June 2026

REPORT

South American Subbasin Groundwater Sustainability Plan 2027 Periodic Evaluation

South American
SUBBASIN

SCGA Sacramento Central Groundwater Authority

SACRAMENTO COUNTY

Omochumne - Hartnell Water District
Servicing the Community of the Cosumnes River

RECLAMATION DISTRICT 551

NDGSA
NORTHERN DELTA GROUNDWATER SUSTAINABILITY AGENCY

Contributing GSAs

South American SUBBASIN

NDGSA Northern Delta Groundwater Sustainability Agency

Sacramento County

SCGA Sacramento Central Groundwater Authority

Omochumne - Hartnell Water District
Servicing the Community of the Cosumnes River

RECLAMATION DISTRICT 551

Northern Delta Groundwater Sustainability Agency, Omochumne – Hartnell Water District, Reclamation District 551, Sacramento Central Groundwater Authority, Sacramento County, contributed to the development of the South American Subbasin Groundwater Sustainability Plan.

South American Subbasin Consulting Team

GEI Consultants

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Woodard & Curran

GEI Consultants, Larry Walker Associates, and Woodard & Curran compose the consulting technical team for the South American Subbasin Groundwater Sustainability Plan 2027 Periodic Evaluation.

Other consultant contributors include Stantec (DWR-funded facilitators).

South American Subbasin
Groundwater Sustainability Plan 2027 Periodic Evaluation

Northern Delta Groundwater Sustainability Agency
Omochumne-Hartnell Water District
Reclamation District 551
Sacramento Central Groundwater Authority
Sacramento County

June 2026

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The findings, recommendations, specifications, or professional opinions are presented within the limits described by the client, in accordance with generally accepted professional engineering and geologic practice. No warranty is expressed or implied.

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South American Subbasin
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Thomas R. Grovhoug

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Ali Taghavi

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Acronyms and Abbreviations

µg/L	Micrograms per Liter
AEM	Airborne Electromagnetic
AF	Acre-Feet
AFY	Acre-Feet per Year
Ag-MAR	Agricultural Managed Aquifer Recharge
ARBS	American River Basin Study
ARP	Aquifer Recharge Potential
ASR	Aquifer Storage and Recovery
bgs	Below Ground Surface
BMP	Best Management Practice
CAL AM	California American Water
CalSIP	California Stream Gage Improvement Program
CDEC	California Data Exchange Center
CEQA	California Environmental Quality Act
CoSANA	Cosumnes-South American-North America (groundwater model)
DMS	Data Management System
DWAG	Domestic Well Advisory Group
DWR / Department	California Department of Water Resources
EO	Executive Order
Flood-MAR	Flood Managed Aquifer Recharge
GDEs	Groundwater-Dependent Ecosystems
GEI	GEI Consultants, Inc.
GSA	Groundwater Sustainability Agency
GSP / Plan	Groundwater Sustainability Plan
HFPO-DA	Hexafluoropropylene Oxide Dimer Acid and its Ammonium Salt
IM	Interim Milestones
InSAR	Interferometric Synthetic Aperture Radar
ISW	Interconnected Surface Water
m	Meters
MAR	Managed Aquifer Recharge
MCL	Maximum Contaminant Level
mg/L	Milligrams per Liter
micromhos/cm	Micromhos per Centimeter
MNM	SGMA Monitoring Network Module
MOs	Measurable Objectives
MOU	Memorandum of Understanding
MTs	Minimum Thresholds
NASb	North American Subbasin
NDGSA	North Delta Groundwater Sustainability Agency
NS	Not Samples

OHWD	Omochumne-Hartnell Water District Expansion
OSWCR	Online System for Well Completion Reports
PBW	Previously Banked Water
PFAS	Per- and Polyfluoroalkyl Substances
PFHxS	Perfluorohexane Sulfonic Acid
PFNA	Perfluorononanoic Acid
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonic Acid
PLSS	Public Land Survey System
PMAs	Projects and Management Actions
ppb	Parts per Billion
ppt	Parts per Trillion
PRISM	Parameter-elevation Regressions on Independent Slopes Model
RD551	Reclamation District 551
RMP	Representative Monitoring Point
RMSE	Root Mean Square Error
RWA	Regional Water Authority
RWQCB	Regional Water Quality Control Board
SAFCA	Sacramento Area Flood Control Agency
SASb / Subbasin	South American Subbasin
SB	Senate Bill
SC	Specific Conductance
SCGA	Sacramento Central Groundwater Authority
SGMA	Sustainable Groundwater Management Act
SMCL	Secondary Maximum Contaminant Level
SMCs	Sustainable Management Criteria
SRCD	Sloughhouse Resource Conservation District
SWRCB	State Water Resources Control Board
SWS	State Small Water System
TDS	Total Dissolved Solids
URs	Undesirable Results
VMP	Voluntary Monitoring Program
VSWTP	Vineyard Surface Water Treatment Plant
WAS	Water Accounting System
WCR	Well Completion Report
WY	Water Year

Executive Summary

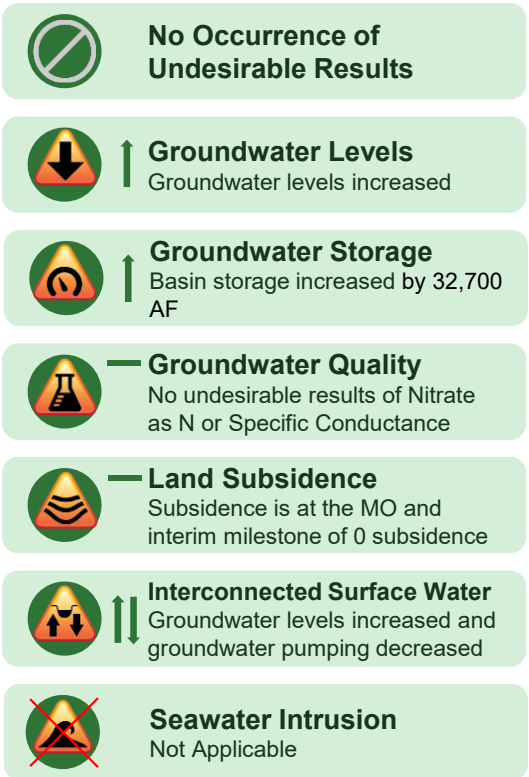
E.S.1. Introduction

This Periodic Evaluation covers Water Years (WY) 2021 through 2025 and provides a high-level assessment of the 2022 Groundwater Sustainability Plan (GSP or Plan) implementation for the South American Subbasin (SASb or Subbasin). The purpose of this evaluation is to determine whether implementation of the GSP is on track to achieve the Subbasin's sustainability goal and continues to meet the requirements of the Sustainable Groundwater Management Act (SGMA) and GSP Regulations.

During this five-year period, hydrologic conditions included two critical years, one wet year, and two above normal years (see Table 5-5). In the 50 years (1970-2019) of hydrology used in the model projections, 20% of the years were critical, 34% were wet, and 14% were above normal. With more critical water years and fewer wet water years, the five-year period was similar to the 50-year period. As such, this evaluation period provides a reasonable basis for assessing progress toward sustainability.

As described and supported in this report, minor adjustments to the GSP were made that incorporated new data and monitoring results to ensure sustainability goals are met. These minor technical changes incorporated new data leading to refinements to the monitoring networks without changing the fundamental sustainability goals or thresholds. Accordingly, the Subbasin's Groundwater Sustainability Agencies (GSAs) determined that a formal Plan Amendment requiring re-adoption was not necessary. This Periodic Evaluation is accompanied by the 2027 GSP that reflects these updates.

The recommended corrective actions recommended by the California Department of Water Resources (DWR) in the Statement of Findings Regarding the Approval of the Sacramento Valley – South American Subbasin Groundwater Sustainability Plan issued July 27, 2023 have been addressed in the 2027 GSP accompanying this Periodic Evaluation.



E.S.2. Progress Toward Sustainability Goal

The Subbasin's sustainability goal is to operate the basin within sustainable yield while avoiding undesirable results related to the six sustainability indicators defined in the GSP.

The 2022 GSP estimated the basin sustainable yield as 235,000 acre-feet per year (AFY), including approximately 30,000 AFY of remediation pumping. The sustainable yield analysis assumed that the

remediation pumping would be reduced over time as the cleanup efforts progress and would not exceed the approximately 30,000 AFY over the long-term. For the five WYs 2021 through 2025, total annual groundwater pumping including pumping for remediation and clean-up operations was within the subbasin sustainable yield, ranging from 178,000 to 224,100 acre-feet (AF), and averaging 195,400 AF. Additionally, undesirable results have not occurred for any of the six sustainability indicators. Thus, the GSAs conclude that the GSP is being implemented in a manner consistent with achieving the Subbasin's sustainability goal.

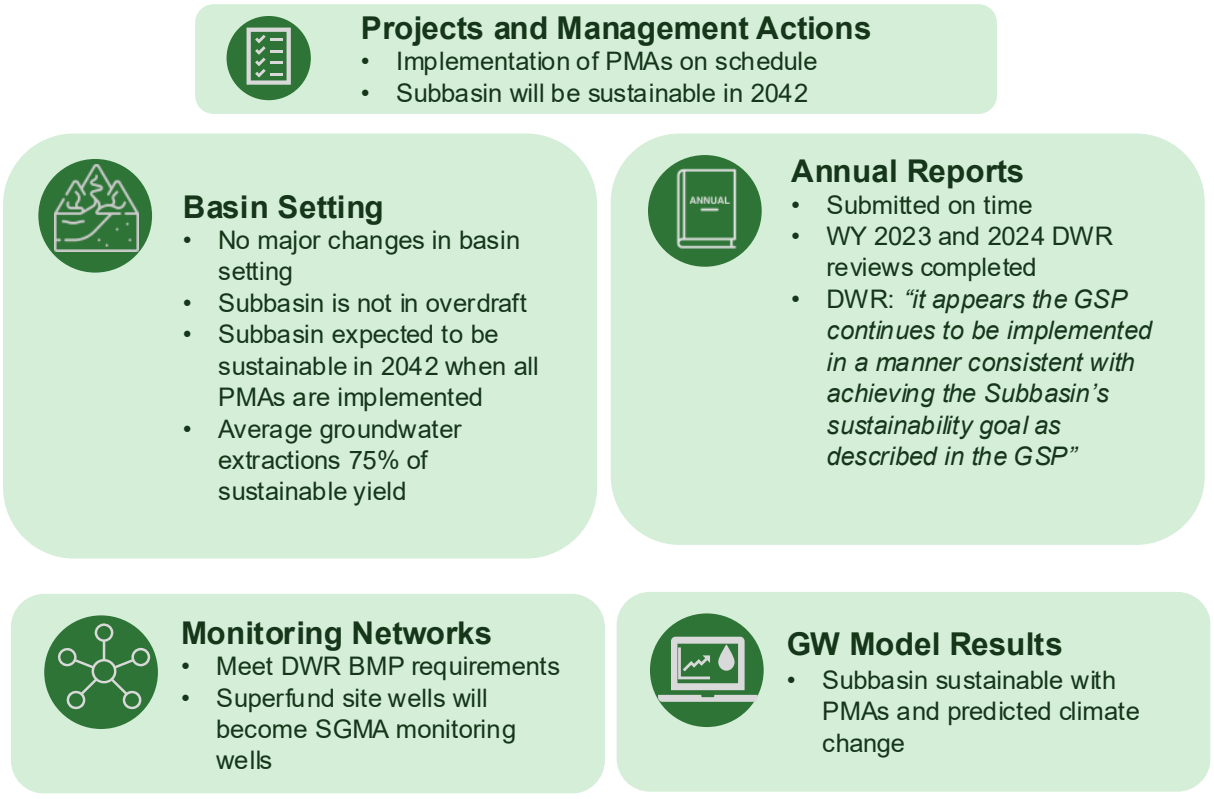
E.S.3. Implementation Status and Key Findings

Implementation of projects and management actions (PMAs) remains on schedule, and overall basin conditions indicate stable or improving trends.

Only one dry well was reported in 2022 during the second consecutive critical water year. Results from the DWR Dry Well Susceptibility Tool, the Senate Bill (SB) 552 Well Vulnerability Tool, and the Subbasin's domestic well vulnerability analysis indicate that the overall risk of domestic wells going dry is very low.

In addition, the Subbasin has added one project that is being implemented to ensure sustainability goals will be met and a second conceptual recharge project that can be funded if needed.

Based on these findings, the GSAs are confident that the GSP has been and continues to be implemented in a manner consistent with achieving the Subbasin's sustainability goal as described in the GSP. Overall, GSA implementation activities are progressing as expected and are effectively supporting achievement of the Subbasin's sustainability goal.



E.S.4. New Information and Stakeholder Engagement

As discussed previously, new data and analytical tools were incorporated during this evaluation cycle, including updated domestic well vulnerability assessments and state-provided tools. These data were used to refine the understanding of groundwater conditions, the basin setting, and needed PMAs.

The GSAs continued to engage interested parties throughout the evaluation cycle through regular meetings, coordination efforts, and public outreach activities. Public comments received during GSP implementation and Periodic Evaluation development were considered in preparing this assessment. Comments were limited in number and primarily consisted of requests for clarification on presentation materials. These comments were considered in refining analyses and presentation of results in this Periodic Evaluation.

The Sloughhouse Resource Conservation District (SRCD) GSA withdrew as a GSA in December 2025, and the other GSAs are working cooperatively with DWR to bring that area under the jurisdiction of one of the other GSAs. Additionally, the Omochumne-Hartnell Water District (OHWD) is pursuing annexation of agricultural areas currently within the Sacramento Central Groundwater Authority (SCGA), so the boundaries of these two GSAs will also be updated when the annexation is complete. Aside from these changes in GSA coverage and boundaries, no significant changes to the overall governance structure or agency roles occurred during this evaluation cycle.

