PUBLIC DRAFT

Sutter Subbasin GSP Amendment

Executive Summary

Prepared for:

Sutter Subbasin GSAs

Prepared by:

Woodard & Curran
801 T Street
Sacramento, CA 95811

November 2026

This page intentionally left blank.

Contents

EXECUTIVE SUMMARY ES-1

ES-1. Introduction ES-1
ES-2. Plan Area ES-1
ES-3. Governance and Administration ES-3
ES-4. Outreach and Communication ES-3
ES-5. Basin Setting ES-4
ES-6. Sustainability Management Criteria ES-9
ES-7. Sustainability Implementation ES-13
ES-8. Plan Implementation ES-15
ES-9. References and Technical Studies ES-16

Figures

Figure ES-1. GSP Plan Area and Neighboring Subbasins ES-2
Figure ES-2. Sample Utility Bill Insert for Public Workshop ES-4
Figure ES-3. Sample Nested Well Hydrograph in Sutter Subbasin ES-5
Figure ES-4. Overview of Water Budget Components ES-7
Figure ES-5. Sutter Subbasin Average Annual Groundwater Budget ES-8
Figure ES-6. Sustainable Management Criteria Schematic for Groundwater Levels ES-10

Tables

Table ES-1. Summary of Sustainable Management Criteria ES-11

DRAFT

This page intentionally left blank.

DRAFT

EXECUTIVE SUMMARY

ES-1. INTRODUCTION

In 2014, the California legislature enacted the Sustainable Groundwater Management Act (SGMA) in response to continued overdraft of portions of California's groundwater resources. The Sutter Groundwater Subbasin (Subbasin) is one of 127 alluvial basins and subbasins identified by the California Department of Water Resources (DWR) as a high or medium priority groundwater basin and therefore subject to the requirements of SGMA. SGMA requires the preparation of a Groundwater Sustainability Plan (GSP) to provide a path to achieve and document sustainable groundwater management within 20 years following GSP adoption, promoting the long-term sustainability of locally managed groundwater resources. Within the framework of SGMA, sustainability is generally defined as the long-term reliability of a groundwater basin to meet the needs of existing and future beneficial uses and users of groundwater with the absence of undesirable results.

SGMA requires development of a GSP that achieves groundwater sustainability in the Subbasin by 2042. This GSP provides a framework for sustainable groundwater management moving forward, including water budgets, sustainable management criteria, projects and management actions, monitoring, and implementation activities such as stakeholder outreach and the development of annual reports and periodic evaluations of this GSP.

ES-2. PLAN AREA

The Sutter Subbasin covers approximately 445 square miles of the Sacramento Valley floor and surrounds the foothills of the Sutter Buttes (**Figure ES-1**). The Sutter Subbasin is part of the larger Sacramento Valley Groundwater Basin and adjoins the following subbasins: Butte, Wyandotte Creek, North Yuba, South Yuba, North American, Yolo, and Colusa. The Sutter Subbasin is bounded on the west by the Sacramento River and on the east by the Feather River. Both rivers serve beneficial uses including recreation, agricultural, and wildlife. Other major features within the Sutter Subbasin include the Sutter Bypass (an artificial flood corridor), Sutter National Wildlife Refuge, and portions of the Sutter Buttes.

