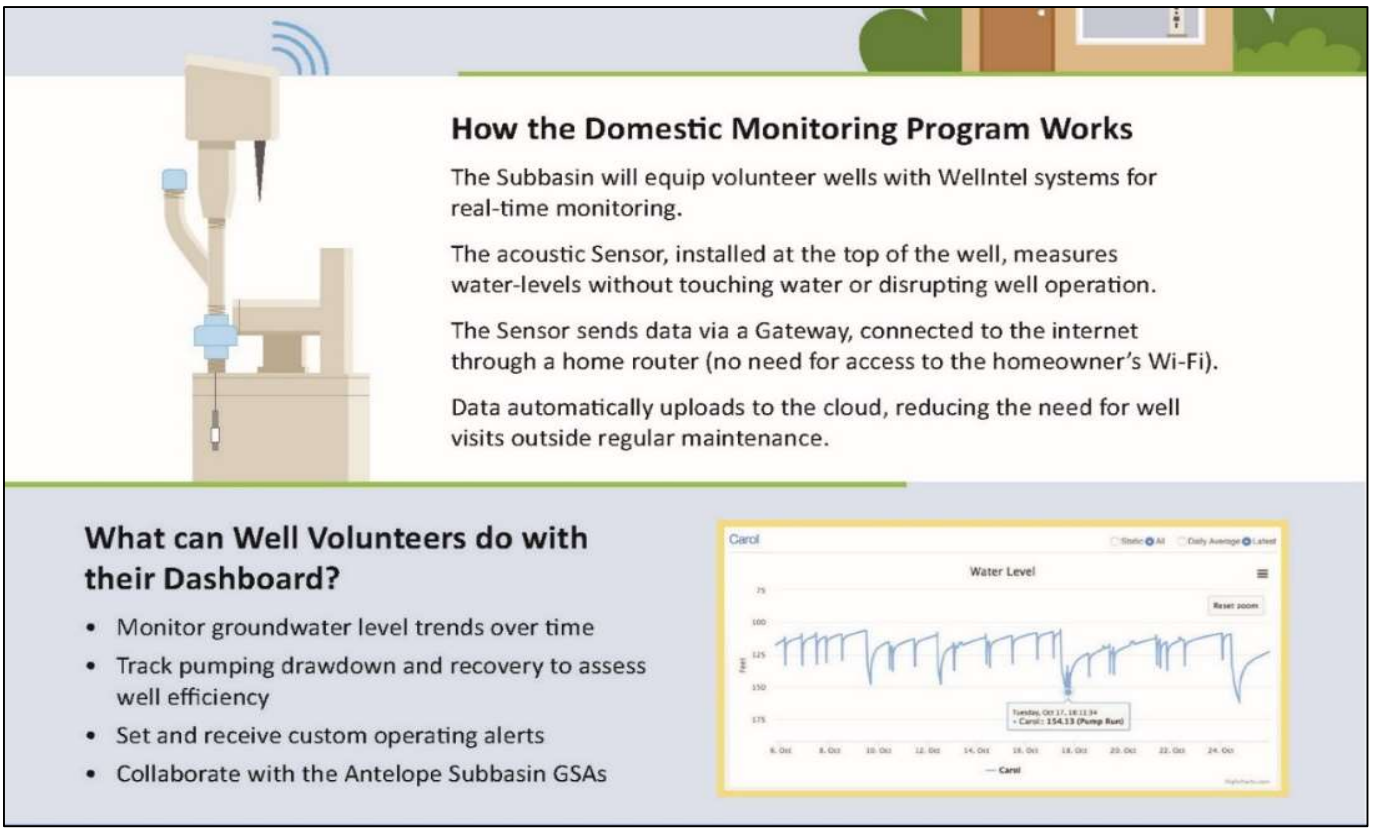
Los Molinos Subbasin GSP:
https://sgma.water.ca.gov/portal/gsp/preview/139



Monitoring Well Construction Almost Complete

Enhancing the groundwater monitoring network of each subbasin is critical, so that the GSAs can make informed and effective decisions about groundwater management. To support this goal, 7 groundwater monitoring wells have now been constructed in the Corning and Antelope Subbasins to-date, with plans to install 16 more by Fall. These efforts are part of our commitment to building a robust monitoring infrastructure that supports adaptive management and ensures the health of our groundwater resources.

- **8 multi-completion monitoring wells** (each of which include three wells at varying depths, between 100 and 1,200 feet) to monitor different aquifer layers in the Antelope and Corning Subbasins
- **15 surface water monitoring sites, each with 2-3 wells** to assess the interaction between surface water and groundwater in the Antelope and Corning Subbasins
- **50 domestic wells** can be equipped with equipment to give the owners the ability to track real-time water levels in their wells within the Antelope and Corning Subbasins.



