SIERRA VALLEY SUBBASIN GSP
CHAPTER 1 INTRODUCTION

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1 Introduction

The Sierra Valley Groundwater Management District (SVGMD) and Plumas County, the Groundwater Sustainability Agencies (GSAs) for the Sierra Valley Groundwater Subbasin (SV Subbasin), developed this Groundwater Sustainability Plan (GSP or Plan) in accordance with the California Department of Water Resources (DWR) Sustainable Groundwater Management Act (SGMA) of 2014. The purpose of the Plan is to roadmap the process to achieving sustainable groundwater management, as defined by SGMA, in the SV Subbasin (DWR Subbasin No. 5-012.01).

SGMA is a three-bill legislative package comprised of Assembly Bill (AB) 1739 (Dickinson), Senate Bill (SB) 1168 (Pavley), and SB 1319 (Pavley) signed into law in 2014 and codified in Section 10720 of the California Water Code. SGMA expands the role of DWR to support local implementation of GSPs and allows for intervention by the State Water Resources Control Board (SWRCB) at discrete points throughout the process if local agencies are not willing or able to manage groundwater sustainably. In addition to the one Assembly Bill and two Senate Bills, SGMA is partially defined by the "emergency regulations" (adopted by DWR and incorporated into the California Code of Regulations, Sections 350 – 354.4) and a number of other documents[1].

SGMA required critically-over-drafted basins to be managed under a GSP by January 31, 2020, and all other groundwater basins designated as high- or medium-priority basins to be managed under a GSP by January 31, 2022. Additionally, SMGA requires demonstrated sustainability within 20 years of GSP implementation, and continued sustainability through the 50-year planning and implementation horizon.

SV Subbasin boundary modifications were completed in early 2019 and basin prioritization for the modified basins was revised by DWR in spring 2019. The SV Subbasin was characterized as a medium-priority basin that is not critically overdrafted per DWR Bulletin 118 (2019). An eligible local agency was therefore required to develop and implement a GSP by January 31, 2022, and achieve demonstrated sustainability by January 31, 2042. SVGMD and Plumas County chose to pursue sustainability and compliance with the requirements of SGMA via a multi-GSA, single GSP approach, led by SVGMD with the support of Plumas County, in hopes that SVGMD can retain their authority to manage groundwater in the SV Subbasin into the indefinite future. It is the belief of SVGMD and Plumas County that groundwater management by a local entity will best ensure the local communities needs are met and voices are heard while striving toward optimized groundwater management, consistent with the belief of former California Governor Jerry Brown who emphasized in his signing statement that "groundwater management in California is best accomplished locally".

SVGMD has been working since its establishment in 1980 and, therefore, long before SGMA, to implement practices aimed at better management of groundwater resources in Sierra Valley. As described in section 2.1.3.4, the process for permitting new wells in the SV Subbasin is governed by SVGMD Ordinance 18 01, which requires that all applications to construct wells in the SV Subbasin be reviewed and approved by SVGMD prior to permit issuance by Plumas or Sierra Counties and limits construction of new high-capacity wells where such construction would likely impact groundwater resources (e.g., within the "Restricted Area" as described in Section 2.1.4). SVGMD approves applications where sufficient data is available that suggests

[1] https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management

construction and use of the proposed well will not adversely impact sustainability of groundwater resources.

Furthermore, the District began monitoring groundwater extraction from agricultural wells in 1989 thus providing a robust data set helpful to characterize groundwater use and levels throughout Sierra Valley. This unique dataset has been critical for the development of the sustainable management criteria during GSP development.

The SVGMD acknowledges the importance of protecting all beneficial users and uses of groundwater and recognizes that the first priority is to work toward stabilizing groundwater levels. Project and management actions will be considered and implemented, as needed, keeping this priority in mind. The GSAs believe that stabilizing groundwater levels is the critical first step toward achieving the sustainability of the basin.