DRAFT

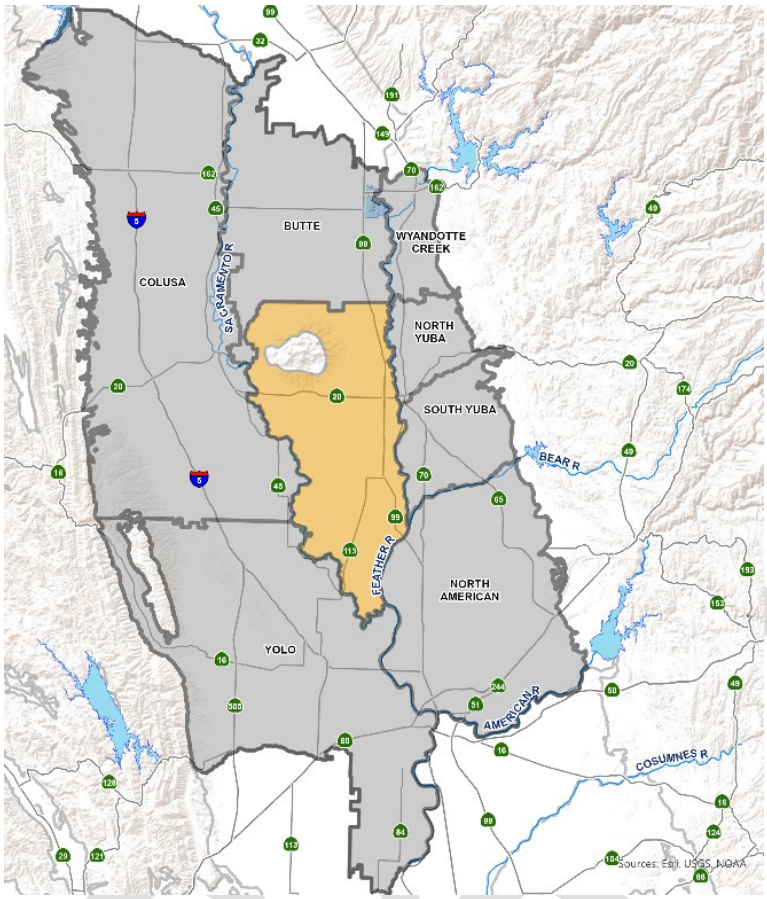

Figure ES-1. GSP Plan Area and Neighboring Subbasins

Land use within the Sutter Subbasin is managed by the cities of Live Oak and Yuba City, as well as Sutter County, and is predominantly agricultural with the production of rice as its primary crop. Surface water and groundwater are the water sources for irrigation, managed wetland, municipal, industrial, and urban/domestic purposes. Implementation of existing land use plans is unlikely to affect the water supply and groundwater sustainability over the planning and implementation horizon as the largest planned changes are related to urban growth with a reduction of agricultural lands and associated irrigation water use.

Water resources monitoring and management plans are currently in place throughout the Subbasin, including the Irrigated Lands Regulatory Program (ILRP) and Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS), as well as Sutter County well standards and permitting. These existing programs can help inform SGMA activities through coordination with monitoring and management entities on overlapping activities and goals.

ES-3. GOVERNANCE AND ADMINISTRATION

This GSP was developed by the nine Sutter Subbasin Groundwater Sustainability Agencies (GSAs): Butte Water District – Sutter, City of Live Oak, City of Yuba City, County of Sutter, Reclamation District No. 70, Reclamation District No. 1500, Reclamation District No. 1660, Sutter Extension Water District, and Sutter Community Service District. Each GSA has its own individual organization and management structures as well as legal authority under which it operates.

The Sutter Subbasin Groundwater Management Coordination Committee (SSGMCC) contains one representative from each GSA and was created to cooperatively carry out the purposes of SGMA by coordinating the development, adoption, and implementation of this GSP. Activities of the SSGMCC include providing technical direction for GSP development, identifying projects and management actions, conducting regular monitoring activities, reporting to their respective GSA boards, and coordinating approval and adoption of this GSP by their respective GSA boards.

ES-4. OUTREACH AND COMMUNICATION

The goal of the public engagement effort related to GSP development and implementation is to understand the needs of stakeholders and beneficial uses and users of groundwater in the Subbasin; consider the interests of diverse social, cultural, and economic elements of the population; increase awareness and understanding of SGMA and the GSP; and promote active involvement in the process to achieve and maintain sustainability.

Public workshops were held approximately once per quarter during initial GSP development (five in total) between 2020 and 2021 to update interested residents and stakeholders about the GSP preparation process and included presentations on data, information, and analyses, as well as activities to solicit input and feedback from participants. Beyond these meetings, information regarding plan development, noticing, and public comments periods was distributed via the project website (http://suttersubbasin.org/), e-mail notices, social media postings, press releases, and mailings, and utility bill notifications (**Figure ES-2**). Supporting materials (online and hard copy) were prepared in English, Spanish, and Punjabi. During the GSP amendment process in 2026, SSGMCC meetings were publicly noticed and interested stakeholders were invited to participate in refining and improving the GSP.

Outreach efforts continued throughout the implementation of this GSP and included SSGMCC meetings, regular updates at GSA board or city council meetings, maintenance of the project website, local outreach at public events and grower's meetings, and posting of an annual report fact sheet to the Subbasin website.

