Sierra Valley Groundwater Sustainability Plan (GSP): Public Review Draft

What Is It?

The Public Review Draft is a working draft of the Groundwater Sustainability Plan (GSP). While it is a complete draft of the GSP, some highlighted sections are still being refined and developed further.

The GSP chapters and a comment log are posted online at www.sierravalleygmd.org/gsp-documents. Some appendices are provided for background and context but do not necessarily need to be reviewed.

Comments will be accepted on the Public Review Draft through **November 15, 2021**. Please submit the comment log (which is posted with the Draft Chapters) to Betsy Elzufon at betsye@lwa.com.

The technical team will then review and incorporate comments, as appropriate to create the GSP that will be presented to the Groundwater Sustainability Agencies – Sierra Valley Groundwater Management District and Plumas County – at their respective Board meetings on December 20, 2021 and December 21, 2021. The final GSP must be submitted to the California Department of Water Resources by January 31, 2022.

Public Workshop to Discuss the Public Review Draft: Sunday, October 17, 2021

A public workshop will take place on Sunday, October 17, 2021 from 6:00 – 8:00 p.m. to review the Public Review Draft. The meeting will take place at Sierra Christian Church in Beckwourth.

Webinar option: https://us02web.zoom.us/j/5156427999
Phone only: (669) 900-9128 Meeting ID: 515 642 7999

How to Comment

- All materials for the Public Review Draft, including a comment log, are posted online at www.sierravalleygmd.org/gsp-documents.
- Please email the comment log to betsye@lwa.com **by November 15, 2021**.

Chapter 1: Introduction

Chapter 1 presents the background, context and elements of the Sierra Valley GSP. It is 10 pages long and describes:

- the Groundwater Sustainability Management Act (SGMA),
- the purpose of the GSP,
- the Groundwater Sustainability Agencies for Sierra Valley (Sierra Valley Groundwater Management District and Plumas County), and their respective organizational structures and legal authorities,
- the Sustainability Goal for Sierra Valley Subbasin,
- estimated costs for implementing the GSP, and
- the sections of the GSP.

Purpose of the GSP

A GSP describes: the past, present and anticipated future characteristics and conditions of a groundwater basin; groundwater uses and users; criteria for managing groundwater sustainably (Sustainable Management Criteria); Projects and Management Actions to achieve sustainable groundwater management; and an implementation plan.

The ultimate objective for sustainable groundwater management is to prevent the following undesirable results from occurring:

1. Chronic lowering of groundwater levels
2. Significant and unreasonable reduction of groundwater storage (amount of groundwater that is stored)
3. Significant and unreasonable seawater intrusion (*not applicable to Sierra Valley*)
4. Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies
5. Significant and unreasonable land subsidence that substantially interferes with surface land uses
6. Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of that interconnected surface water

Sustainability Goal

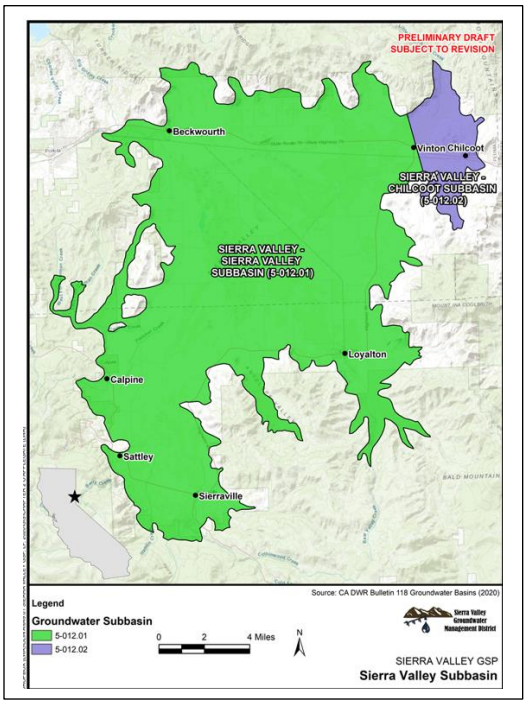
To manage groundwater resources in a manner that best supports the long-term health of the people, the environment, and the economy of Sierra Valley

Chapter 2: Plan Area and Basin Setting

Chapter 2 is extensive (125 pages, which includes about 40 pages of figures and tables) and presents the information on two aspects of groundwater management in the Subbasin.

The **Plan Area** (35 pages long) describes relevant planning elements in the Subbasin, such as:

- jurisdictional areas,
- water resources monitoring and management programs,
- land use elements and applicable General Plans, and
- notices and communication approaches.



The **Basin Setting** section (88 pages long) explains the *Hydrogeologic Conceptual Model*, which is a framework for understanding how water moves into, within, and out of a groundwater basin and underlying aquifer system. This incorporates information on physical aspects of the aquifer such as:

- climate,
- vegetation and land use,
- soils,
- geology, and
- precipitation, surface water and groundwater dynamics.

Current and historical groundwater conditions are described using:

- groundwater level measurements,
- estimates of groundwater storage (the amount of groundwater that is being stored),
- measurements of groundwater quality,
- information on land subsidence (through ground surveys and satellite data),
- assessments of interconnected surface water (areas where surface water and groundwater are connected through saturated zones of the aquifer), and
- assessments of Groundwater Dependent Ecosystems.