To facilitate such sustainable groundwater management, this Plan provides:

- Agency information and management structure (Chapter 1);
- All pertinent background information (Chapter 2) including description of the Plan Area and SV Subbasin setting, historical conditions, and current conditions;
- Modeled water budget information (Section 2.2.3.) including the estimated sustainable yield and discussion on how the value may change over time as a result of changes in climate;
- Sustainable management criteria (Chapter 3) that will serve as the basis for evaluation of the sustainability of groundwater management in the SV Subbasin and the efficacy of this Plan;
- Assessment of the sustainability of the existing condition (Section 3.3) based on the sustainable indicators defined in SGMA and analysis of data collected over the past several decades, building upon the historic and existing conditions information provided in Section 2.2.2;
- Description of the existing monitoring network and protocol (Section 3.4), assessment of the existing network and protocol with respect to its ability to generate the data necessary to sufficiently evaluate the sustainability of groundwater management in the SV Subbasin, and planned improvements;
- Existing and potential projects and management actions that the GSAs are considering to achieve sustainability, i.e., meet the sustainable management criteria (Chapter 4); and
- GSP implementation information (Chapter 5) including estimated cost, implementation schedule, annual reporting protocol, and periodic evaluation protocol for evaluating the Plan's efficacy and amending the Plan as needed to achieve sustainability.

1.1 Purpose of the Groundwater Sustainability Plan (GSP or Plan)

The purpose of this Plan is to ensure that "sustainable groundwater management" in the SV Subbasin is achieved by the SVGMD by 2042 and maintained at least until 2072. Sustainable groundwater management is the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing "undesirable results." Undesirable results are defined by SGMA as one or more of the following effects caused by groundwater conditions occurring throughout a groundwater basin:

(a) Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon. Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels if extractions and groundwater recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods.

(b) Significant and unreasonable reduction of groundwater storage.

(c) Significant and unreasonable seawater intrusion (*not applicable to Sierra Valley*).

(d) Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies.

(e) Significant and unreasonable land subsidence that substantially interferes with surface land uses.

(f) Depletion of interconnected surface water that has significant and unreasonable adverse impacts on beneficial uses of the surface water.

To complete a specific local definition of undesirable results for each of the sustainability indicators, the SV Subbasin GSAs engaged stakeholders to develop a description of what would be considered "significant and unreasonable" impacts associated with each of the five pertinent undesirable results categories in the SV Subbasin. This requirement of the Plan is set forth in SGMA.

The purpose of this Plan, as implemented by the GSAs, is as follows:

- to facilitate groundwater management in the SV Subbasin with the objective of reducing and/or eliminating impacts associated with groundwater level declines, groundwater storage reductions, water quality degradation, land subsidence, and surface water depletions that result from groundwater extraction and are locally considered to be significant and unreasonable, and
- to prevent to the extent practicable any such impacts from occurring by 2042 and thereafter until at least 2072.

This purpose serves as the basis of the intention of the sustainability goal described in the following section.

1.2 Sustainability Goal

As required by SGMA, the sustainability goal for the Basin was created through input from all the stakeholders who participated in the GSP planning effort. The goal fulfills the regulations put forward by the DWR to develop a sustainability goal that "…culminates in the absence of undesirable results within 20 years..." (23 CCR § 354.24).

The GSAs strive for equal access to groundwater for all current and future members of the Basin and that the water will be put to beneficial uses while being able to sustainably meet demand and avoid any undesirable results.

The overarching sustainability goal for groundwater management in the Sierra Valley Subbasin is:

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 into the future by avoiding significant and unreasonable impacts to environmental, domestic, agricultural, and industrial beneficial uses and users of groundwater.

The purpose of this goal is to avoid significant and unreasonable impacts to the environmental, agricultural, domestic, industrial, and community beneficial uses and users of groundwater in Sierra Valley. Progress toward the goal will be cumulatively quantified by the Sustainable Management Criteria discussed in Chapter 3.