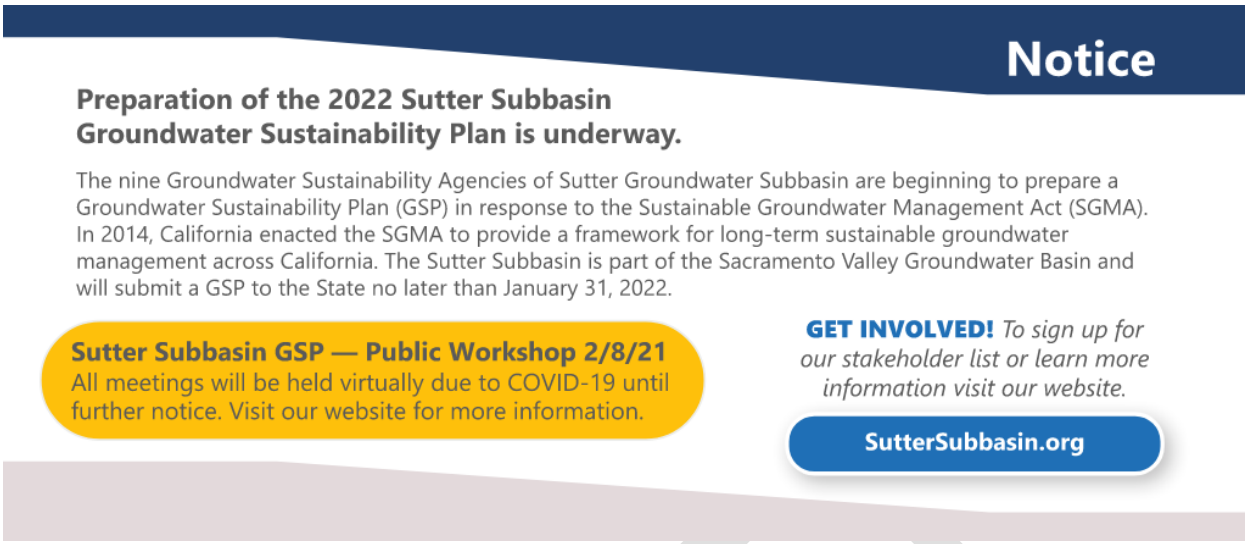

Figure ES-2. Sample Utility Bill Insert for Public Workshop

ES-5. BASIN SETTING

The Basin Setting chapter of this GSP includes the Hydrogeologic Conceptual Model, Groundwater Conditions, and Water Budgets sections which describe the Subbasin's physical setting, characteristics, and current conditions. This information serves as a basis for defining and assessing reasonable sustainable management criteria and projects and management actions.

Hydrogeologic Conceptual Model

Lying within the Sacramento Valley Groundwater Basin, the regional geology of the Sutter Subbasin consists primarily of freshwater-bearing continental deposits underlain by older marine sediments and basement rocks. The freshwater aquifer system is composed of alluvial, lacustrine, and volcanic and volcaniclastic deposits that vary in thickness and extent across the Subbasin. Geology is particularly complex near the Sutter Buttes, where volcanic activity, uplift, and deformation have modified the regional stratigraphic sequence. The Willows Fault is the primary fault structure within Sutter County and lies to the southwest and west of the Sutter Buttes. The Sutter Buttes, located in the northern portion of the Subbasin, are a prominent topographic feature and rise 2,000 feet above the surrounding valley floor. Aside from the Sutter Buttes, the Subbasin is generally flat, with elevations ranging from 80 feet above mean sea level (MSL) in the northeast to 20 feet above MSL in the south. Soils consist mainly of poorly to very poorly drained clay and clay loam, with well-drained loam to sandy loam soils occurring near the Sacramento and Feather Rivers.

The Sutter Subbasin groundwater system consists of one principal aquifer composed of laterally and vertically variable freshwater-bearing deposits. For hydrostratigraphic characterization and groundwater management purposes, the principal aquifer is divided into four aquifer zones (AZs): the Shallow AZ (ground surface to 50 feet below

ground surface [ft bgs]), AZ-1 (50 to 150 ft bgs), AZ-2 (150 to 400 ft bgs), and AZ-3 (greater than 400 ft bgs to the base of freshwater). The aquifer zones are separated locally by low-permeability intervals that influence vertical groundwater movement and may create semiconfined or confined conditions; however, these intervals vary in thickness, continuity, and hydraulic effectiveness across the Subbasin, and are not interpreted as laterally continuous aquitards that divide the Subbasin into separate aquifers.

Groundwater Conditions

Groundwater level trends in the Sutter Subbasin are largely flat over time, indicating sustainable conditions. Principal aquifer rebound is observed during all water year types following seasonal groundwater declines (**Figure ES-3**). Shallow groundwater levels are relatively stable over time and indicate that most groundwater production is occurring below the shallowest portion of the principal aquifer. Greater seasonal fluctuations are observed in the deeper aquifer zones in response to groundwater pumping, with groundwater levels generally rebounding following the irrigation season as the aquifer recharges.