E.S.5. DWR Recommended Corrective Actions

On July 27, 2023, DWR completed its evaluation of the 2022 SASb GSP and approved the GSP. Four recommended corrective actions were provided by DWR, which are addressed in this Plan Evaluation as well as the 2027 GSP. The recommended corrective actions are summarized below:

RECOMMENDED CORRECTIVE ACTION 1

Amend or update the sustainable management criteria for degraded water quality as follows:

a. *Establish sustainable management criteria for arsenic or provide further clarification about why sustainable management criteria was not developed for this constituent.*

   → A trend analysis is provided to further clarify why sustainable management criteria were not developed for Arsenic in Section 3.4.

b. *Provide information regarding the Subbasin's groundwater quality conditions using specific conductivity or provide a better explanation of the relationship between total dissolved solids (TDS) and specific conductivity.*

   → Additional information and an improved explanation is provided in Section 3.4.

c. *Amend the quantitative definition of undesirable results to account for localized threshold exceedances in a single aquifer zone or provide additional information to the GSP to support why undesirable results will not occur unless simultaneous exceedances occur in both aquifer zones.*

   → Additional information is provided in Section 3.4.

RECOMMENDED CORRECTIVE ACTION 2

Revise the definition of undesirable results for land subsidence such that groundwater extraction and other factors, whether due to action or inaction of the GSAs with respect to Subbasin management, are considered and not excluded in the undesirable result definition. Additionally, update tables to provide a consistent definition of the undesirable result.

→ Undesirable results and associated tables are updated in Section 3.5.

RECOMMENDED CORRECTIVE ACTION 3

Department staff understand that estimating the location, quantity, and timing of stream depletion due to ongoing, Subbasin-wide pumping is a complex task and that developing suitable tools may take additional time; however, it is critical for the Department's ongoing and future evaluations of whether GSP implementation is on track to achieve sustainable groundwater management. The Department plans to provide guidance on methods and approaches to evaluate the rate, timing, and volume of depletions of interconnected surface water and support for establishing specific sustainable management criteria in the near future. This guidance is intended to assist GSAs to sustainably manage depletions of interconnected surface water.

In addition, the GSAs should work to address the following items by the GSP's first periodic evaluation:

a. *Provide further clarification regarding the potential impacts to beneficial uses and users that may be affected by future depletions of interconnected surface water related to the projected decreased streamflow exceedance probabilities for the American and Sacramento Rivers due to climate change.*

    → These future depletions are due to changes in rainfall observed in climate change model results and are not due to groundwater management. The PMAs are estimated to increase groundwater levels in the subbasin, which will help to mitigate any potential impacts to beneficial uses and users. Further discussion is provided in Section 3.6.

b. *Consider utilizing the interconnected surface water guidance, as appropriate, when issued by the Department to establish quantifiable minimum thresholds, measurable objectives, and management actions.*

    → After reviewing the interconnected surface water guidance, the GSAs plan to develop a five-year plan to address this and report the results in the 2032 Periodic Evaluation.

c. *Continue to fill data gaps, collect additional monitoring data, and implement the current strategy to manage depletions of interconnected surface water and define segments of interconnectivity and timing.*

    → The GSAs are actively filling data gaps, expanding monitoring, and implementing the current strategy to manage interconnected surface water depletions.

d. *Prioritize collaborating and coordinating with local, state, and federal regulatory agencies as well as interested parties to better understand the full suite of beneficial uses and users that may be impacted by pumping induced surface water depletion within the GSAs' jurisdictional area.*

→ The GSAs continue to collaborate and coordinate with adjacent subbasin technical staff and consultants and with local, state, and federal regulatory agencies and interested parties to better understand the potential impact of pumping on interconnected surface water depletion within the GSAs' jurisdictional area.

RECOMMENDED CORRECTIVE ACTION 4

Provide additional information on the monitoring network, including:

a. Define the monitoring site type and data collection frequency in tabular format for the degraded water quality monitoring network in the GSP.

→ This information is provided in Section 6.2.

b. Conduct a reconciliation between the details of the monitoring network provided in the GSP with the requirements of the data and reporting standards in the GSP Regulations. Where requirements of the data and reporting standards are not provided, the GSAs should include this information in the periodic evaluation of the GSP. As a reminder, modifications to the Subbasin's monitoring network must be reflected in the SGMA Portal's Monitoring Network Module.

→ Modifications to the monitoring network and data requirements and reporting standards will be completed in the SGMA Portal's Monitoring Network Module within a week of the upload of 2027 Periodic Evaluation.

1. Introduction

GSP Emergency Regulations §356.4 state that:

> *Each Agency shall evaluate its Plan at least every five years and whenever the Plan is amended, and provide a written assessment to the Department. The assessment shall describe whether the Plan implementation, including implementation of projects and management actions, are meeting the sustainability goal in the basin.*

1.1. Introduction and Plan Authority

The Sustainable Groundwater Management Act (SGMA), passed in 2014, requires the formation of local Groundwater Sustainability Agencies (GSAs) to oversee the development and implementation of Groundwater Sustainability Plans (GSPs or Plans), with the goal of achieving sustainable management of California's groundwater basins.

The California Department of Water Resources (DWR or Department) designated the South American Subbasin (SASb or Subbasin) as a high-priority basin. In response, six local entities formed GSAs within the Subbasin: the SCGA, OHWD, SRCD (since withdrawn – see Section 9.2.1), North Delta GSA (NDGSA), Reclamation District 551, and Sacramento County (collectively, the GSAs).

The GSAs jointly developed the SASb GSP, which was submitted to DWR in January 2022 and approved in July 2023. Figure 1-1 shows the location of the Subbasin and participating GSAs.

1.2. Purpose of Periodic Evaluation

This Periodic Evaluation meets the five-year assessment requirement of the GSP Emergency Regulations §356.4 *Periodic Evaluation by Agency* and assesses the GSP implementation period for Water Years (WYs) 2021 through 2025. The organization of this Periodic Evaluation adheres to Section 3.3 of the *Groundwater Sustainability Plan Implementation: A Guide to Annual Reports, Periodic Evaluations, & Plan Amendments* (DWR, 2023). Further, this Periodic Evaluation is accompanied by the 2027 GSP that adds new information to the 2022 GSP.

The purpose of this Periodic Evaluation is to provide DWR, interested parties, and the public with an assessment of:

- Progress in implementing the SASb GSP
- Changes in groundwater conditions within the Subbasin
- Progress toward achieving the Subbasin's sustainability goal
- The need, if any, for updates or amendments to the GSP

The Subbasin's sustainability goal is to maintain a locally managed, economically viable, and sustainable groundwater resource for existing and future beneficial uses by operating within the sustainable yield and adapting management as needed to address unforeseen future conditions.

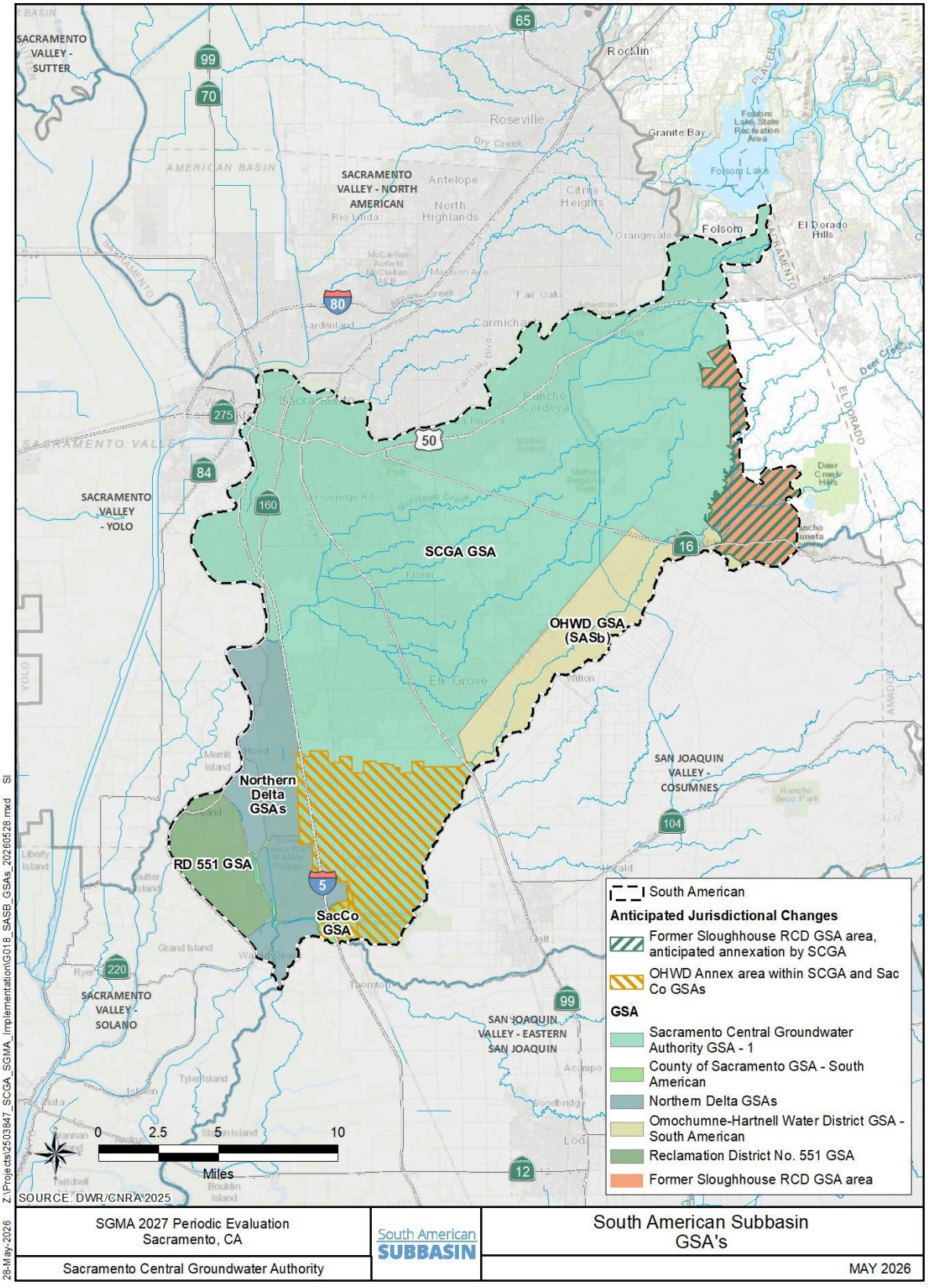
This Periodic Evaluation summarizes and evaluates:

- New and significant information
- Groundwater conditions for each applicable sustainability indicator identified in the approved GSP
- Actions taken to address recommended corrective actions issued by DWR
- Status of projects and management actions
- Updates to the basin setting
- Monitoring network updates
- Actions and authorities taken by the GSAs during this evaluation cycle

On July 27, 2023, DWR completed its evaluation of the 2022 GSP and approved the GSP. As part of its determination, DWR identified four recommended corrective actions intended to enhance the GSP and support future evaluations. This Periodic Evaluation describes the steps taken to implement these recommended corrective actions and the accompanying 2027 GSP includes the revisions to the GSP:

- Recommended Corrective Action 1 — See Section 3.4
- Recommended Corrective Action 2 — See Section 3.5
- Recommended Corrective Action 3 — See Section 3.6
- Recommended Corrective Action 4 — See Section 6.2

Figure 1-1. South American Subbasin Location Map and Groundwater Sustainability Agencies



2. New Information Collected

GSP Emergency Regulations §356.4(f) include a requirement that the Periodic Evaluation shall include:

> *A description of significant new information that has been made available since Plan adoption or amendment, or the last five-year assessment. The description shall also include whether new information warrants changes to any aspect of the Plan, including the evaluation of the basin setting, measurable objectives, minimum thresholds, or the criteria defining undesirable results.*

This section describes new information collected during the evaluation cycle since the development of the 2022 GSP. Each piece of new information was evaluated to determine whether it affects key components of the GSP. This evaluation also considers whether the information warrants revisions to the GSP. A summary of information that is new and significant and its implications for the GSP is summarized in Table 2-1.

Table 2-1. Summary of New Information Since 2022 GSP Development

Significant New Information	Description	Aspects of Plan Affected	Warrant Change to Any Aspects of the Plan (Yes/No)
DWR Airborne Electromagnetic (AEM) Survey	AEM survey data was collected by DWR and is available at: https://water.ca.gov/Programs/Groundwater-Management/Data-and-Tools/AEM	Hydrogeologic Conceptual Model	No, added information to Section 2.2 of the GSP – Hydrogeologic Conceptual Model
Cosumnes-South American-North American (CoSANA) Model Refinements	Updates to the CoSANA Model with additional data and new information, including hydrology, land use, surface and groundwater supply/demand for water years 2021-2025.	Plan Area, Basin Setting, Water Budget	No, added information to Section 2.4 of the GSP – Water Budget
Groundwater Level Data	Semi-annual groundwater level data collected at representative monitoring points (RMPs) by the GSAs and reported in the Annual Reports. Some RMPs record groundwater levels at greater frequency than semi-annual measurements.	Groundwater Conditions	No, added information to Section 2.3 of the GSP – Groundwater Conditions
Water Quality Data	Groundwater quality data collected at RMPs and reported in the Annual Reports. Constituents include nitrate as N, specific conductivity (SC), arsenic, iron, and manganese. In response to Corrective Action 1, subbasin-wide arsenic and SC data was acquired to characterize the subbasin's water quality.	Groundwater Conditions	No, added information to Section 2.3 of the GSP – Groundwater Conditions
Water Quality Monitoring RMP Site Type and Frequency Tabulation	In response to Corrective Action 4a, monitoring site types and data reporting frequencies for the groundwater quality monitoring network were tabulated.	Monitoring Network	No, updated information provided in Section 3.4.3 of the GSP
DWR Dry Well Reporting System	Review of DWR's Dry Well Reporting System to identify reported dry domestic wells during the evaluation cycle. System accessible at https://mydrywell.water.ca.gov/	Monitoring Network	No
DWR Dry Domestic Well Susceptibility Tool	Use of DWR's Dry Domestic Well Susceptibility Tool to cross-check domestic well vulnerability analysis in support of the Shallow/Vulnerable Well Protection Program.	Project and Management Actions	No
SB 552 Water Shortage Vulnerability Scoring and Tool	Review of the SB 552 drinking water well vulnerability tool as a supplemental resource to identify vulnerable wells.	Project and Management Actions	No