Volunteers are still needed to participate in the Community Domestic Monitoring Program, which serves to track changes in water levels within private domestic wells. The equipment allows the owners of the wells to see real time water levels and track well efficiency. For those interested in participating we have a survey (https://bit.ly/43j0siz) to fill out for both Antelope and Corning Subbasins. More details are available please feel free to reach out.

The program information flyer can be accessed here:
Corning Subbasin Program Flyer: https://bit.ly/CorningMonitoring
Antelope Subbasin Program Flyer: https://bit.ly/AntelopeMonitoring

Or for general program information and questions contact Evan Davis at edavis@lsce.com.

Transitioning from Recharge Feasibility Planning to Deploying Pilot Projects

The recharge feasibility studies for several prospective **Managed Aquifer Recharge (MAR)** sites in the Corning, Red Bluff, and Los Molinos Subbasins have been completed, and the technical team is now transitioning from the feasibility to the design phase for several of these projects. MAR projects are described below.

Multi-Benefit Recharge: Recharge projects that also provide other benefits, such as providing or improving habitat for wildlife. Current projects include one site along Thomes Creek in the Corning Subbasin to provide habitat for shorebirds, and a project along Deer Creek in the Los Molinos Subbasin to enhance salmon spawning habitat.

Elder, Thomes and Stony Creek Recharge: Diverting water to encourage infiltration into the aquifer. There are multiple sites along Elder, Thomes, and Stony Creeks in the Red Bluff and Corning Subbasins utilizing a combination of surface recharge and Aquifer Storage and Recovery (ASR) wells.

Recharge through Unlined Creeks, Canals, and Drainages: Utilizing existing waterways to enhance recharge. Current projects include one project along Brannin Creek to construct dry wells to direct surface water into the aquifer.

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What is a dry well?

In the context of Managed Aquifer Recharge (MAR), a dry well is a subsurface structure designed to enhance groundwater recharge by directing surface water into underground aquifers. Specifically:

> A dry well is a vertical shaft—typically filled with gravel or other permeable material—that allows stormwater, streamflow, or other surface water to infiltrate through unsaturated soil layers and reach the aquifer below. In MAR projects, dry wells are often used to increase the rate of infiltration in areas where natural percolation is too slow or where surface spreading is impractical.

In the Brannin Creek project mentioned, dry wells would be used to capture and convey water from the creek into the subsurface, where it can bypass less permeable surface soils and recharge the aquifer more efficiently.

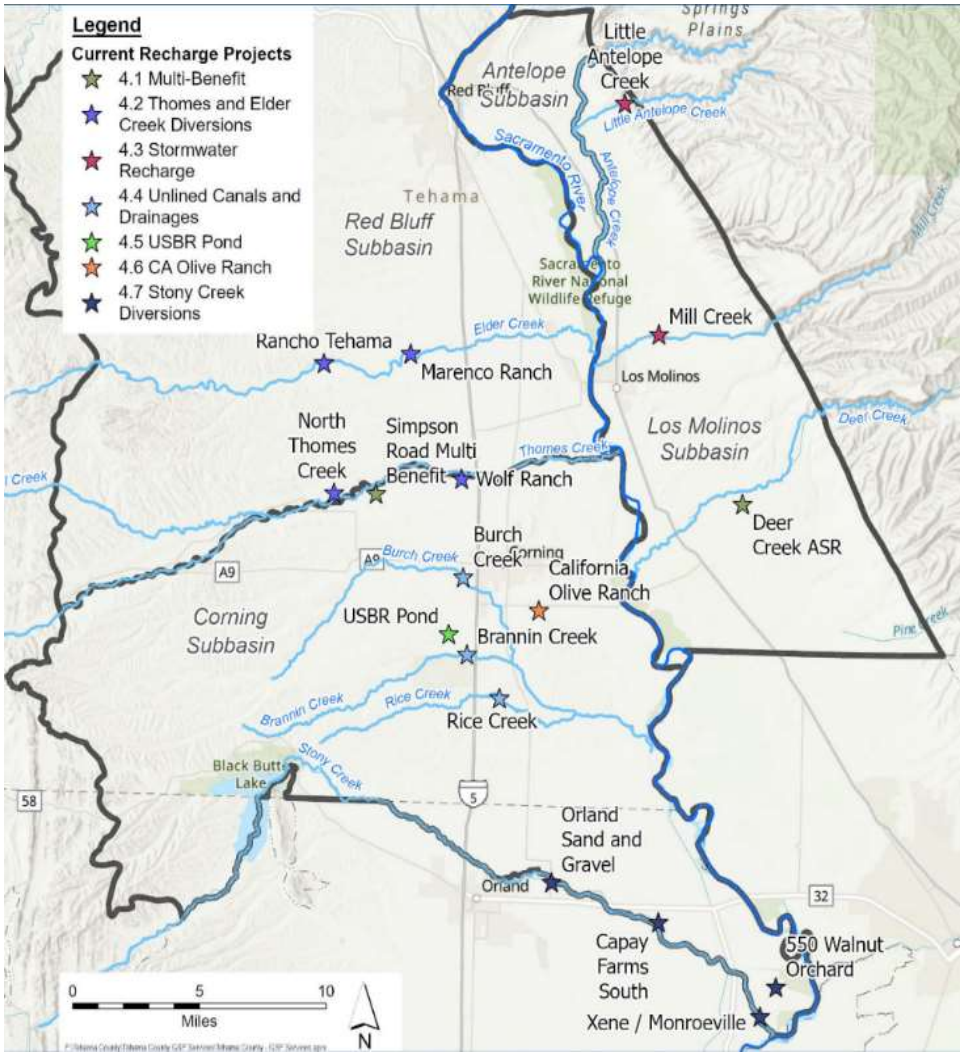
MAR is an important strategy in the GSPs for augmenting groundwater supplies to balance demand, and can be accomplished in several ways:

Stormwater Capture and Recharge: Determining triggers to allow excess stormwater to be diverted to enhance recharge and prevent downstream flooding.

In-Lieu Recharge: Encouraging the use of surface water for irrigation instead of groundwater pumping during wet years, thereby allowing aquifers to recover.

Ag Aquifer Storage and Recovery (Ag ASR): Utilizing groundwater wells to directly inject surface water into the deeper portion of the aquifer when available, to be pumped out when needed.

Interested in participating in recharge opportunities? We invite landowners in the Corning, Red Bluff, or Los Molinos Subbasins to fill out a short survey at bit.ly/Recharge-InterestForm to register interest. Note that filling out the survey is not a guarantee of future surface water and/or participation in future recharge activities.



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2024 Annual Reports Are In

Antelope Subbasin: No undesirable results were reported. Groundwater levels averaged 21 feet above MTs, and storage increased by 5,100 acre-feet due to favorable hydrology. Groundwater met 69% of agricultural demand. Water quality remained within limits, though nitrate levels neared thresholds.
https://sgma.water.ca.gov/portal/service/gspar/document/4796

Corning Subbasin: Twelve wells fell below MTs in fall 2024, but no undesirable results were triggered. Groundwater storage rose by 20,900 acre-feet. Reduced irrigated acreage and more surface water led to decreased groundwater use. Water quality remained stable.

https://sgma.water.ca.gov/portal/service/gspar/document/4781

Los Molinos Subbasin: Conditions remained stable with all indicators above MTs. Groundwater storage increased by 14,100 acre-feet, supported by higher surface water availability. Groundwater use declined, and all water quality metrics stayed within thresholds.

https://sgma.water.ca.gov/portal/service/gspar/document/4802

Red Bluff Subbasin: No undesirable results were reported. Groundwater storage rose by 44,800 acre-feet. Increased surface water supply led to lower groundwater extraction. One well exceeded TDS limits, but broader water quality remained unaffected.

https://sgma.water.ca.gov/portal/service/gspar/document/4808

Next Steps for the Development of Demand Management and Well Mitigation Programs

The revised GSPs approved by DWR in 2025 include commitments from the GSAs to develop Well Mitigation and Demand Management Programs. In areas where groundwater overdraft conditions are occurring, demand management programs can supplement groundwater recharge and other projects to help bring local groundwater basins into balance and comply with local sustainability indicators. Well Mitigation Programs are designed to mitigate risks for domestic well owners and other landowners with shallow wells. The GSAs are working toward developing the Demand Management Program by January 1, 2026 (January 1, 2027 in the Corning Subbasin) and Well Mitigation Programs by January 1, 2026. The GSAs are committed to coordinate these efforts with local landowners and stakeholders through various outreach opportunities. Stay tuned for more information on these programs and check the websites below for the most recent program information.

Upcoming Meetings at-a-Glance

June 2025

June 4 | CSAB
June 11 | Groundwater Commission
June 16 | TCFCWD Board
June 26 | CSGSA Meeting

July 2025

July 9 | Groundwater Commission
July 21 | TCFCWD Board
July 24 | CSGSA Meeting

GSA Staff Contacts

Contact **Lisa Hunter** at lhunter@countyofglenn.net or 530-934-6540 with questions about groundwater management in the Corning Sub-basin GSA or to receive email notices from Glenn County.

Contact **Justin Jenson** at jjenson@tcpw.ca.gov or 530-690-0700 with questions about groundwater management in Tehama County, or contact TehamaGSA@tcpw.ca.gov to receive email notices from Tehama County.

Tehama County Flood Control and Water Conservation District GSA Website: https://tehamacountywater.org/gsa/; for information about Tehama County's Well Registration Program, visit the TCFCWCD website.

Corning Sub-basin GSA Website: https://www.countyofglenn.net/corning-sub-basin-gsa