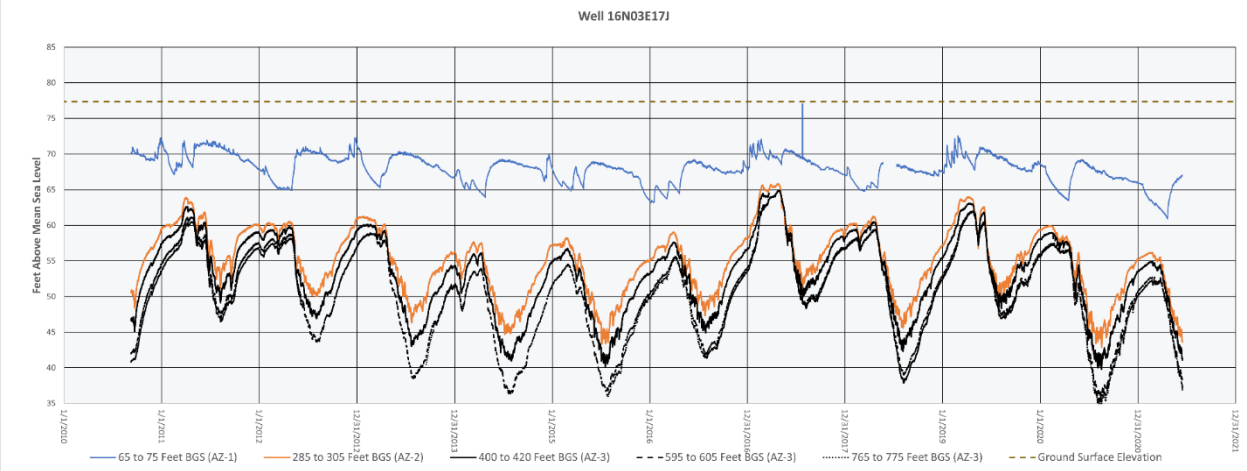

Figure ES-3. Sample Nested Well Hydrograph in Sutter Subbasin

As with groundwater levels, groundwater storage volumes in the Sutter Subbasin have been generally stable over at least the past 30 years (the length of available record). Groundwater storage increases as groundwater levels rise and decreases as groundwater levels fall. Total groundwater storage in the Sutter Subbasin is estimated to be 49 million acre-feet (AF) based on the C2VSimFG-Sutter Version 2.0 integrated flow model.

Due to its location inland from the Pacific Ocean and set back from the Sacramento-San Joaquin Delta, seawater intrusion and related groundwater conditions are not applicable to the Sutter Subbasin.

Groundwater quality in the Sutter Subbasin varies by location, depth, and constituent. Arsenic, boron, total dissolved solids (TDS), and nitrate have been detected above applicable water quality objectives at some locations within the Subbasin. Recent data from 2021 through 2025 show arsenic exceedances occurring primarily in the central portion and along the eastern boundary of the Subbasin, while boron exceedances occur primarily in the southern portion and northeastern corner of the Subbasin. TDS concentrations are generally below the Upper Secondary Maximum Contaminant Level (SMCL), with exceedances scattered throughout the Subbasin; and nitrate concentrations are below the Primary Maximum Contaminant Level (MCL) at the majority of wells with exceedances observed in the southern portion and along the northeastern boundary. Historical data also indicate differences in groundwater quality with depth, including arsenic exceedances in the intermediate and deep aquifer zones and elevated TDS concentrations at some shallow and deeper locations. Arsenic and boron are naturally occurring constituents associated with geologic materials in the Subbasin, while salinity may have natural or anthropogenic sources and nitrate may be associated with human activities.

Inelastic land subsidence has not been recorded within the Sutter Subbasin, and no related impacts to critical infrastructure have been reported. Elastic land subsidence occurs in response to seasonal fluctuations in groundwater levels and associated aquifer pressure.

Interconnected surface waters are surface water features that are hydraulically connected by a saturated zone to the underlying groundwater system and may exhibit gaining, losing, or mixed conditions depending on the relationship between surface water and groundwater levels. The Sacramento and Feather Rivers and Sutter Bypass have been identified as interconnected surface waters in the Sutter Subbasin. Modeling and available datasets indicate that the Sutter Bypass has mostly mixed and gaining conditions throughout the Subbasin. The Feather River exhibits varying gaining and losing conditions, with longer, more distinct gaining or losing reaches in the southern portion of the Subbasin. Along the Sacramento River, modeled conditions generally show gaining or mixed reaches. Groundwater pumping can also reduce flows in interconnected surface waters. Based on C2VSimFG-Sutter Version 2.0 simulations, average annual depletions of interconnected surface water for Water Year (WY) 2021 through WY 2025 are estimated at approximately 89 thousand acre-feet (TAF) per year, with approximately 40 TAF/year associated with the Sutter Bypass, 30 TAF/year with the Sacramento River, and 19 TAF/year with the Feather River.

Groundwater dependent ecosystems (GDEs) in the Sutter Subbasin exist primarily where vegetation relies on shallow groundwater supply for survival. Potential GDEs have been identified along the Feather River and the most northeastern portion of the Sutter Flyway. Additional evaluation and refinement of GDE mapping are planned as part of subsequent periodic evaluations of the GSP.

DRAFT

Water Budgets

Water budgets are developed to provide a quantitative account of water (including surface water and groundwater) entering and leaving the Sutter Subbasin under historical, current, projected, and projected with climate change conditions. The water budgets were developed using C2VSimFG-Sutter Version 2.0, an integrated surface water and groundwater flow model used to simulate conditions within the Sutter Subbasin.