Significant New Information	Description	Aspects of Plan Affected	Warrant Change to Any Aspects of the Plan (Yes/No)
Voluntary Monitoring Program Well Data	Groundwater level measurements and well construction information from domestic wells collected by volunteers.	Groundwater Conditions	No, added information to Section 2.3 of the GSP – Groundwater Conditions
Updated Domestic Well Inventory and Well Vulnerability Analysis	New data from UC Berkely Water Equity Science Shop and DWR's Online System for Well Completion Reports (OSWCR).	Groundwater Conditions	No, added information to Section 2.3 of the GSP – Groundwater Conditions
California Data Exchange Center (CDEC) Stream Gage Records	Flow data from the CDEC for gages on the American River, Cosumnes River, and other stream gages within the SASb. Quantitative analysis is planned for a future evaluation cycle.	Monitoring [(Interconnected Surface Water (ISW)]	No
Additional Streamflow Measurements and Related RMP Groundwater Levels	In response to Corrective Action 3 on Interconnected Surface Waters.	Groundwater Conditions, Sustainable Management Criteria	No
DWR Three-Paper Series on ISW	Three paper series published by DWR to provide informational resources on ISW. Available on DWR website: https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents	Sustainable Management Criteria	No, the document is informational guidance
Revised Land Subsidence Undesirable Result Definition	In response to Corrective Action 2, revised the definition of undesirable results for land subsidence.	Sustainable Management Criteria; Undesirable Results	No, revised undesirable results in Executive Summary, Section 2.3.5 and 3.2 of the GSP – Sustainable Management Criteria
DWR Land Subsidence Best Management Practices (BMP) Document	A BMP document that describes activities, practices, and procedures to avoid or minimize subsidence under SGMA. Guidance on DWR website: https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents	Sustainable Management Criteria	No, the document is informational guidance

Significant New Information	Description	Aspects of Plan Affected	Warrant Change to Any Aspects of the Plan (Yes/No)
Aerojet Remediation Superfund Coordination and Data	To address and plan for the declining groundwater levels due to cleanup activities at Aerojet and the Inactive Rancho Cordova Test Site, obtained updated pumping and capture-zone information relevant to groundwater level Sustainable Management Criteria (SMCs) in the region of the remediation activities.	Sustainable Management Criteria	No, revised monitoring network and added information to Sections 2.3 and 3.5 of the GSP – Groundwater Conditions and Monitoring Network
American River Basin Study – Bureau of Reclamation	A watershed-level look at projected climate change impacts and strategies for addressing future water demands, flood risks, and environmental impacts. Study can be found here: https://www.usbr.gov/watersmart/bsp/completed.html	Basin Setting, Project and Management Actions	No, the final draft of this plan informed the 2022 GSP climate change analysis, so no new information to add
American River Watershed Resilience Pilot Project	A watershed-level look at projected climate change impacts and strategies for resilience and adaptation. Key projects to enhance resiliency include: Managed Aquifer Recharge and Multi-Benefit Floodplain and Levee Setback Projects.	Basin Setting, Project and Management Actions, climate change based on long-term observations and American River Basin Study (ARBS) (2022) projections	Yes, plan briefly described in Section 2.1.11
DWR Guidance on Funding SGMA Implementation	DWR guidance document on funding mechanisms for SGMA implementation. Guidance on DWR website: https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents	Project and Management Actions	No, the document is informational guidance
DWR Guidance on Considerations for Identifying and Addressing Drinking Water Well Impacts	A DWR guidance document on appropriate ways to monitor and address impacts to drinking water well users due to SGMA implementation. Guidance on DWR website: https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents	Sustainable Management Criteria	No, the document is informational guidance
Aquifer Recharge Potential	Aquifer Recharge Potential (ARP) maps identify locations that have relatively higher potential for managed aquifer recharge (MAR) and are intended to be used as a screening tool.	Basin setting, Project and Management Actions	No, Recharge section 2.2.8.4
Water Quality Monitoring of Flood-Managed Aquifer	Findings indicate that groundwater quality in the aquifer beneath the vineyards has not been altered by Ag-MAR. Nutrient, pesticide, and trace metal concentrations remain far below standards set for drinking	Basin setting, Project and Management Actions	No, Recharge section 2.2.8.4

Significant New Information	Description	Aspects of Plan Affected	Warrant Change to Any Aspects of the Plan (Yes/No)
Recharge on Vineyards (Ag-MAR) near Wilton, CA	water and do not show significant changes over time, including before and after various Ag-MAR flooding events.		
Sacramento Regional Water Bank – Goal, Objectives, Principles, and Constraints	This document defines the foundational framework for development of the Sacramento Regional Water Bank, including its overarching goal, objectives, guiding principles, and key constraints. It establishes the strategic direction for water bank planning, including alternatives development, environmental documentation, governance, and implementation considerations. The report also highlights regional water management challenges driven by climate change.	Projects and Management Actions	No, the document is informational guidance
Sacramento Regional Water Bank Governance: Organizational Framework, Functions, and Associated Roles and Responsibilities	This report outlines the governance framework for the proposed Sacramento Regional Water Bank, including organizational structure, roles and responsibilities, policy and legal functions, operational tools (e.g., water accounting, monitoring, and reporting), and agreements and financing mechanisms. The document supports development of a coordinated regional approach to water banking and provides a foundation for implementation and stakeholder engagement.	Projects and Management Actions, Coordination Agreement	No, the document is informational guidance
Regional Water Authority (RWA) – Water Accounting System for Water Banking in North and South American Subbasins	This report presents a structured Water Accounting System (WAS) to support transparent and consistent tracking of water banking activities within the North and South American Subbasins. The WAS establishes standardized procedures for accounting of recharge, recovery, storage balances, and losses, and supports adaptive management, regulatory compliance, and coordination among GSAs and participating agencies. The framework also defines roles, responsibilities, and reporting requirements, and is intended to support implementation of the Sacramento Regional Water Bank and other current and future water banking programs.	Projects and Management Actions	No, the document is informational guidance
DWR – Cosumnes River Multi-Benefit Floodplain Restoration Pilot Study Summary (DWR, 2025)	This study summarizes potential multi-benefit floodplain restoration opportunities along the Cosumnes River and Deer Creek using DWR's Ecological Floodplain Inundation Potential toolset. The analysis identifies and prioritizes project opportunities that could enhance floodplain function, improve groundwater recharge, reduce flood risk, and support ecosystem habitat.	Projects and Management Actions	Yes, Added project to Section 4

Significant New Information	Description	Aspects of Plan Affected	Warrant Change to Any Aspects of the Plan (Yes/No)
Sacramento County – State Water Code 1242.1 Flood Diversions for Recharge	Sacramento County worked with Rancho Murrieta Community Services to divert flood waters for recharge under the authority granted by State Water Code 1242.1.	Projects and Management Actions	Yes, Added project to Section 4
Elk Grove Water District – Recharge Basin Concept	Elk Grove Water District sponsored a groundwater modeling study to evaluate benefits of recharge in a gravel pit near the Folsom South Canal.	Projects and Management Actions	Yes, Added to Section 4

The extensive new information described above supports the 2022 GSP implementation plan. These new data and monitoring results have been carefully considered and added to the 2027 GSP to further the understanding of the Subbasin. The information supports the conclusion that the GSP is being implemented in a manner consistent with achieving the Subbasin's sustainability goal as described in the GSP. The analyses in response to the recommended corrective actions led to minor technical changes incorporated into the 2027 GSP without changing the fundamental sustainability goals or thresholds. Thus, the GSAs determined that a plan amendment was not necessary.

3. Groundwater Conditions Relative to Sustainable Management Criteria

GSP Emergency Regulations §356.4(a) state the Periodic Evaluation shall include:

> *A description of current groundwater conditions for each applicable sustainability indicator relative to measurable objectives, interim milestones and minimum thresholds.*

Table 3-1 summarizes the SMCs for each applicable sustainability indicator as in the 2027 GSP.

The following subsections are organized by sustainability indicator and evaluate current groundwater conditions over the evaluation cycle for this Periodic Evaluation relative to SMCs established in the 2022 GSP, using supporting data to evaluate if sustainable conditions have been maintained in the SASb. Where applicable, modifications to the SMC definitions or methodology due to changes in the representative monitoring networks or recommended corrective actions from DWR's 2022 GSP determination letter are described. An update to current groundwater conditions is included in Section 2.3 of the 2027 GSP.

Table 3-1. Summary of Sustainable Management Criteria

Sustainability Indicator	Identification of Undesirable Results	Measurable Objective and Interim Milestones	Minimum Threshold
Chronic Lowering of Groundwater Levels	More than 25% of representative monitoring wells fall below minimum thresholds (MTs) for three consecutive years.	Average groundwater levels observed from January 2015 to June 2021. Measurable Objectives (MOs) are higher in the Harvest Water area to account for recharge over time.	Set at historical minimum elevations to protect sensitive uses and users and avoid undesirable results.
Reduction in Groundwater Storage	Groundwater levels used as a proxy for this sustainability indicator.		
Seawater Intrusion	This sustainability indicator is not applicable in the SASb.		
Degraded Water Quality	More than 2 RMPs exceeding the MT for Nitrate or for Specific Conductance.	Maintain concentration at each RMP below the maximum concentration observed at the RMP prior to May 2020. No MO shall exceed 90% of the MT [9 milligrams per liter (mg/L) for nitrate, 1,440 micromhos per centimeter (micromhos/cm) for SC].	Nitrate = 10 mg/L Specific Conductance = 1,600 micromhos/cm
Land Subsidence	When subsidence substantially interferes with beneficial users of groundwater and surface land uses.	Maintain current ground surface elevations.	No more than 0.1 foot in any single year and a cumulative 0.5 foot in any five-year period, resulting in no long-term permanent subsidence.

Sustainability Indicator	Identification of Undesirable Results	Measurable Objective and Interim Milestones	Minimum Threshold
Depletions of Interconnected Surface Water	Management of depletions of interconnected surface water is performed using groundwater levels as a proxy pending re-evaluation following review of soon to be issued DWR ISW Guidance.		

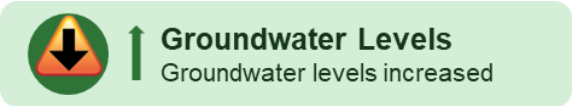
3.1. Chronic Lowering of Groundwater Levels

No recommended corrective actions related to the chronic lowering of groundwater levels sustainability indicator were provided in DWR's determination letter for the SASb. There are no significant changes to SMC for this sustainability indicator as part of the 2027 GSP.

No undesirable results related to chronic lowering of groundwater levels occurred during the evaluation cycle. While limited exceedances of MTs occurred at individual RMPs, these exceedances are not widespread, persistent, or sufficiently severe to meet the definition of undesirable results.

3.1.1. Current Conditions Evaluation

Groundwater level conditions during the evaluation cycle (WYs 2021 through 2025) were evaluated using RMPs and compared to MTs, MOs, and interim milestones (IMs). Figure 3-1 shows a map of the RMPs for the chronic lowering of groundwater levels monitoring network defined in the 2022 GSP.



Across the evaluation cycle, groundwater levels remained above MTs at the majority of RMPs, and conditions did not trigger undesirable results as defined in the GSP. The percentage of RMPs above MTs each year is summarized below and in Figure 3-2:

- WY 2021: 92% above MTs (8% below)
- WY 2022: 86% above MTs (14% below)
- WY 2023: 93% above MTs (7% below)
- WY 2024: 93% above MTs (7% below)
- WY 2025: 91% above MTs (9% below)

Although some RMPs were below MTs in individual years, the frequency of wells below MTs remained well below the threshold for undesirable results, which is defined as 25% of RMPs below MTs for three consecutive years. These results indicate that groundwater level conditions across the Subbasin remain stable and within the range of sustainable management.

Although basin-wide groundwater level conditions did not constitute undesirable results, groundwater level conditions near the Aerojet and Mather Superfund sites differ from broader Subbasin conditions due to ongoing remediation activities. Figure 3-1 categorizes the RMPs based on the change in mean groundwater levels from 2021 through 2025 minus the historical period of 1995 through 2014. The classification scheme is consistent with categories used in DWR's semiannual groundwater reports. As shown in Figure 3-1, groundwater levels in the Aerojet and Mather Superfund areas have declined

relative to the historical baseline condition. Due to these localized influences, conditions in the Aerojet and Mather Superfund areas are described separately from the broader Subbasin.