Community input from the Technical Advisory Committee (TAC) indicated that priorities for Sierra Valley include:

- Maintaining viable agriculture and the quiet, rural nature of the valley;
- Maintaining and enhancing the habitat for wildlife, including migratory and local bird populations;
- Preventing drying out of wetlands, streams, and braided channels;
- Preventing water quality degradation;
- Preventing impacts to domestic well users that would require drilling deeper wells;
- Reducing or preventing new development, including industrial farming, airport expansion, and housing developments;
- Preventing subsidence; and
- Managing the Subbasin to mitigate impacts of drought and to differentiate between drought conditions and other actions that cause undesirable results.

To address these priorities, the sustainability goal incorporates managing groundwater conditions for each of the applicable sustainability indicators in the Subbasin so that:

- Groundwater elevations and groundwater storage do not significantly decline below their historically measured range (i.e., January 2015 levels), thereby protecting the existing well infrastructure from impacts, protecting groundwater-dependent ecosystems, and avoiding significant streamflow depletion due to groundwater pumping.
- Groundwater quality is suitable for beneficial uses in the SV Subbasin and is not significantly or unreasonably degraded.
- Significant and unreasonable land subsidence is prevented in the SV Subbasin. Infrastructure (e.g., roads, foundations, water conveyances, and well casings) and agriculture production in the SV Subbasin remain safe from land subsidence.
- Significant and undesirable depletions of interconnected surface water (ISW) due to groundwater pumping are avoided by maintaining hydraulic gradients near ISW and through projects and management actions that bolster groundwater levels.
- The GSA groundwater management is effectively integrated with other watershed and land use planning activities through collaborations and partnerships with local, state, and federal agencies, private landowners, and other organizations, to achieve the broader "watershed goal" of adequate groundwater recharge and sufficient surface water flows to sustain healthy ecosystem functions.

The Sustainability Goal will be achieved by quantifying and minimizing potential impacts to domestic, residential, agricultural, industrial, and environmental beneficial users. Scientifically informed Sustainable Management Criteria will continue to be developed around these

assessments that avoid significant and unreasonable impacts to beneficial uses and users of groundwater. Finally, the GSAs will implement projects and management actions, monitor Sustainable Management Criteria, and iteratively refine the GSP so that the Sustainability Goal is achieved during Plan implementation and is maintained afterward.

1.3 Agency Information (Reg. § 354.6)

Per Reg. § 354.6 of the California Code of Regulations, the GSP must include a copy of the information provided pursuant to Water Code Section 10723.8, with any updates, if necessary, along with the following information:

(a) The name and mailing address of the Agency.

(b) The organization and management structure of the Agency, identifying persons with management authority for implementation of the Plan.

(c) The name and contact information, including the phone number, mailing address, and electronic mail address, of the plan manager.

(d) The legal authority of the Agency, with specific reference to citations setting forth the duties, powers, and responsibilities of the Agency, demonstrating that the Agency has the legal authority to implement the Plan.

(e) An estimate of the cost of implementing the Plan and a general description of how the Agency plans to meet those costs.

The information provided pursuant to Water Code Section 10723.8 is included as Appendix 1-1. The name and mailing address of the lead Agency (SVGMD) is provided on the title page of this Plan and is provided below.

Sierra Valley Groundwater Management District
PO Box 88
Chilcoot, CA 96105

The name and mailing address of Plumas County (the GSA for the small area of the SV Subbasin which is outside of the SVGMD boundary) is provided below. The other information (Water Code Section 10723.8 items b, c, d, and e) is provided subsequently in this Chapter.

Plumas County Board of Supervisors
520 Main St., Room 309
Quincy, CA 95971

The Plan Manager is the individual point of contact for this Plan. The Plan Manager is responsible for submitting required documentation to DWR and reporting any comments, inquiries, and other Plan-related correspondences to the SVGMD Board of Directors. If the Plan Manager is to change, the Plan Manager information below will be updated.