The primary components of the groundwater budget include the following (also depicted in **Figure ES-4**):

- Inflows:
  - Deep percolation from rainfall, irrigation-applied water, and applied water for refuge use
  - Stream seepage
  - Land subsidence inflow
  - Conveyance seepage
  - Subsurface inflow from adjacent subbasins
- Outflows:
  - Groundwater outflow to streams
  - Groundwater pumping
  - Subsurface outflow to adjacent subbasins
- Change in groundwater storage

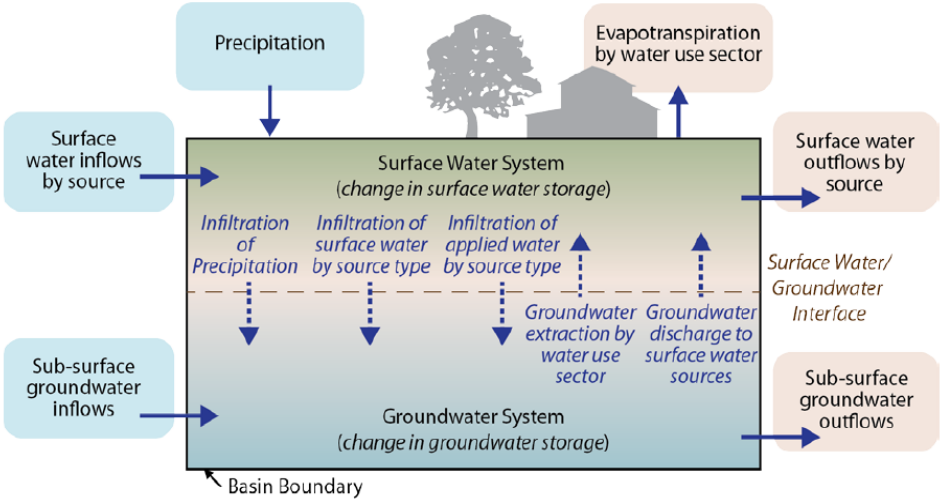

Figure ES-4. Overview of Water Budget Components

Groundwater storage in the Sutter Subbasin remains relatively stable across all water budget scenarios. The historical water budget estimates an average annual decrease in groundwater storage of approximately 4,000 acre-feet per year (AFY), while current conditions estimate an average annual increase of approximately 5,000 AFY. These changes represent approximately 0.008% and 0.010%, respectively, of the estimated 49 million AF of groundwater in storage. Under both projected conditions and projected conditions with climate change, average groundwater inflows and outflows are balanced, resulting in no estimated long-term change in groundwater storage. **Figure ES-5** shows the average annual volume of inflow and outflow from the groundwater budget for all water budget scenarios.

The sustainable yield for the Sutter Subbasin remains estimated at 182,000 AFY, as established in the original GSP using C2VSimFG-Sutter Version 1.0. Average groundwater pumping under current conditions is estimated at 139,000 AFY, below the established sustainable yield. However, updated modeling with C2VSimFG-Sutter Version 2.0 estimates average groundwater pumping of approximately 224,000 AFY under projected conditions while maintaining balanced groundwater inflows and outflows and no long-term change in groundwater storage. Rather than revising the sustainable yield based on the updated model results, the GSP Amendment retains the existing 182,000 AFY estimate based on current sustainable conditions and conservative assumptions. The sustainable yield will be reviewed every five years as part of the Subbasin's Periodic Evaluation and may be increased in the future if average groundwater pumping approaches the currently established sustainable yield value and sustainable conditions continue to be observed.

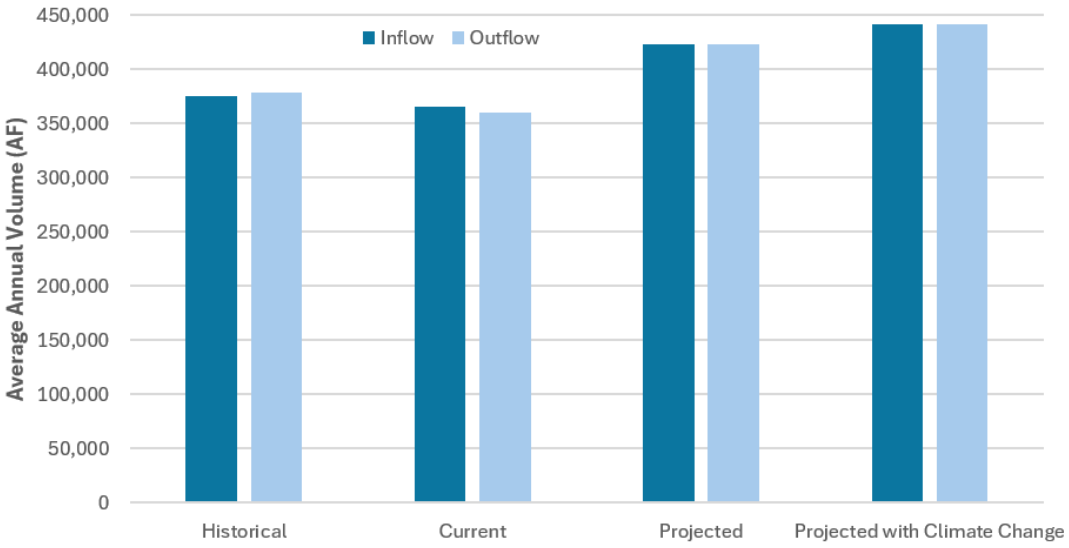

Figure ES-5. Sutter Subbasin Average Annual Groundwater Budget

ES-6. SUSTAINABLE MANAGEMENT CRITERIA

SGMA introduces several terms to measure sustainability including:

- **Sustainability Indicators** – Sustainability indicators refer to adverse effects caused by groundwater conditions occurring throughout the Subbasin that, when significant and unreasonable, cause undesirable results. The six sustainability indicators identified by DWR are the following:
  - Chronic lowering of groundwater levels
  - Reduction of groundwater storage
  - Seawater intrusion
  - Degraded water quality
  - Land subsidence
  - Depletions of interconnected surface water
- **Sustainability Goal** – This goal is the culmination of conditions resulting in the absence of undesirable results within 20 years.
- **Undesirable Results** – The condition at which for each sustainability indicator significant and unreasonable impacts are likely to be observed.
- **Minimum Thresholds** – Minimum thresholds are a numeric value for each sustainability indicator and are used to define when undesirable results occur.
- **Measurable Objectives** – Measurable objectives are a specific set of quantifiable goals for the maintenance and improvement of groundwater conditions.
- **Interim Milestones** – Targets set in five-year increments over the GSP implementation period to reach the measurable objectives within 20 years.
- **Margin of Operational Flexibility or Operating Range** – The range of active management between the measurable objective and minimum threshold.

Figure ES-6 shows a graphic demonstrating the relationship between the sustainable management criteria (SMC) terms such as minimum thresholds and measurable objectives using groundwater elevation as an example.

DRAFT

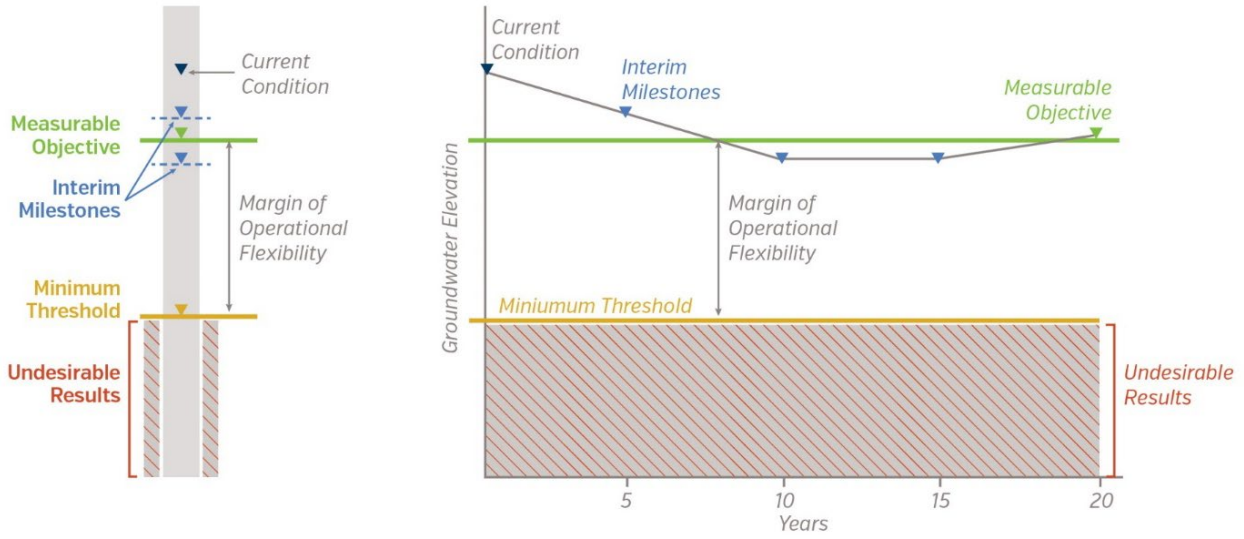

Figure ES-6. Sustainable Management Criteria Schematic for Groundwater Levels

The sustainability goal for the Sutter Subbasin is as follows:

> *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. This goal will be achieved through implementation of proposed projects and management actions and monitoring activities aiding in reaching or maintaining established interim milestones and measurable objectives culminating in the absence of undesirable results by 2042. Water managers in the Sutter Subbasin will work together and collaboratively with stakeholders and neighboring subbasins through GSP implementation and beyond to achieve this goal.*

The method prescribed by SGMA to measure undesirable results and achieve the sustainability goal involves setting numerical minimum thresholds and measurable objectives for a series of representative monitoring sites. The SMC for the Sutter Subbasin are summarized in **Table ES-1**.