Figure 3-1. Summary of Representative Monitoring Points for Chronic Lowering of Groundwater Levels (Difference 2021-2025 minus 1995-2014)

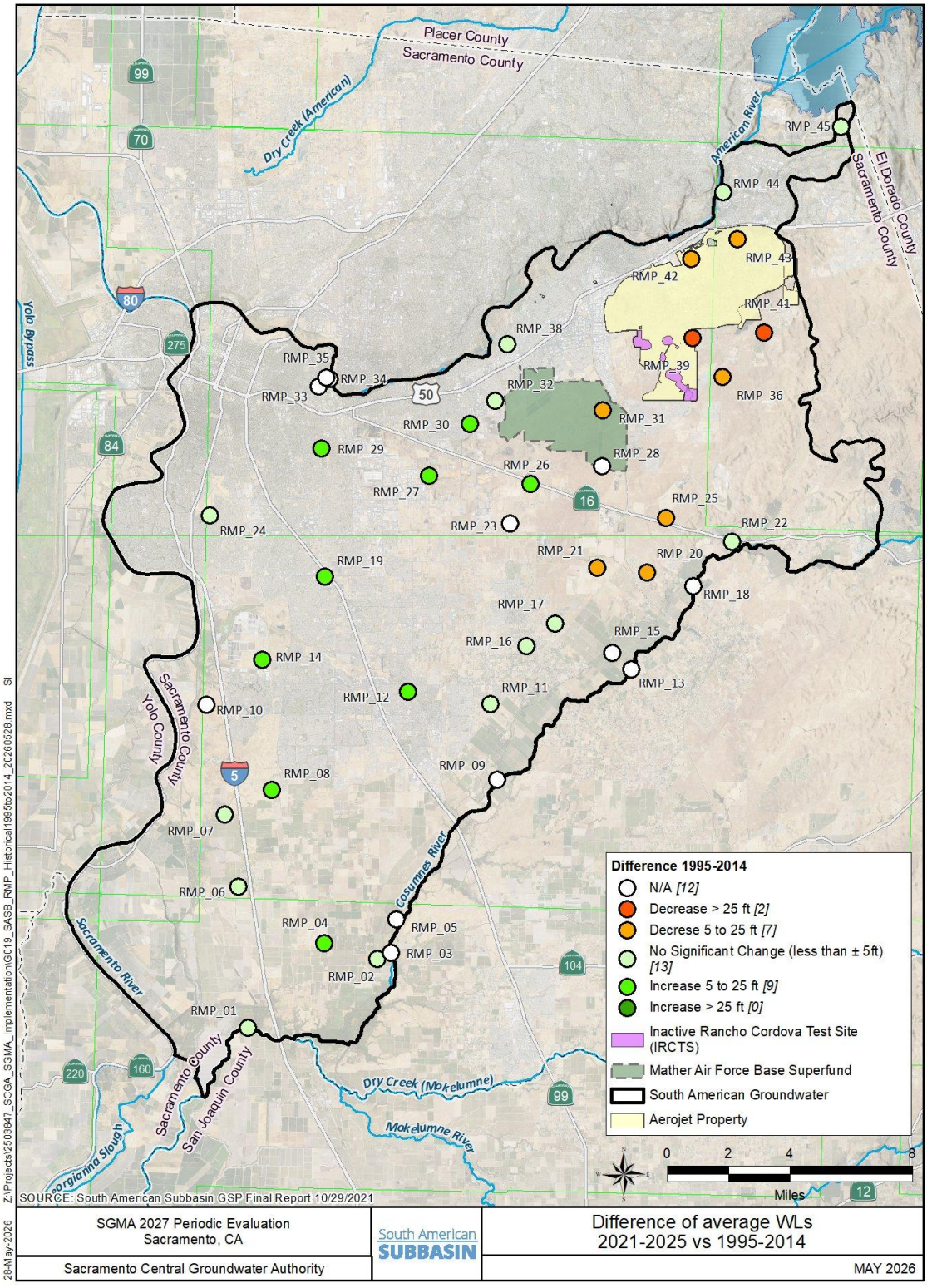
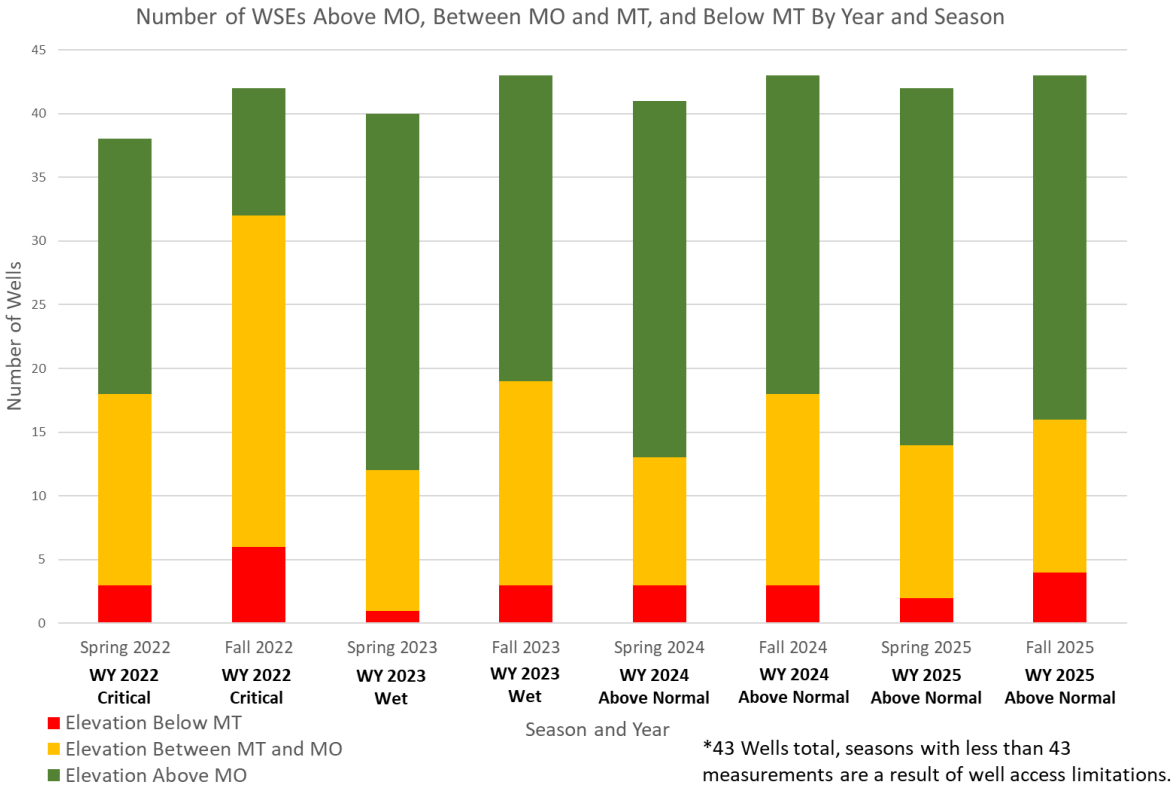


Figure 3-2. Groundwater Conditions Relative to Chronic Lowering of Groundwater Levels Sustainable Management Criteria – All RMPs[1]



Note:

1. Although Fall water levels are observed in the new water year, the level is the result of what happened in the prior year; thus, the Fall levels are labeled with the water type of the previous water year.

3.1.1.1. Aerojet and Mather Superfund Area

Figure 3-3 summarizes groundwater level conditions at the eight RMPs within the Aerojet and Mather Superfund areas by showing the number and percentage of wells above MOs, between MTs and MOs, and below MTs for each monitoring event from Spring 2022 through Fall 2025. Overall, most RMPs were consistently either above MOs or between MT and MO, indicating generally acceptable groundwater conditions during the evaluation period. However, several monitoring events included wells below MT, particularly at certain RMPs, reflecting localized exceedances and variability across seasons and hydrologic conditions.

Key observations include:

- In Fall 2025, four RMPs below MTs were located within or adjacent to the Aerojet and Mather Superfund sites
- Annual remediation pumping from the Aerojet and Mather Superfund sites averaged approximately 26,900 acre-feet during WYs 2021 through 2025 (Table 3-2)
- Pumping associated with remediation activities influences local groundwater levels

The GSAs do not have regulatory authority over Superfund remediation activities. However, these activities provide regional benefits to groundwater quality within the Subbasin and are overseen by the Regional Water Quality Control Board (RWQCB), with annual reports available for public review. The remediation activities are highly regulated. The Aerojet and Mather Superfund site areas have around 3,000 monitoring wells that are regularly observed. Remediation pumping is in response to observed incidence of water quality constituents of concern observed in monitoring wells and thus, can increase or decrease through adaptive management. These potential changes in pumping make setting realistic SMCs for monitoring wells in these areas extremely challenging.

Thus, as described in the monitoring network assessment, in response to the new information gained with the five years of experience managing the Subbasin, the GSAs propose to change eight RMPs in this area from SGMA representative wells to SGMA wells without SMCs. The GSAs receive an annual presentation on the state of the Aerojet and Mather Superfund sites from the RWQCB. The GSAs plan to continue reviewing the groundwater conditions in these areas. Furthermore, the GSAs plan to review the situation during each upcoming five-year Periodic Evaluation and consider if conditions have changed to allow SMCs to be re-established for these eight monitoring wells.

Figure 3-3. Groundwater Conditions Relative to Chronic Lowering of Groundwater Levels Sustainable Management Criteria – Aerojet and Mather Superfund RMPs Only

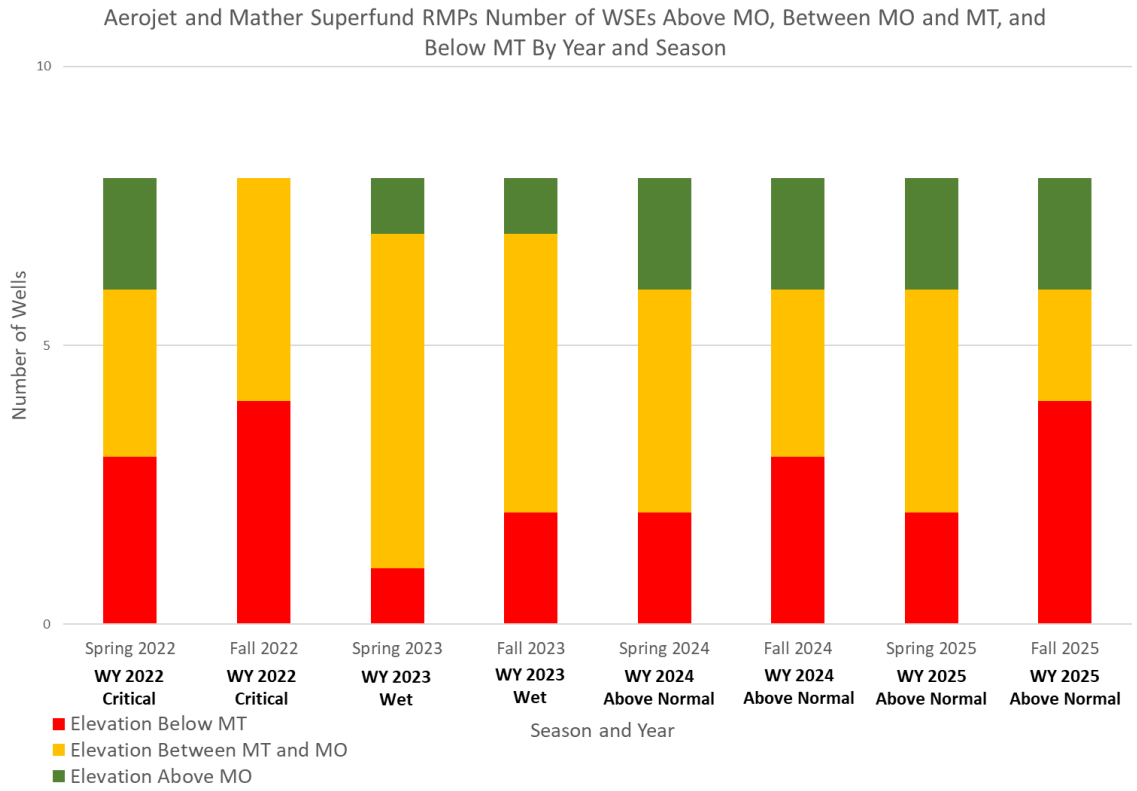


Table 3-2. Remedial Pumping at Superfund Areas

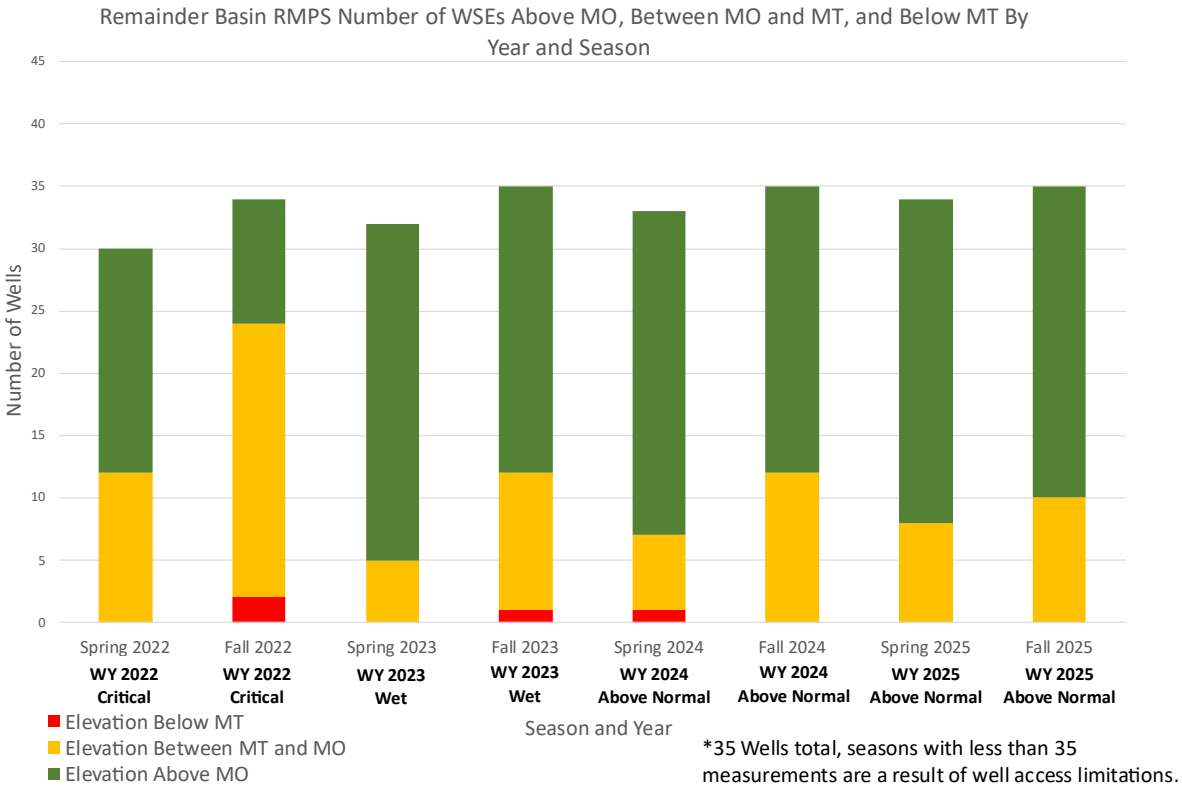
Water Year	Total Remediation Pumping (AF)	RMP Measurements Below MT (eight RMPs measured biannually)
2021	28,561	1
2022	24,038	7
2023	26,966	3
2024	27,621	5
2025	27,276	6
Average	**26,892**	**4.4**

3.1.1.2. Subbasin Area Outside Superfund Site Areas

Figure 3-4 presents groundwater level conditions for the area of the Subbasin, outside the Aerojet and Mather Superfund areas, which are outside of GSA management authority. In other words, this is part of the Subbasin that the GSAs have authority to manage.