Jenny Gant
Clerk of the Board
Sierra Valley Groundwater Management District
PO Box 88
Chilcoot, CA 96105
(530) 414-6831
sierravalleygmd@sbcglobal.net

1.3.1 Organization and Management Structure of the Groundwater Sustainability Agency (GSA or Agency)

SVGMD was authorized under SB 1391 in 1980 to protect and oversee the management of the groundwater within the SV Subbasin. SVGMD submitted notification to DWR in 2017 to become the exclusive GSA for the portion of the SV Subbasin that lies within their groundwater management district statutory boundary and thereby, became the Lead Agency for the majority of the SV Subbasin. A relatively small area of the northwest corner of the SV Subbasin (approximately 115 acres or <0.1% of total SV Subbasin area) falls outside of SVGMD boundary and therefore excludes SVGMD from eligibility to be the GSA for that area.

Accordingly, Plumas County submitted notification and became the exclusive GSA for that area, and in accordance with Water Code Section 10723.6, SVGMD and Plumas County established a memorandum of understanding (MOU) to establish their respective roles in GSP development and implementation. The MOU, provided in Appendix 1-2, outlines that the two entities will work together to develop and adopt a single SGMA-compliant GSP for the SV Subbasin using sound groundwater science and local expertise.

The SV Subbasin area for which Plumas County is the GSA is located entirely on Plumas National Forest lands and is a hydrologically important area within Sierra Valley along the federally designated Wild and Scenic River corridor of the Middle Fork of the Feather River. This area stretches from near the east end of Rocky Point Road to the western edge of the Sierra Valley basin in the Middle Fork Feather corridor. For the local Maidu, Paiute, and Washoe tribes, this part of the Wild and Scenic corridor has deep and enduring cultural connections that predate both establishment of the U.S. Forest Service and non-tribal settlement of the region. Present-day, this area includes a grazing allotment managed by Plumas National Forest (“the Ramelli Allotment”), which is the location of an irrigation water right from Big Grizzly Creek near its confluence with the Middle Fork of the Feather River.

Because SVGMD is the GSA for the vast majority of the SV Subbasin, SVGMD is considered the lead GSA, and, as such:

- Monitors groundwater levels using monitoring wells located throughout the District boundary;
- Meters active large-capacity agricultural wells (those capable of pumping 100 gallons per minute or more);
- Prepares technical reports and evaluations on groundwater;
- Reviews development project proposals within the District boundary; and
- Executes all other powers invested in the District by SB 1391 and SGMA.

As the lead GSA for the SV Subbasin, and in coordination with the Plumas County GSA, the SVGMD will be responsible for overseeing implementation of this Plan, including monitoring and reporting. Furthermore, the SVGMD will coordinate with Sierra County, for the areas within the District’s southern boundary.

The SVGMD Board of Directors holds public board meetings monthly and regularly publishes meeting minutes, ordinances, technical reports, and other information online[2]. Plumas County representatives, representatives of affected agencies, and engaged community members

[2] http://www.sierravalleygmd.org/

regularly attend SVGMD Board meetings and participate in discussions. The organization and management structure of SVGMD is as outlined in SVGMD's enabling legislation[3]. SVGMD's Policies and Procedures Manual and Purchasing Policy, which are included in Appendix 1-3 and 1-4, provide additional information pertaining to SVGMD's organization and management structure.

The Plumas County Board of Supervisors holds public meetings on the first three Tuesdays of every month and publishes[4] meeting minutes, agendas, and other information. The Plumas County Board of Supervisors oversees the management of County government, in addition to governing a handful of County special districts including the Plumas County Flood Control & Water Conservation District. Five supervisors are elected by constituencies of each district and serve all citizens of Plumas County during a four-year term. The Clerk of the Board of Supervisors[5] provides support to the Board of Supervisors and information to the public.