DRAFT

Table ES-1. Summary of Sustainable Management Criteria

Sustainability Indicator	Undesirable Results	Identification of Undesirable Results	Minimum Threshold	Measurable Objective
Chronic lowering of groundwater levels	Groundwater levels drop to a level that causes domestic or irrigation wells to go dry or lose functional pumping capacity, results in significantly higher pumping costs, and/or requires significant and unreasonable effort to maintain or deepen production wells.	At least 25% of representative monitoring locations across all aquifer zones drop below the minimum threshold criteria concurrently over two consecutive seasonal low water level measurements.	The deeper of: 1. The historic low from available record at each representative monitoring site; or 2. The average operating range using the above criterion for the following aquifer zones: - Shallow AZ and AZ-1 = 8.0 feet - AZ-2 and AZ-3 = 16.5 feet.	Average of the available historical record at each representative monitoring site.
Reduction of groundwater storage	Same as chronic lowering of groundwater levels. Groundwater levels are used as proxy.	Same as chronic lowering of groundwater levels. Groundwater levels are used as proxy.	Same as chronic lowering of groundwater levels. Groundwater levels are used as proxy.	Same as chronic lowering of groundwater levels. Groundwater levels are used as proxy.
Seawater intrusion	Undesirable results related to seawater intrusion are not applicable to the Sutter Subbasin.	Undesirable results related to seawater intrusion are not applicable to the Sutter Subbasin.	Minimum thresholds are not developed because undesirable results related to seawater intrusion are not applicable to the Sutter Subbasin.	Measurable objectives are not developed because undesirable results related to seawater intrusion are not applicable to the Sutter Subbasin.
Degraded water quality	A result stemming from a causal nexus between groundwater-related activities, such as groundwater extraction or recharge, and a degradation in groundwater quality that causes a significant and unreasonable reduction in long-term viability of domestic, agricultural,	At least 50% of representative monitoring wells across all aquifer zones exceed the minimum threshold for two consecutive annual measurements at each location and where these minimum threshold exceedances can be tied to a causal nexus between	The higher of: 1. The Upper Secondary Maximum Contaminant Level (SMCL) for TDS of 1,000 mg/L and Primary MCL for nitrate as N of 10 mg/L; or 2. Current water quality conditions for TDS and nitrate as N based on available data from 2000 to	The higher of: 1. Current water quality conditions for TDS and nitrate as N based on available data from 2000 to the time of GSP development or amendment at each representative monitoring well or

Sustainability Indicator	Undesirable Results	Identification of Undesirable Results	Minimum Threshold	Measurable Objective
	municipal, or environmental uses over the planning and implementation horizon of this GSP.	SGMA-related activities and water quality.	the time of GSP development or amendment at each representative monitoring well or nearby well in the same aquifer zone. 2. The Recommended SMCL for TDS of 500 mg/L and 70% of the Primary MCL for nitrate as N of 7 mg/L.	nearby well in the same aquifer zone.
Land subsidence	A result due to groundwater extraction that causes a significant reduction in the viability of the use of infrastructure for water distribution and flood control.	At least 25% of representative subsidence monitoring sites exceed the minimum threshold for subsidence over a 5-year rolling average calculated by water year.	0.5 feet of subsidence over a 5-year rolling average calculated by water year.	0.25 feet of subsidence over a 5-year rolling average calculated by water year.
Depletions of interconnected surface water	A result that causes significant and unreasonable adverse effects on beneficial uses and users of interconnected surface water within the Sutter Subbasin over the GSP planning and implementation horizon.	Same as chronic lowering of groundwater levels. Groundwater levels are used as proxy.	Same as chronic lowering of groundwater levels. Groundwater levels used as proxy.	Same as chronic lowering of groundwater levels. Groundwater levels used as proxy.

DRAFT

ES-7. SUSTAINABILITY IMPLEMENTATION

The Sutter Subbasin GSP contains the required sections for sustainability implementation, including Projects and Management Actions and a Representative Monitoring Network monitoring program.

Projects and Management Actions

As the Sutter Subbasin is currently sustainable and projected to remain sustainable, there are no projects or management actions required to achieve sustainability. However, projects and management actions can enhance understanding of the groundwater system and improve the ability to adaptively manage the Subbasin so that undesirable results can be prevented. Most projects and management actions contained in this GSP will be implemented as needed and as funding is available.