Overall, groundwater conditions in the area of the Subbasin outside of Superfund areas were predominantly above MOs throughout the evaluation period, indicating generally sustainable conditions under SGMA criteria. Only a small number of wells were below MT during any given monitoring event, primarily occurring during WY 2022 (critical conditions) and less frequently in subsequent wetter and above-normal years. These results indicate that, areas outside of the Superfund areas, groundwater levels are largely meeting or exceeding sustainability targets, with limited and localized occurrences of conditions below MT.

Figure 3-4. Groundwater Conditions Relative to Chronic Lowering of Groundwater Levels Sustainable Management Criteria – Remainder of the Subbasin (Excluding Aerojet and Mather Superfund RMPs)



3.1.2. Progress Toward Sustainability

Groundwater level conditions demonstrate that the Subbasin is making progress toward achieving its sustainability goal. Groundwater levels have remained stable overall, with temporary declines during critical water years followed by recovery in wetter periods. The data indicate that implementation of the GSP, including existing water management practices and planned projects, has been effective in maintaining groundwater levels above minimum thresholds and avoiding undesirable results.

Impacts to beneficial users related to groundwater levels were minimal during the evaluation cycle. Only one dry well was reported in 2022 during a critical water year, and broader analysis indicates a low risk to domestic well users.

Based on observed trends and current subbasin conditions, the GSAs expect groundwater levels to continue to meet interim milestones and MOs through the next evaluation cycle. Continued implementation of planned PMAs is expected to maintain and improve groundwater levels.

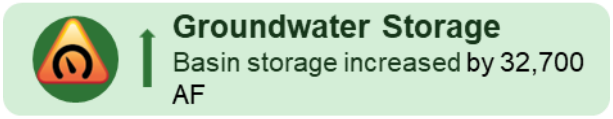
3.2. Reduction of Groundwater Storage

No recommended corrective actions related to the reduction of the groundwater storage sustainability indicator were identified in DWR's approval determination for the SASb GSP. There are no significant changes to SMC for this sustainability indicator as part of the 2027 GSP.

3.2.1. Current Conditions Evaluation

Groundwater storage conditions in the Subbasin are primarily evaluated using groundwater level data, which serve as a proxy for changes in storage. As described in Section 3.1, groundwater levels remained generally stable across the Subbasin during the evaluation cycle (WYs 2021 through 2025), indicating that groundwater storage conditions have also remained stable or improved.

Over the evaluation cycle, groundwater storage in the Subbasin showed a net increase. Basin storage increased by approximately 32,700 acre-feet between WY 2021 and WY 2025. The CoSANA model water budget for the basin calculated an estimated increase in SASb storage of about 7,000 AF during WY 2025. During the 31-year period from 1995-2025, there has been an estimated cumulative increase in groundwater storage of 139,400 AF.



This increase reflects a combination of factors, including:

- Reduced groundwater demand relative to sustainable yield
- Periods of above-average hydrologic conditions
- Continued implementation of conjunctive use and recharge practices

Groundwater storage conditions remained consistent with the SMC established in the GSP. Groundwater level trends, used as a proxy for storage, remained above MTs at the majority of RMPs and did not trigger undesirable results. No long-term declining trend in groundwater storage indicative of overdraft was observed during the evaluation cycle. No undesirable results related to reduction of groundwater storage occurred during the evaluation cycle.

3.2.2. Progress Toward Sustainability

Groundwater storage conditions demonstrate that the Subbasin is making progress toward achieving its sustainability goal. The observed increase in basin storage indicates that groundwater extractions are being managed within sustainable limits. The effectiveness of GSP implementation is further supported by the fact that average groundwater extractions during the evaluation cycle remained below the estimated sustainable yield, and planned PMAs continue to be implemented.

Based on observed trends and current conditions, the GSAs expect groundwater storage to remain stable or continue to increase through the next evaluation cycle. The Subbasin is therefore expected to meet interim milestones and MOs related to groundwater storage. Continued implementation of planned projects and adaptive management strategies will support maintaining groundwater storage within sustainable limits.

3.3. Seawater Intrusion

Seawater intrusion is not an applicable sustainability indicator because seawater intrusion is not present and is not likely to occur in the Subbasin due to distance from the Pacific Ocean, bays, deltas, or inlets.

Seawater Intrusion
Not Applicable

3.4. Degraded Water Quality

The monitoring network for water quality includes 23 RMPs. Nitrate as N is reported annually for most wells, while SC is reported every three years. There are no undesirable results in this evaluation cycle.

The definition of an undesirable result is more than two wells with MT exceedances for a constituent (defined based on number of exceedances as of May 22, 2020). Section 6.2 describes successful coordination with public supply well operators to increase the frequency of reporting for most RMPs to annual for both constituents.

3.4.1. Recommended Corrective Actions

RECOMMENDED CORRECTIVE ACTION 1A - *Establish sustainable management criteria for arsenic or provide further clarification about why sustainable management criteria was not developed for this constituent.*

DWR staff recommended that SMCs for arsenic be established as it appears to have exceedances of the MCL at similar or higher frequencies than nitrate, and TDS or SC. The development of SMCs for nitrate and SC considered feedback from stakeholders, assessment of historical groundwater quality data, evaluation of compliance with water quality objectives, assessment of concentration trends in groundwater quality, information on sources, control options and regulatory jurisdiction, and the coverage of public water supply systems that deliver drinking water to residents within the Subbasin (2022 GSP Section 3.3.3). In response to DWR's recommended corrective action, additional analysis was completed to clarify why SMCs are not defined for arsenic. The analysis acknowledges the same reasoning in the GSP that subbasin management (e.g., groundwater pumping) does not appear to be the cause of arsenic exceedances. Arsenic has a primary Maximum Contaminant Level (MCL) of 10 micrograms per liter (10 µg/L).

The presence of arsenic in the Subbasin is presumed to be naturally occurring[1] and evaluation of arsenic data suggests that arsenic concentrations across the Subbasin are not increasing. To verify this, trend analysis was completed for wells with sufficient record in the period of 2005-2025. For the trend analysis, wells with at least five samples were considered. A Mann-Kendall with pre-whitening was

[1] Welch, A. H., Westjohn, D. B., Helsel, D. R., & Wanty, R. B. (2000). Arsenic in ground water of the United States: occurrence and geochemistry. *Groundwater*, *38*(4), 589-604.

applied to remove autocorrelation from the time series data before determining whether a trend was present.

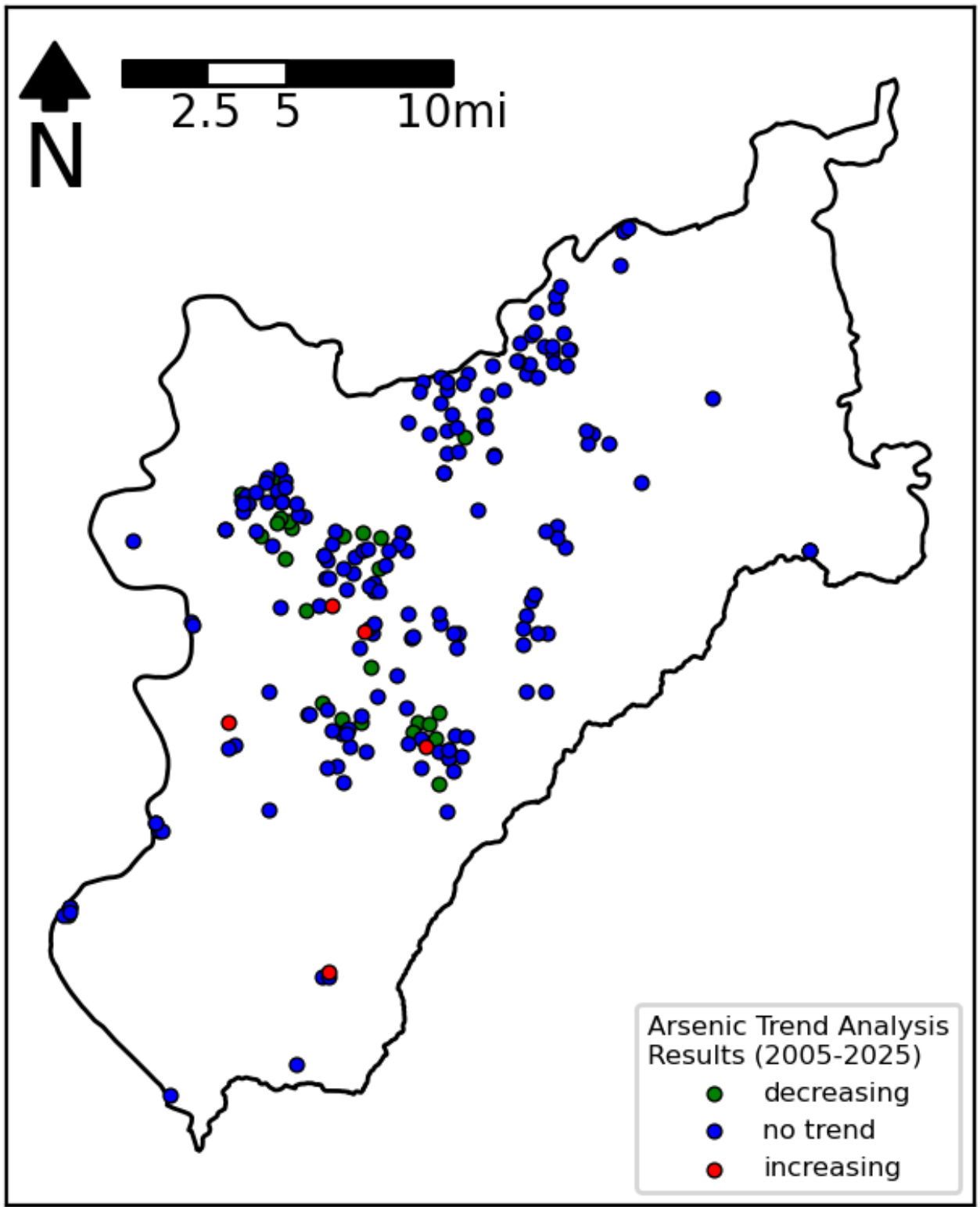
The results show that for wells with at least one sample above 5 µg/L, 4 of 89 wells indicate an increasing concentration trend, and for wells with all samples below 5 µg/L, 1 of 123 wells indicate an increasing concentration trend (Table 3-3). Of all wells evaluated, the low number of wells with increasing trends (2.4%) suggests that arsenic concentrations are generally stable in the Subbasin. This indicates subbasin management (e.g., groundwater pumping) is not degrading water quality with respect to arsenic. Additionally, 4 out of 5 of the wells with increasing trends occur in wells where arsenic concentrations were previously elevated, which is likely due to natural occurrence rather than Subbasin management.

Table 3-3. Summary of Mann-Kendall Trend Analysis Results for Arsenic (1958 - 2025 and 2005 - 2025)

Period	Wells with Decreasing Trend	Wells with No trend	Wells with Increasing Trend	Total wells
1958 - 2025	27	189	5	221
2005 - 2025	27	180	5	212

The spatial distribution of wells with an increasing trend shows the wells are in the western portion of the Subbasin and are not limited to a restricted region (Figure 3-5). Additionally, the wells with increasing trends are co-located with wells that show no trend or decreasing trend, which suggests that overall the Subbasin does not have increasing arsenic concentrations.

Figure 3-5. Map of Mann-Kendall Trend Analysis Results for Arsenic from 2005-2025 for Wells with at Least Five Samples



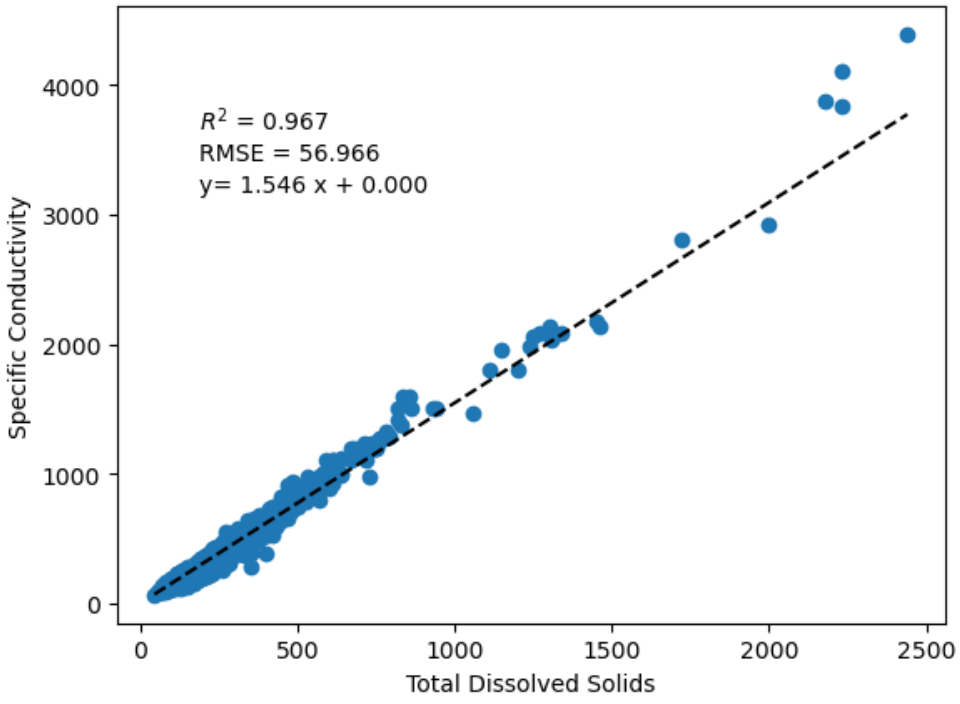
RECOMMENDED CORRECTIVE ACTION 1B - *Provide information regarding the Subbasin's groundwater quality conditions using specific conductivity or provide a better explanation of the relationship between TDS and specific conductivity.*

DWR staff acknowledge that while TDS and SC are related, they recommend additional information on water quality conditions in the Subbasin using SC, or a better explanation of the relationship between TDS and SC. This section presents results of an analysis of TDS and SC to demonstrate the relationship specific to the Subbasin and provides maps of maximum SC measurements from the lower and upper aquifer zones to complement the GSP's maps of maximum TDS concentrations.