The Sierra County Board of Supervisors[6] is the governing body of the County and enacts ordinances and resolutions, adopts the annual budget, approves contracts, appropriates funds, determines land use zoning for the unincorporated area, and appoints certain County officers and members of various boards and commissions. The Board also sits as the Sierra County Flood Control and Water Conservation District and Sierra County Board of Equalization. The Board of Supervisors is composed of five members elected from the five separate districts of the County, on a non-partisan basis, to serve four-year staggered terms. The Board meets on the second and third Tuesday of each month. Meeting agendas and background are available to the public prior to the meeting. The Clerk of the Board of Supervisors provides administrative support to the members of the Board of Supervisors in its response to the needs of the public.

1.3.2 Legal Authority of the GSAs

In 1980, SVGMD was authorized under SB 1391 to protect and oversee the management of the groundwater within the SV Subbasin. SB 1391 defined the legal boundaries and regulatory authority of the District and authorized its creation by a joint exercise of powers agreement between Plumas and Sierra counties.

In late 1980 SB 1401, referred to as the "SB 1391 Clean-Up Bill", amended and repealed selected sections of SB 1391 and deleted specified provisions requiring the District to limit or suspend groundwater extractions for export before limiting extractions by overlying users (DWR, 1983). The bill also revised provisions of SB 1391 relating to the approval of proposed development projects within the District that propose to extract groundwater for water service (DWR, 1983).

In accordance with Water Code Section 10723(c)(1), SVGMD was deemed the exclusive GSA for the portion of the SV Subbasin that is within SVGMD's statutory boundary. In accordance with Water Code Section 10723.8, upon submitting notification to DWR to become the GSA for that portion of the SV Subbasin, SVGMD was authorized the legal powers of a GSA as described in Chapter 5 of SGMA (Water Code Sections 10725 - 10726.9).

In accordance with Water Code Section 10723(a), Plumas County was eligible to become the exclusive GSA for the portion of the SV Subbasin that is outside of the SVGMD's statutory boundary. In accordance with Water Code Section 10723.8, upon submitting notification to

[3] https://svgmd.specialdistrict.org/enabling-act

[4] http://plumascoca.suiteonemedia.com/web/Home.aspx

[5] https://www.plumascounty.us/418/Clerk-of-the-Board-of-Supervisors

[6] http://www.sierracounty.ca.gov/182/Board-of-Supervisors

DWR to become the GSA for the small area of the SV Subbasin that is outside of the SVGMD boundary, Plumas County was authorized the legal powers of a GSA as described in Chapter 5 of SGMA (Water Code Sections 10725 - 10726.9).

1.3.3 Estimated Cost of Implementing the GSP and the GSA's Approach to Meet Costs

The funding for GSP implementation may come from a combination of local, state, and federal sources. SVGMD has been funded by contributions from Sierra and Plumas Counties, management charges on parcels and active large-capacity wells, and grants. The general direction from the Board of Directors in regard to funding GSP implementation can be summarized as:

- District expenses should be well-controlled
- Funding strategy needs to be locally viable and right-sized
- Funding Strategy needs to focus on fairness

The SVGMD's Joint Powers Agreement states that the District can request funds from Plumas and Sierra Counties, as needed. In recent years, both Counties have contributed $4,000 annually towards District operating expenses. SVGMD's existing revenue sources also include two management charges: a "meter fee," associated with large-capacity wells metered by the District, and a "parcel fee," which is based on acreage. The authority to enact these charges derives from the District's enabling act, Water Code Appendix 119. The Board is responsible for enacting charges by ordinance.

For fiscal years 2018-19 and 2019-20, the District's parcel fee was fixed at a total of 30 cents per acre, per year, for parcels over 40 acres, and a total charge of $10.00 per year on all parcels of 40 acres or less. Beginning in fiscal year 2020-21, this fee was reduced to a rate of 15 cents per acre per year, for parcels over 40 acres, and a total charge of $6.00 per year on all parcels of 40 acres or less. The District has established the continuation of this lower rate going forward for fiscal year 2021-22. In 2020/21 the parcel fees totaled $32,798 and the meter fees total $12,200 for a total annual fee revenue of $44,998.

