SVGSP PERIODIC EVALUTION: KEY HIGHLIGHTS *DRAFT – FOR REVIEW ONLY*

Groundwater Sustainability Agencies (GSAs) associated with medium-priority groundwater basins, such as Sierra Valley, are required by the California Department of Water Resources (DWR) to submit a 5-year Periodic Evaluation of their Groundwater Sustainability Plan (GSP).

The draft Periodic Evaluation is available online (link), with a public comment period open from (date) through (date).

The Periodic Evaluation incorporates new information obtained since 2022 to update the content provided in the original GSP. Importantly, the document describes the following groundwater conditions for the 5-year evaluation period:

- Water use during the evaluation period has been relatively stable, with no significant change in irrigated acreage, and the Basin is not determined to be experiencing overdraft as of Water Year (WY) 2025.
- The basin demonstrated significant resilience and recovery capacity, with groundwater storage increasing by over 24,000 acre-feet during wet WY2023 and conditions stabilizing in below-average WY2024 and WY2025 for a cumulative decline in groundwater storage of 4,962 acre-feet over the evaluation period.
- Groundwater levels were similarly resilient through three below-normal or critically dry years of the five-year evaluation period, with only one well, considered to reflect local rather than basin-wide conditions, remaining below its minimum threshold level as of WY2025.

Key Projects and Management Actions (PMAs) were implemented to:

- Expand the monitoring network to enhance data collection on groundwater levels, groundwater quality, and changes in land elevation, and to better understand interconnected surface water conditions.
- Develop and implement agricultural irrigation efficiency recommendations for individual ranches to reduce water demand.
- Develop and establish pilot projects that divert excess winter flows to areas that support groundwater recharge.
- Identify irrigation systems where conjunctive use (in-lieu recharge) is viable for substituting surface water supplies for groundwater – during years of high and average precipitation.

The Sierra Valley Hydrogeologic System Model (SVHSM)'s Precipitation-Runoff Modeling System (PRMS) and MODFLOW Groundwater-Flow Model (MODFLOW) components were substantially recalibrated during the evaluation period, improving simulated streamflow timing and magnitude.

Additionally, remaining data gaps were identified as were strategies to address those data gaps.

See other side for highlights of key Projects and Management Actions (PMAs).

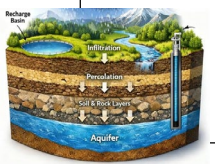
PERIODIC EVALUATION: HIGHLIGHTS OF KEY PMAS *DRAFT – FOR REVIEW ONLY*

MANAGED AQUIFER RECHARGE

Two pilot projects have been installed in Sierra Valley to divert excess winter flows to infiltration areas for recharge of the deeper aquifer. One project is located off of Staverville Creek and the other occurs on the ephemeral drainage tributary to Smithneck Creek.

Diversions at both sites are authorized under Temporary Permits issued by the State Water Resources Control Board's Division of Water Rights.

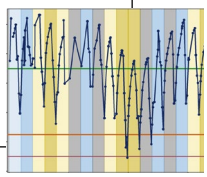
For diversion events between December 2025 – March 2026, the proof-of-concept tests recharged roughly 130 acre-feet of high water flows. Both locations are ready and operational for upcoming 2026-27 precipitation.



EXPANDED MONITORING NETWORK

Over the course of developing and implementing the SVGSP, the monitoring networks now include:

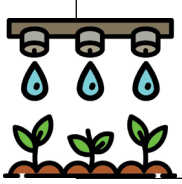
- 38 wells are monitored twice a year for groundwater levels
- A consistent approach to sampling groundwater quality for 8 constituents
- Installation of equipment to assess stream flow along Smithneck and Staverville creeks; the addition of 4 telemetered wells in the northwest wetland area to assess shallow groundwater conditions
- 11 physical control points to monitor land elevation



AGRICULTURAL IRRIGATION EFFICIENCY

During GSP implementation, 15 irrigators participated in farm assessments to identify options for improving irrigation efficiency. Each rancher received specific recommendations for enhancing irrigation equipment.

The upgrades to those irrigation systems are estimated to reduce water use by approximately 400 – 470 acre-feet per year during years with average precipitation. Most of the anticipated water savings are due to high efficiency sprinkler upgrades



Higher water savings are expected in dry years, and lower water savings are expected in wet years.

CONJUNCTIVE USE (IN-LIEU RECHARGE)

Rather than withdraw groundwater, only to replace it later through recharge, conjunctive use involves using surface water instead of groundwater. This substitution would occur only during average and wet years.

Investments in equipment were made at three sites to improve surface water quality for irrigation purposes.

This allows irrigators to use surface water supplies when available, and reducing demand on the aquifer by about 400 acre-feet per year (in average and wet years.) During dry years, when less surface water is available, irrigators will switch back to groundwater sources.



See other side for key highlights of the Periodic Evaluation.