A comparison of SC and TDS data was completed to develop a quantified relationship between the two constituents. This review identified Subbasin wells with at least three concurrent measurements. The ratio of SC to TDS was used to remove outlier measurements based on the interquartile range plus or minus 1.5 times the range. TDS was then used as the independent parameter in a linear regression to estimate the SC and quantify the scaling factor between the two analytes specific to the Subbasin.

The scatter plot of TDS (on the x-axis) against specific conductance (on the y-axis) shows a strong linear relationship between the analytes (Figure 3-6). The results of the linear regression show that SC (micromhos/cm) is predicted as TDS (mg/L) multiplied by a factor of 1.546 with an R-squared value of 0.967, indicating a strong fit. Additionally, the root mean square error (RMSE) of 56.97 is small given SC typically ranges from 0 – 2000 micromhos/cm.

Figure 3-6. Scatter Plot Showing the Relationship between TDS and Specific Conductance[1]



Note:

1. The linear regression is plotted with a black dashed line following the calculated equation y = 1.546 x +0 with an R-squared value of 0.967. TDS is mg/L on the x-axis and SC is micromhos/cm on the y-axis.

The spatial distribution of maximum SC measurements from the shallow and deep aquifer zones were mapped to demonstrate that the spatial pattern of SC matches that of TDS. The maps of maximum SC measurements from the shallow and deep zones are presented in Figure 3-7 and Figure 3-8; these were compared to the maximum TDS concentration maps from the shallow and deep aquifer zones presented in the 2022 GSP (Figure 2.3-32 and 2.3-33). The specific conductance figures divide wells into four categories:

- Wells where all measurements were below 50% of the recommended Secondary MCL (SMCL) (<450 micromhos/cm),
- Wells where at least one measurement was greater than 50% of the recommended SMCL (>450 micromhos/cm),
- Wells where at least one measurement was greater than the recommended SMCL (>900 micromhos/cm),
- Wells where at least one measurement was greater than the upper MCL (>1,600 micromhos/cm)

The SC and TDS maps display the same grouping of higher measurements in the western central portion of the Subbasin, with some elevated levels near the American River. The results conclude that the spatial distribution of SC is consistent with TDS, and there is a strong quantifiable relationship between TDS and SC in the Subbasin.

Figure 3-7. Maximum Specific Conductance Measurements in the Shallow Zone

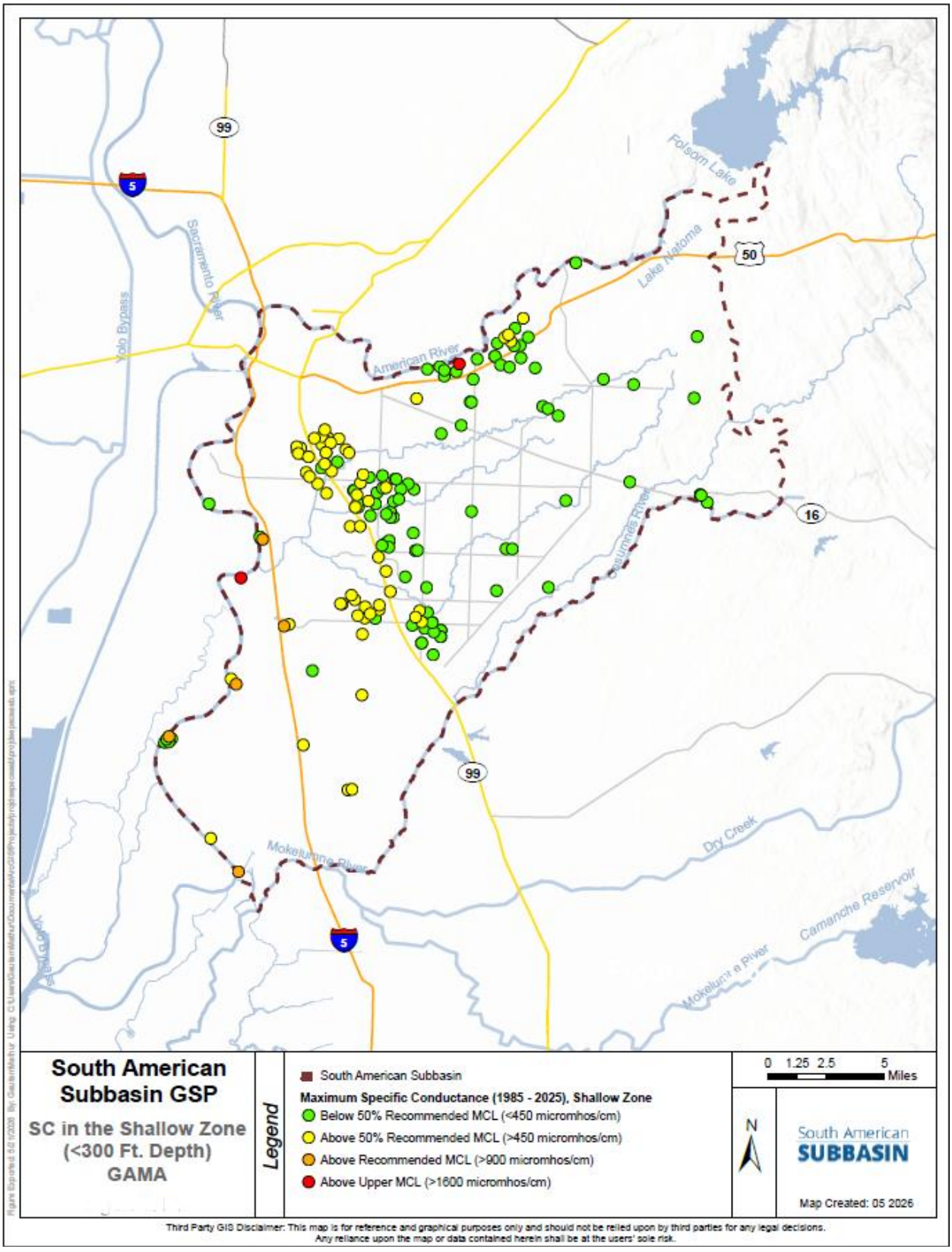
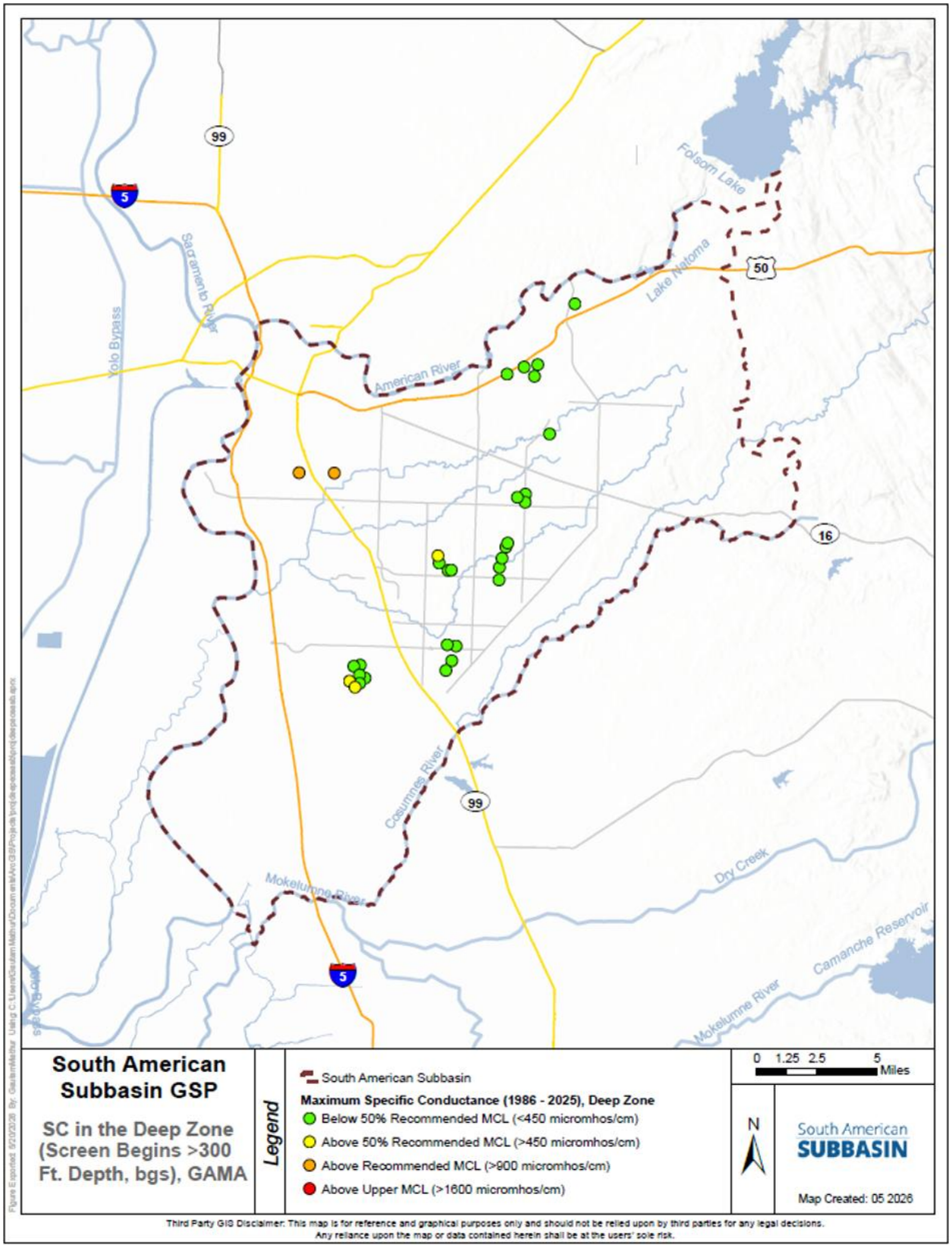


Figure 3-8. Maximum Specific Conductance Measurements in the Deep Zone (wells 300 feet or greater depth)



RECOMMENDED CORRECTIVE ACTION 1C - *Amend the quantitative definition of undesirable results to account for localized threshold exceedances in a single aquifer zone or provide additional information to the GSP to support why undesirable results will not occur unless simultaneous exceedances occur in both aquifer zones.*

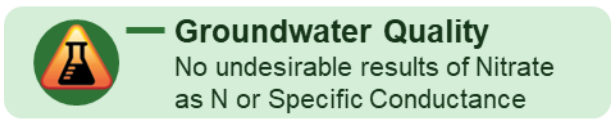
The 2022 GSP defines undesirable results to occur for groundwater quality when "more than 10% of groundwater quality wells exceed maximum thresholds in each aquifer zone (1/10 wells and 1/11 wells in the upper and lower zones respectively)" (2022 GSP, Section 3.2.3.1). The 2022 GSP also states significant and undesirable results are experienced if MTs are exceeded in 10% of the monitoring wells (2022 GSP, Section 3.3.3).

This corrective action recommends the quantitative definition of undesirable results be amended to account for localized threshold exceedances in a single aquifer zone or to provide additional information to support why undesirable results will not occur unless simultaneous exceedances occur in both aquifer zones. This Periodic Evaluation clarifies that significant and undesirable results for degraded groundwater quality are defined to occur when the number of RMPs experiencing exceedances above the MT is greater than the number of RMPs, with exceedances as of May 22, 2020. For the groundwater quality RMP network defined in the 2022 GSP, this corresponds to more than two RMPs exceeding the MT for nitrate, or more than two RMPs exceeding the MT for specific conductance. This definition allows for localized threshold exceedance in one zone to quantify as an undesirable result. It is noted that this clarification to the definition of undesirable results does not change the outcome of the evaluation of undesirable results presented in this section.

The DWR Determination Letter included the recommendation to use the term "minimum threshold" in place of the term "maximum threshold" that was used in the 2022 GSP in the context of SMC for water quality. This recommendation was not a formal Recommended Corrective Action within the Determination Letter; however, it is noted that this Periodic Evaluation and the accompanying 2027 GSP follows this guidance and uses the term "minimum threshold" in place of the term "maximum threshold."

3.4.2. Current Conditions Evaluation

The Water Quality RMPs have generally met their MOs during the past 5 years; there are no Interim Milestones (IMs) defined for degraded water quality. Instead, there are triggers to identify if a constituent may proactively require action to avoid the occurrence of Undesirable Results (URs).



The MT concentration for each of the constituents of concern is their associated regulatory threshold. For nitrate as nitrogen (nitrate as N), this corresponds to the Title 22 Primary MCL of 10 mg/L, and for specific conductance this corresponds to the Title 22 SMCL of 1,600 micromhos/cm. The MO for each RMP is to maintain the concentration below the maximum concentration observed at the RMP prior to May 2020. In addition, no MO shall exceed 90% of the MT (9 mg/L for nitrate, 1,440 micromhos/cm for SC).

Triggers are set below the MT to proactively avoid the occurrence of URs. The trigger value for SC is the recommended SMCL of 900 micromhos/cm. The trigger values for nitrate are 50 percent and 90 percent of the Title 22 MCL, corresponding to 5 mg/L and 9 mg/L, respectively.[2] It is noted that a trigger value can be less than a well's MO, meaning that a well can be meeting its MO (i.e., the concentration goal defined at the well to achieve sustainability) while simultaneously experiencing a trigger.