Overall, in Sierra Valley:

- Groundwater levels see seasonal fluctuations, with wells in the central part of the valley showing declining groundwater levels.
- Groundwater quality is generally good, with higher levels of naturally occurring arsenic and manganese near Calpine.
- Based on intermittent observations, subsidence rates vary across the basin from less than 1” per year to about 6” per year.

Chapter 3: Sustainable Management Criteria

Chapter 3 is 55 pages long, which includes about 15-20 pages of figures and tables.

The following is a high-level overview of the chapter. For a recap of the Sustainable Management Criteria (SMCs) associated with each objective (groundwater levels, groundwater quality, subsidence, and interconnected surface water / groundwater dependent ecosystems), go to: www.sierravalleygmd.org/files/d4e1daec2/SVTAC-Recap-Sustainable-Mgmt-Criteria.pdf

Sustainable Management Criteria (SMCs)

SMCs establish targets that support sustainable groundwater management.

- **Measurable Objectives** (MOs) indicate the desired target for maintaining a specific groundwater condition. These management objectives should be attained, or getting close to attainment, by 2042. MOs are established for each Representative Monitoring Point (e.g., each specific well) for the planning and implementation period.
- **Minimum Thresholds** (MTs) set a level which, when exceeded, would result in Undesirable Results. While Minimum Thresholds might be exceeded for a short time during the GSP implementation phase – they should not be exceeded after 2042.

  Minimum Thresholds are often established to reflect historical conditions at, or near, their worst. MTs are established for each Representative Monitoring Point (e.g., each specific well) for the planning and implementation period.
- **Undesirable Results** describe the outcomes deemed to be "significant and unreasonable." Undesirable results are identified by the GSAs and basin stakeholders.

  For groundwater levels, it is proposed that Undesirable Results be defined as occurring if 25% of Fall low groundwater level observations (i.e., the minimum groundwater level in any given water year) in any of the Representative Monitoring Points (e.g., wells) decrease below their established MTs for two consecutive years (e.g., 25% of RMPs (wells) fall below MTs for two consecutive years).

Triggers may also be established at levels above the Minimum Thresholds to provide advance notice for when conditions may be approaching the Minimum Threshold level. This allows the GSAs to assess groundwater conditions and determine whether any management action is required at that time.

Generally, **Sustainable Management Criteria** are set to ensure that groundwater conditions are maintained at or above January 2015 levels.

- Minimum Thresholds are set at, or close to, conditions recorded in January 2015
- Measurable Objectives are established at levels representing improved groundwater conditions. The levels are set to provide enough cushion that routine fluctuations in groundwater conditions would not result in exceeding the Minimum Threshold.

Chapter 4: Projects and Management Actions

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Chapter 4 (46 pages, which includes 8 pages of tables) provides an overview and description of current and potential Projects and Management Actions (PMAs) to help attain sustainable groundwater management.

- Existing PMAs include a brief discussion of the current practice and potential enhancements
- Potential PMAs encompass a range of possible options that could be considered for attaining sustainable groundwater conditions (e.g., achieving Measurable Objectives and avoiding Minimum Threshold levels)

As PMAs are being considered for implementation, additional evaluation will be needed of the costs, benefits, feasibility and scope of each PMA.

Projects refer to capital investments in physical infrastructure or restoration.

Management actions represent programs or policies that do not involve infrastructure or capital improvements.

PMAs generally are associated with three broad categories of outcomes:

- Supply augmentation
- Demand management
- Data and information

Each PMA incudes a high-level write-up including: project description, measurable objective, public noticing, permitting and regulatory process, schedule for implementation, implementation, expected benefits, legal authority, and estimated costs and funding plan.

While this write-up is intended to better define each PMA, any PMA that advances would need additional evaluation and discussion on costs, benefits, secondary outcomes and proposed scale for implementation.

Chapter 5: Implementation

Chapter 5 (18 pages, with 8 pages of figures and tables) focuses on the responsibilities and requirements for GSP implementation and associated costs. Specific aspects include:

- ***Management and Administration***: This covers the administrative, technical and financial tasks associated with completing GSP tasks, and explains the requirements for submitting annual reports and five-year updates.
- ***Monitoring and Data Activities***: This encompasses all elements of monitoring such as: taking measurements, installing or repairing equipment, data analysis, reporting, and updates to the Sierra Valley Integrated Hydrologic Model.
- ***Projects and Management Actions (PMAs)***: The GSP provides a proposed approach for evaluating and prioritizing PMAs based on expected effectiveness, ease of implementation, and cost and level of support. This preliminary prioritization will be initiated immediately after submission of the GSP to provide the GSAs with enough time to evaluate project feasibility and include the selected projects into future funding requests. The GSAs are expected to continue to refine this prioritization as more information on the feasibility, costs, and anticipated benefits become available for the PMAs.
- ***Coordination, Outreach and Engagement***: Coordination will be needed between the GSAs and planning partners and agencies on policies, programs and initiatives that may impact sustainable groundwater management in the Sierra Valley Subbasin.

Estimate of GSP Implementation Costs and Discussion of Funding Opportunities

An initial projection of annual costs for GSP implementation will likely range between $68,500 - $142,000. Costs for PMAs are not included, since costs are still being developed and it is likely that they will be funded through future available grants.

Appendix 5-2 describes possible funding sources and mechanisms.

Schedule for Implementation

Chapter 5 also presents two timelines:

- one for annual GSP implementation tasks through 2042
- one for PMA implementation tasks through 2026, with a quarterly breakdown for 2022