On May 13, 2020, under the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access for All Act of 2018 (Proposition 68), SVGMD accepted $2,000,000 from the California Department of Water Resources to assist in financing the Sierra Valley Subbasin Groundwater Sustainability Plan (GSP) Development Support to improve sustainable groundwater management, pursuant to Water Code Section 79700 et seq.

The cost breakdown for implementing and managing the GSP is presented and described in more detail in Chapter 5 and Appendix 5-1 and includes a fiscal reserve for unexpected and miscellaneous costs. The major cost categories are:

- Agency administration and operations
- GSP reporting (annual and 5-year reports)
- Monitoring, data collection, and technical support
- Technical work and model maintenance
- Outreach, coordination, and education
- Legal support

- Projects and management actions

The total estimated cost of GSP implementation over the next 20 years (2022 to 2042) is estimated to be in the range of $68,500 - $142,000 (present dollar value), annually, based on the best available information.

The GSAs will pursue various available funding opportunities to assist in covering the yearly costs as described further in Appendix 5-1. As part of the implementation, SVGMD will review its current fee structure and update as necessary. It is expected that SVGMD will manage the implementation and reporting of the GSP, with support from other entities as needed. This updated fee structure will be continually used to fund the GSAs and GSP implementation up to the end of the 20-year period.

1.4 GSP Organization

The Plan was developed using the DWR's Groundwater Sustainability Plan Annotated Outline (December 2016) and is therefore organized consistent with that Outline. Content requiring additional information was sourced from the Preparation Checklist for GSP Submittal (DWR 2016).

DWR's Preparation Checklist for GSP Submittal was completed and added to this Plan as Appendix 1-5 to provide a quick reference guide for locating specific required information.

1.4.1 Description of how the GSP is organized

The GSP is organized as follows:

- **Executive Summary:** This section presents an overview of the GSP, a background of the groundwater conditions within the Basin, a timeline of the GSP Development process, and key information from each of the GSP sections.
- **Chapter 1.0 Introduction**: This section states the purpose of the GSP, the Basin's Sustainability Goal, information on the GSA and its member agencies and the organization of the GSP.
- **Chapter 2.0 Plan Area and Basin Settings**: This section describes the Sierra Valley Subbasin Groundwater Plan, current conditions within the Subbasin, and a historical baseline and models for future scenarios. This historic and projected data provides context to be able to sustainably manage the basin into the future. This section also provides the Basin water budget as context for achieving long-term sustainability within the basin.
- **Chapter 3.0 Sustainable Management Criteria**: This section discusses the Subbasin's Sustainability Goal as well as the criteria for addressing the five pertinent SGMA Sustainability Indicators, including the associated Minimum Thresholds, Measurable Objectives, and proposed monitoring strategy created for the Sierra Valley Subbasin. These criteria provide the framework for when the sustainability of the Basin is at risk, and therefore when management actions need to be undertaken by the GSAs.
- **Chapter 4.0 Projects and Management Actions**: This section provides a description of projects and management actions proposed to achieve Subbasin sustainability and provides a strategy for evaluating and prioritizing these actions.
- **Chapter 5.0 Plan Implementation**: This section provides an estimate of GSP operating costs and the proposed implementation schedule for management actions. It also

outlines the procedural requirements for the yearly and 5-year evaluations to the GSP and the associated steps necessary if any parts of the GSP need to be updated.

1.4.2 Preparation Checklist for GSP Submittal

This GSP was prepared to meet the regulatory requirements established by DWR, as shown in the completed GSP Elements Guide, provided in Appendix 1-5, which is organized according to the California Code of Regulation Sections of the GSP Emergency Regulations.