Projects and management actions listed in the Sutter Subbasin GSP include select ongoing and planned projects and management actions, such as:

- System modernization by water purveyors
- Boundary flow and primary spill measurement and drainage recovery
- Dual source irrigation systems
- Multi-benefit recharge
- Grower education
- Installation of shallow monitoring wells

As-needed projects and management actions will be implemented, as deemed necessary, to support sustainability, allow for adaptation to changing conditions, and achieve other water management objectives, such as:

- Direct and in-lieu groundwater recharge
- Wetland habitat improvement, such as through securing firm water supplies or fish screen projects
- Surface water supply augmentation through backwash recovery
- Updated electrical Supervisory Control and Data Acquisition (SCADA) and telemetry
- Water quality enhancement through replacement of sewer mains
- Projects to address data gaps, such as:
    - Investigations of interactions between rivers and changes in groundwater levels
    - Investigation of source of elevated salinity in the shallow aquifer zone
    - Study of aquifer properties
    - Data collection to improve the HCM
    - Comprehensive groundwater quality investigation

DRAFT

- Investigation and characterization of the Sutter Buttes, including salinity monitoring, airborne electromagnetic (AEM) survey, and an inter-basin working group focused on water quality
- Groundwater dependent ecosystem mapping confirmation
- Well census
- Land subsidence monitoring evaluation

A living list of projects and management actions will be maintained and updated in the Subbasin's data management system (DMS) using the Opti platform, reflecting the current status of each and continually adjusting as needed to meet changing basin conditions. The list of projects and management actions in the DMS constitutes the required list for the Sutter Subbasin GSP per the GSP Emergency Regulations Subarticle 5. Projects and Management Actions.

Monitoring

The Sutter Subbasin GSP includes representative monitoring networks for the five applicable sustainability indicators, where seawater intrusion is not applicable to the Sutter Subbasin. The objective of these monitoring networks is to monitor conditions across the Subbasin and detect trends toward undesirable results such that adaptive management actions and projects can be implemented to prevent the onset of undesirable results. Specifically, the monitoring networks were developed to:

- Monitor changes in groundwater conditions relative to measurable objectives and minimum thresholds
- Monitor impacts to the beneficial uses and users of groundwater resulting from groundwater use
- Demonstrate progress toward achieving measurable objectives described in the GSP

Three representative monitoring networks were developed for the Sutter Subbasin GSP: groundwater levels by aquifer zone (also used as proxy for reduction in groundwater storage and depletions of interconnected surface water sustainability indicators), groundwater quality by aquifer zone, and land subsidence. All monitoring networks described in this GSP are representative monitoring networks and are used to determine compliance with the quantitative minimum thresholds and measurable objectives established at each representative monitoring site.

The representative monitoring networks were designed by evaluating existing monitoring programs, such as CASGEM, monitoring conducted by DWR, or local agency monitoring programs. The monitoring networks largely consist of monitoring sites that have historical monitoring data and no significant barriers to future monitoring events. Data gaps identified in the Sutter Subbasin monitoring network include limited monitoring locations in the Shallow AZ throughout the Subbasin and particularly along

interconnected surface waters. Progress will continue to be made to fill these identified data gaps prior to the next periodic evaluation, where updated monitoring networks will be included in future GSP amendments.

Monitoring frequencies vary by sustainability indicator. For groundwater levels, measurements will be taken during seasonal high (March through April) and seasonal low (September through October) conditions. Additional groundwater level measurements may be taken in areas where rice growing activities substantially alter the timing of seasonal highs and lows in shallow aquifer zones. Groundwater quality for identified constituents of concern (TDS and nitrate as N) will be analyzed annually with samples collected between July and October. Land subsidence will be monitored using publicly-available Interferometric Synthetic Aperture Radar (InSAR), extensometer, and continuous Global Positioning System (CGPS) stations and assessed on an annual basis.

ES-8. PLAN IMPLEMENTATION

Implementing the Sutter Subbasin GSP requires ongoing activities by the Sutter Subbasin GSAs, including:

- GSA administration and activities associated with the SSGMCC
- Public outreach and stakeholder engagement
- GSP monitoring, data collection, evaluation, and reporting
- Maintenance and updating of the Subbasin Data Management System (DMS)
- Refinement and updating of the C2VSimFG-Sutter model
- Implementing adaptive management strategies as needed
- Implementing projects and management actions, as needed and as funding is available
- Annual Report development and submittal to DWR by April 1 each year
- Evaluating and updating the GSP at least every five years

Implementation of the Sutter Subbasin GSP will require funding from the GSAs as well as external sources. Outside grants will be sought to assist with reducing the cost of implementation to participating agencies, residents, and landowners in the Subbasin. The estimated initial cost of GSP implementation activities is between approximately $380,000 and $1,920,000 per year during the initial years of implementation, excluding implementation of projects and management actions. Costs associated with the implementation of identified projects and management actions will vary depending on the project type and stage of the project (e.g., planning or construction). The Subbasin GSAs are currently evaluating potential long-term funding mechanisms for GSP implementation, including assessments, pumping fees, and combinations of fees and assessments, and may also pursue grants or loans to support eligible projects and management actions.

ES-9. REFERENCES AND TECHNICAL STUDIES

Lists of references used to develop this GSP are included following each GSP chapter. Technical studies relied upon in developing the Sutter Subbasin GSP are included as a chapter of this GSP.

DRAFT