Table 3-4 presents the SMC evaluation for wells in the 2022 GSP's water quality RMP monitoring network. For nitrate as N, one well exceeded the 5 mg/L trigger value during WYs 2023, 2024, and 2025. Concentrations at this well exceeded the trigger value prior to GSP adoption; therefore, the well continues to meet its MO. Concentrations for nitrate as N are below the trigger for all other RMPs, which shows the Subbasin is meeting IMs for most wells. For SC, there have been up to three wells with trigger exceedances in a year, while the remainder of wells are below the trigger or MO, this shows that most of the wells are meeting IMs.

There have been no MT exceedances for nitrate as N. For SC there has not been more than one exceedance of the MT for a given WY, which avoids significant and undesirable results as defined in the GSP. During WY 2023 and 2024, only one well in the network experienced an exceedance of the specific conductance MT (the same well experienced the exceedance). Given there was only one exceedance, it is expected that there have not been significant impacts to beneficial uses and users; furthermore, there is a low density of domestic wells near the RMP with the exceedance. The well with the exceedance is RMP CA3901216_001_001, which is a municipal well installed in the upper aquifer zone, located adjacent to the Sacramento River in the southwestern portion of the subbasin. It is noted that evaluation of other wells in the area installed to similar depths does not indicate the occurrence of similarly high specific conductance levels as found in that well.

Table 3-4. Summary of RMP SMC Evaluation by Water Year for the Groundwater Quality Network for Nitrate as N and Specific Conductance

Constituent	Water Year	Exceeds MT	Exceeds MO (below MT)	Below MO	Exceeds Trigger	No Measurement
Nitrate as N	2021	0	1	18	0	2
	2022	0	1	16	0	4
	2023	0	2	16	1	3
	2024	0	1	18	1	2
	2025	0	2	16	1	3
Specific Conductance	2021	0	1	5	0	15
	2022	0	0	7	0	14
	2023	1	5	9	3	6
	2024	1	2	5	2	13
	2025	0	2	6	1	13

[2] The DWR Determination Letter included the recommendation to clarify the trigger values for nitrate and specific conductance. This was not a formal recommended corrective action within the Determination Letter; however, text is included in this section to clarify the defined triggers.

3.4.3. Evaluation of Undesirable Results

The GSP defines significant and undesirable results for groundwater quality to occur when the number of RMPs experiencing exceedances above the MT is greater than the number of RMPs with exceedances prior to May 22, 2020 (i.e., more than two for nitrate, or more than two for specific conductance). Groundwater conditions over the past 5 years have not resulted in significant and undesirable results as neither nitrate nor SC had more than two wells with MT exceedances.

3.4.4. Progress Towards Sustainability and PMA Updates

The evaluation of current conditions with respect to SMCs shows that subbasin conditions are generally maintaining existing groundwater quality conditions without further degradation. The GSAs are not implementing PMAs directed at avoiding degrading groundwater quality, but there are several PMAs that may improve groundwater quality through recharge.

The SMCs for Degraded Water Quality are not impacting other sustainability indicators. There is no significant new information on water quality in the Subbasin, and the water quality SMCs have been clarified in response to DWR Recommended Corrective Action 1c. The RMPs for the water quality network have been updated to add additional wells in locations of spatial data gaps, remove wells that were no longer adequately monitored, and increase the frequency of monitoring for specific conductance. SMCs were defined for the new RMPs following the same procedure in the GSP. The additional review of arsenic data, along with the analysis of the relationship between TDS and SC, confirms the results presented in the GSP and does not warrant any changes to the groundwater quality SMCs.

3.5. Land Subsidence

There is one DWR Recommended Corrective Action relative to land subsidence discussed next, along with progress toward sustainability.

3.5.1. Recommended Corrective Action

RECOMMENDED CORRECTIVE ACTION 2 - R*evise the definition of undesirable results for land subsidence such that groundwater extraction and other factors, whether due to action or inaction of the GSAs with respect to Subbasin management, are considered and not excluded in the undesirable result definition. Additionally, update tables to provide a consistent definition of the undesirable result.*

In response, the GSAs updated the definition of undesirable results for land subsidence as follows:

> *An undesirable result for land subsidence occurs when subsidence creates a significant and unreasonable impact on land uses or critical infrastructure and occurs when subsidence is greater than 0.1 foot [0.03 m] in any single year and a cumulative 0.5 foot [0.15 m] in any five-year period as measured in at least a 5 square mile area of the Subbasin. The Interferometric Synthetic Aperture Radar (InSAR) data will be used for measuring subbasin-wide land subsidence consistently each year.*

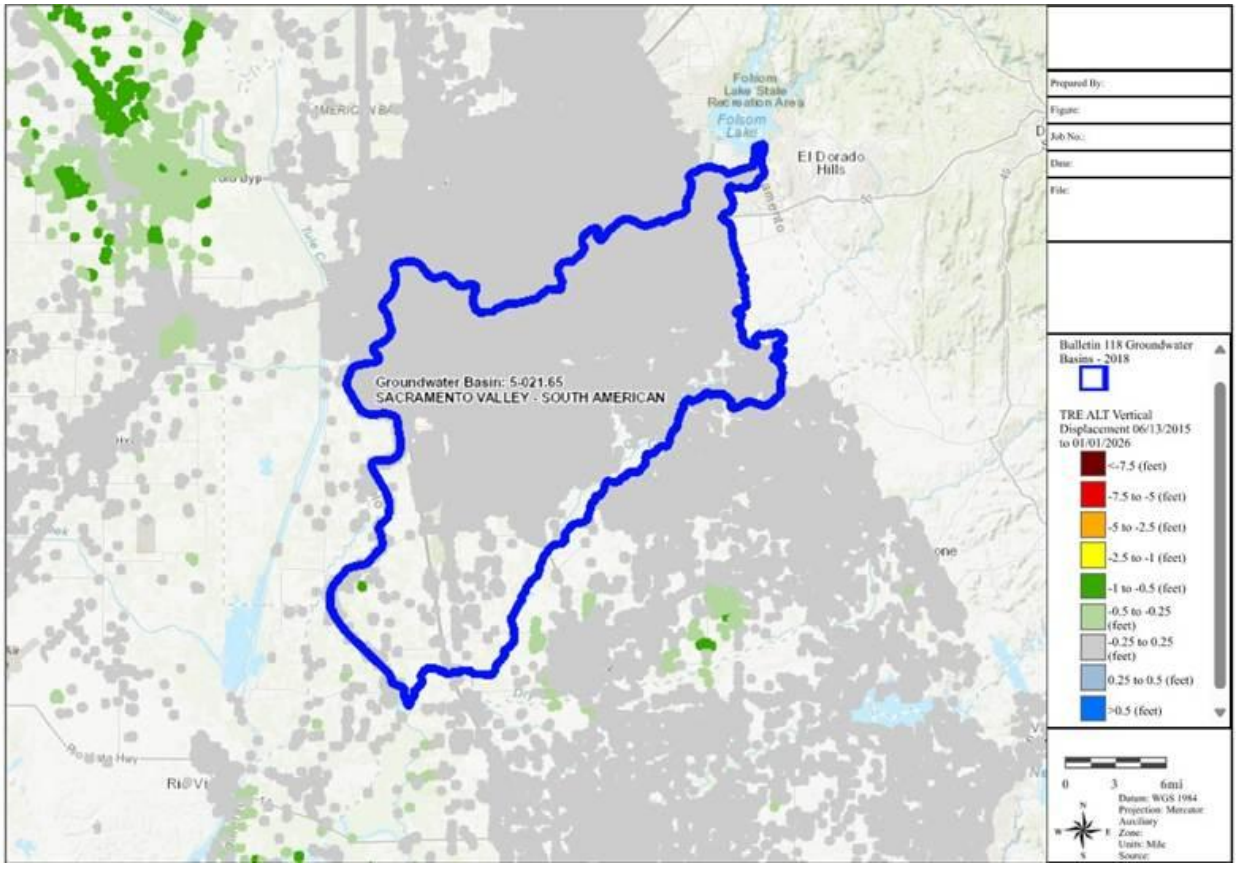
Also, tables ES-4 and 3-1 in the 2027 GSP were updated to include the above definition of the undesirable result for land subsidence in both, ensuring consistency across Plan elements.

Subsidence in the SASb is at the MO and IM of zero subsidence. Figure 3-9 shows total vertical displacement between June 2015 and April 2026 obtained from InSAR satellite data from the SGMA Data Viewer web map. The maximum total displacement is between -0.5 and -1.0 feet on a single pixel (approximately 2.5 acres) located in the southwest area of SASb near the Sacramento River. The figure shows values between -0.25 and 0.25 throughout the remainder of the Subbasin. This is less than -0.02 feet per year over the 11 years from 2015 through 2026 and of similar magnitude to the InSAR data error.

Land Subsidence
Subsidence is at the MO and interim milestone of 0 subsidence

No undesirable results related to land subsidence occurred during the evaluation cycle. No minimum threshold exceedances were observed, and no impacts to beneficial uses or users were identified.

Figure 3-9. South American Subbasin InSAR Subsidence, June 2015 – April 2026



3.5.2. Progress Toward Sustainability

Land subsidence conditions indicate that the Subbasin is achieving its measurable objective and interim milestones for this sustainability indicator. Subsidence rates remain minimal and consistent with stable groundwater levels. These results demonstrate that GSP implementation has been effective in

preventing significant or unreasonable subsidence impacts and maintaining stable subsurface conditions. Continued monitoring using InSAR data and implementation of GSP PMAs will support ongoing prevention of subsidence related impacts.

3.6. Depletions of Interconnected Surface Water

The ISW RMP monitoring network uses a subset of the groundwater level RMP monitoring network wells and groundwater level measurements as a proxy for assessing changes in stream leakage. The subset of wells selected for the ISW RMP monitoring network during GSP development was based on wells located between ISW features and pumping zones in the Subbasin within the shallower depths (e.g., less than 300 ft deep) of the principal aquifer.

DWR is expected to soon release its ISW Guidance Paper on ISW Management, which may change the way the Subbasin monitors impacts to ISW. The ISW monitoring network will be evaluated along with the ISW SMCs during the next 5-year implementation period following the release of the ISW guidance from DWR. The recommended corrective actions will also be reevaluated and updated following the release of the guidance.

3.6.1. Recommended Corrective Action

RECOMMENDED CORRECTIVE ACTION 3 - *Department staff understand that estimating the location, quantity, and timing of stream depletion due to ongoing, Subbasin-wide pumping is a complex task and that developing suitable tools may take additional time; however, it is critical for the Department's ongoing and future evaluations of whether GSP implementation is on track to achieve sustainable groundwater management. The Department plans to provide guidance on methods and approaches to evaluate the rate, timing, and volume of depletions of interconnected surface water and support for establishing specific sustainable management criteria in the near future. This guidance is intended to assist GSAs to sustainably manage depletions of interconnected surface water.*

In addition, the GSAs should work to address the following items by the GSP's first periodic evaluation:

e. Provide further clarification regarding the potential impacts to beneficial uses and users that may be affected by future depletions of interconnected surface water related to the projected decreased streamflow exceedance probabilities for the American and Sacramento Rivers due to climate change.

These future depletions are mostly due to changes in rainfall observed in climate change model results and are not due to groundwater management. The PMAs are estimated to increase groundwater levels in the Subbasin, which will help to mitigate any potential impacts to beneficial uses and users.

f. Consider utilizing the interconnected surface water guidance, as appropriate, when issued by the Department to establish quantifiable minimum thresholds, measurable objectives, and management actions.

After reviewing the ISW guidance, the GSAs plan to develop a 5-year plan to, if necessary, update SMC and the ISW monitoring plan and report the results in the 2032 Periodic Evaluation.

g. *Continue to fill data gaps, collect additional monitoring data, and implement the current strategy to manage depletions of interconnected surface water and define segments of interconnectivity and timing.*

The GSAs are actively filling data gaps, expanding monitoring, and implementing the GSAs recharge strategy to manage interconnected surface water depletions.

h. *Prioritize collaborating and coordinating with local, state, and federal regulatory agencies as well as interested parties to better understand the full suite of beneficial uses and users that may be impacted by pumping induced surface water depletion within the GSAs' jurisdictional area.*

The GSAs continue to collaborate and coordinate with adjacent subbasin technical staff and consultants and with local, state, and federal regulatory agencies and interested parties to better understand the potential impact of pumping on interconnected surface water depletion within the GSAs' jurisdictional area.

3.6.2. Current Conditions Evaluation

The GSP defines groundwater levels as a proxy for the ISW Sustainability Indicator, thus the same MTs are used and the same definition of undesirable results (i.e., more than 25% of RMPs below MTs for three consecutive years). Groundwater levels in measured RMPs for ISW stayed above MTs in at least 7/9 RMPs (78%) in all years, which avoids the occurrence of significant and unreasonable impacts to ISW (Table 3-5).

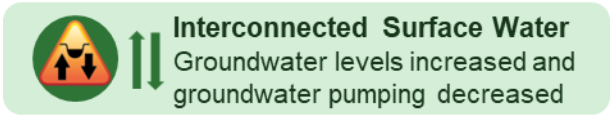


Table 3-5. Summary of RMP SMC and Interim Milestone Evaluation by Water Year[1]

Water Year	Water Year Type	Above MO	Above MT	Below MT	No Measurement	Above IM	Below IM
WY2021	Critical	2	6	0	1	4	4
WY2022	Critical	3	4	2	0	4	5
WY2023	Wet	4	5	0	0	8	1
WY2024	Above Normal	4	4	1	0	8	1
WY2025	Above Normal (1)	4	4	1	0	8	1

Note:

1. At the time of writing DWR has not published a final value for 2025, but it is assumed to be above normal.

For the ISW RMPs, from WY2021-2022 there were 4/9 wells above the 2025 IM likely due to the dry period from 2020-2022 that reduced rainfall and streamflow that supports groundwater recharge in the subbasin (Table 3-5). With the conditions from WY2023-2025, all eight wells outside of the Aerojet superfund site are above their respective interim milestones. These results indicate that GSP implementation has thus far been effective.

No undesirable results related to interconnected surface water occurred during the evaluation cycle.

3.6.3. Progress Toward Sustainability and Implementation Effectiveness

Groundwater level trends and monitoring results indicate that the Subbasin is making progress toward achieving sustainability for the ISW sustainability indicator.

The current implementation of ISW management utilizes groundwater level as a proxy to indicate whether there are undesirable results. Groundwater levels measured over the past 5 years indicate that no undesirable results have occurred (see Section 3.1). As discussed in the Monitoring Section on ISW, there has been additional implementation of stream gages in the Subbasin that will provide data to support the re-evaluation of ISW management following the release of final guidance from DWR on ISW management. There have been no changes to ISW management in the Subbasin; changes are awaiting the new guidance from DWR.

4. Status of Projects and Management Actions

GSP Emergency Regulations §356.4(b) include a requirement that the Periodic Evaluation shall include:

> *A description of the implementation of any projects or management actions, and the effect on groundwater conditions resulting from those projects or management actions.*

This section summarizes the status of PMAs implementation and their contribution to achieving the Subbasin's sustainability goal. In the 2022 GSP, PMAs were organized into three groups based on implementation status:

- Group 1: PMAs that were already being implemented at the time of GSP development and included in baseline conditions. These projects continue to operate and provide ongoing sustainability benefits and are therefore not described in detail in this section.
- Group 2: PMAs planned for near-term implementation.
- Group 3: Supplemental PMAs that will be implemented if needed to maintain sustainability.

Since GSP adoption, two additional projects were identified in WY 2025 and included in the WY 2025 Annual Report. These projects are incorporated into this Periodic Evaluation as part of the Subbasin's adaptive management approach to enhance drought resiliency. Table 4-1 provides a summary of projects, including descriptions, implementation date, and mechanism.

Projects and Management Actions
- Implementation of PMAs on schedule
- Subbasin will be sustainable in 2042

Figure 4-1 (Figure 4-15 from the 2022 GSP) illustrates modeled groundwater storage conditions with implementation of PMAs under projected hydrologic and climate conditions. Model results indicate that, with implementation of the planned PMAs and accounting for anticipated climate change effects, average annual groundwater storage conditions remain stable, with an estimated net change of approximately 100 AF. This supports the conclusion that the Subbasin is sustainable under the current management framework.

Implementation of PMAs is proceeding on schedule, and the Subbasin expects all Group 2 projects to be operational by 2042, including:

- Conjunctive Use: Partially implemented and generating benefits, on schedule for full implementation
- OHWD Recharge: Partially implemented and generating benefits, on schedule for full implementation
- Harvest Water: On schedule

Implementation of these projects has contributed to maintaining stable groundwater levels and storage conditions across the Subbasin, as described in Section 3. Continued implementation of PMAs is expected to further support sustainable groundwater conditions and resilience.

4.1. Projects

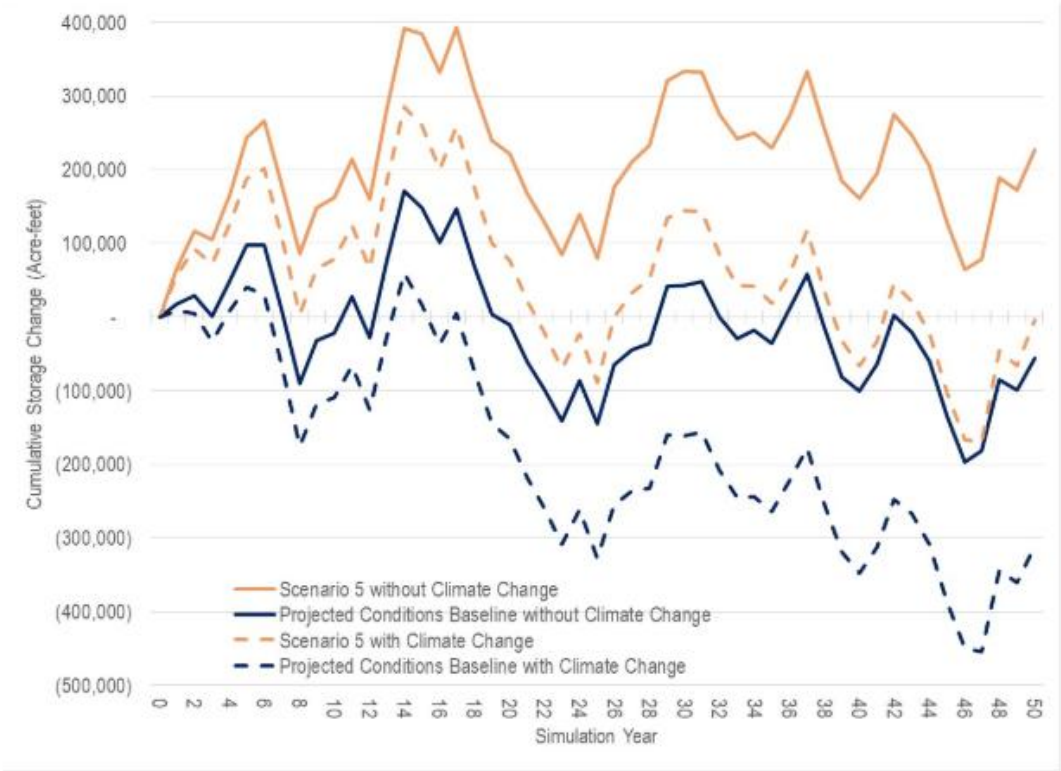
Projects are described by group and include projects planned for:

- Near-term implementation (Group 2)
- Supplemental projects (Group 3)
- Projects planned and implemented after GSP development

Table 4-1: Project and Management Action Summary

GSA	Project or Management Action Name	Project or Management Action Description	Targeted Sustainability Indicator	Project Status	Expected Schedule (First Year Facilities Available for Use)	Benefits Observed to Date or Anticipated Benefits	Estimated Average Annual Benefits upon Completion
SCGA and Northern Delta	Harvest Water Project	Treated recycled water will be provided to irrigate more than 16,000 acres of agricultural and improve the groundwater conditions of over 5,000 acres of riparian and wetland habitats. For additional information, see https://www.sacsewer.com/harvest-water/	• Groundwater Levels • Groundwater Storage	Implementing	2027	• Reduced Groundwater Pumping results in in lieu recharge • Habitat benefits	Provide up to 50,000 AFY for irrigation of 16,000 acres and improve groundwater conditions of 5,000 acres of riparian and wetland habitats.
OHWD	OHWD Groundwater Recharge Project	Water diverted from the Cosumnes River for recharge to 1,168 acres of agricultural land between Cosumnes River and Deer Creek.	• Groundwater Levels • Groundwater Storage	Implementing	2020	• Increased Recharge	1,794 AFY based on 30 years of streamflow data.
SCGA	Regional Conjunctive Use Program	Increase conjunctive use amongst both SASb and North American Subbasin (NASb) and municipal water purveyors. Planned projects will utilize existing infrastructure through water transfers, groundwater recharge projects, wholesale agreements, or wheeling agreements.	• Groundwater Levels • Groundwater Storage	Implementing	2000	• Reduced Groundwater Pumping results in in lieu recharge	27,700 AFY
SCGA	Vineyard ASR well (part of Regional Conjunctive Use Program)	Construction of Vineyard Surface Water Treatment Plant (VSWTP) was completed in 2011. ASR program is continuing, including the installation of ASR wells and existing system adaptation.	• Groundwater Levels • Groundwater Storage	Implementing	2020	• Increased Recharge	Recharge about 800 AFY between November and April each year when water is available.
SCGA, SRCD and OHWD	Sacramento Area Flood Control Agency (SAFCA) Flood Managed Aquifer Recharge (Flood-MAR)	To safely contain floods with a 1-in-500 annual probability of occurrence, release water from Folsom Dam down the Folsom South Canal for recharge in the SASb and Cosumnes subbasins.	• Groundwater Levels • Groundwater Storage	Planned	2030	• Increased Recharge • Flood Control	ARBS, 2022 estimates 16,000 AFY of average annual recharge in the SASb (32,400 AFY total recharge along the Folsom South Canal.
Sac County	Flood Diversions for Groundwater Recharge	The County of Sacramento is working with Rancho Murieta Community Service District to divert flood flows from the Cosumnes River for recharge under State Water Code 1242.1.	• Groundwater Levels • Groundwater Storage	Implementing	2025	• Increased Recharge	180 AFY average annual recharge is a preliminary estimate based on 224 AF was recharged in water year 2025. Assuming the area participating doubles and water is available 4 out of 10 years.
Sac County	Wilton Road Floodplain Reconnection	Reduce flood risk, increase groundwater recharge and improve habitat by modifying floodplain elevations to connect two gravel pits (locally referred to as the "Hanford Gravel Pits") to the Cosumnes River and Deer Creek at lower flows.	• Groundwater Levels • Groundwater Storage	Planned	To Be Determined	• Increased Recharge • Flood Control • Improved Habitat	Recharge: 2,700 acre-feet (AF) of additional recharge per average water year Flood: Flood elevation reduction by over 1 foot in Wilton area. Habitat: Increase of over 10,000 acre-days per year of aquatic/riparian habitat.
All	Domestic/Vulnerable Well Protection Program	Program assists qualifying domestic well users impacted by groundwater level decline. (GSP 2022 refers to this as the Shallow/Vulnerable Well Protection Program)	• Groundwater Levels	Implementing	2022	• Outreach and Collaboration • Groundwater Levels	Outreach and collaboration assists groundwater well users and provides protection against groundwater level decline.
All	Sacramento County Environmental Management Wells Program	GSAs coordinate with this program to establish revised requirements for well construction to avoid future impacts on domestic well users, groundwater dependent ecosystems (GDEs), and the GSP monitoring network.	• Groundwater Levels	Implementing	2022	• Outreach and Collaboration • Groundwater Levels	Requirements for new wells avoids future impacts on domestic well users, GDEs, and the GSP monitoring network.
All	GSP Monitoring Network Data Gaps	GSAs to plan, implement and fund efforts to fill data gaps including: refine information regarding wells in GSP Monitoring Network, understand surface water and groundwater interactions along Cosumnes River.	• Groundwater Levels • Groundwater Storage • ISW	Implementing	2023	• Data Collection • Fill Data Gaps • Refine Monitoring Network • Understand ISW	Filled data gaps will help to refine information regarding GSP Monitoring Network wells and better understand surface and groundwater interactions along the Cosumnes River.

Figure 4-1. Projected Cumulative Storage Change with Group 2 Projects and Climate Change[1]



Note:

1. From 2022 GSP (Figure 4-15) - The dark blue solid line named "Projected Conditions Baseline without Climate Change" averages 100 acre-foot per year decrease.

4.1.1. Group 2 Projects (Near-Term Implementation)

Group 2 projects for near-term implementation are described in this section.

4.1.1.1. Harvest Water

The Harvest Water Project, sponsored by the Sacramento Area Sewer District (formerly Sacramento Regional County Sanitation District), will provide a supply of disinfected tertiary-treated recycled water, up to 50,000 AFY to irrigate more than 16,000 acres of agricultural land and improve groundwater conditions for over 5,000 acres of riparian and wetland habitats. This project will reduce the need for groundwater pumping, support habitat protection efforts, restore depleted groundwater levels by up to 35 feet within 15 years, and increase groundwater storage by approximately 370,000 AF. It will also provide approximately 30,000 AFY for conjunctive use during droughts.

In WY 2025, the Harvest Water team worked with the Department of Fish & Wildlife staff to finalize the program's ecosystem benefits and develop an ecosystem Public Benefits contract and Adaptive Management Plan.

Harvest Water employs a community-based implementation approach, with a strong emphasis on coordination with local growers. Through WY 2025, long-term contracts have been executed to meet approximately 56 percent of the summer irrigation demand goal. Delivery infrastructure for participating growers is currently under construction.

Physical construction completion of the Harvest Water Project is scheduled for 2026, with anticipated start of operation in 2027. For more information, see https://www.regionalsan.com/harvest-water (Board of Directors Regular Meeting). Harvest water provides the GSAs with a status report presentation at the SCGA GSA Board meeting in December of every year.

4.1.1.2. OHWD Groundwater Recharge

The OHWD Groundwater Recharge Project currently has a recharge capacity of approximately 2,444 AFY, which OHWD plans to increase to 4,000 AFY. The project will divert up to 4,000 AFY of surface water from the Cosumnes River to two separate vineyard recharge areas totaling 1,168 acres, located between the Cosumnes River and Deer Creek, to recharge groundwater in the SASb.

The recharge facilities are located near the boundary with the Cosumnes Subbasin; therefore, some recharge benefits are expected to accrue to the adjacent Cosumnes Subbasin as well. Recharge during high-flow events is anticipated to increase groundwater levels and support extended baseflow conditions in the Cosumnes River, potentially allowing flows to persist longer into the dry season.

In WY 2023, OHWD was granted a five-year temporary groundwater recharge permit through the State Water Resources Control Board (SWRCB) authorizing OHWD to divert 2,444 AF from the Cosumnes River in Sacramento County during flow events meeting the minimum flow diversion criteria for the period December 1st - March 15th. The permit requires fish screens on both the pumps currently available, and construction of fish screens was completed in 2023. Based on 30 years of streamflow data (1995-2025), the estimated average annual volume of streamflow available for recharge under the diversion permit is 1,794 AFY. On average, 65 days per year meet the diversion criteria, but 79 are needed to divert the full amount of 2,444 AF. Recharge from 2021 to 2025 is shown in Table 4-2.

Extensive water quality monitoring was conducted during these recharge events (Vankeuren, 2025). At each recharge area, two monitoring wells were sampled twice a year, in the fall before recharge events and in the late spring after recharge events. Three irrigation wells were also sampled. Findings indicated that groundwater quality in the aquifer beneath the vineyards was not altered by the recharge events.

Moving forward, the OHWD will continue to operate the recharge site, implementing the project using the five-year temporary permit. OHWD is evaluating applying for a standard diversion permit.

Table 4-2. Summary of OHWD Recharge and Water Year Type (2021 – 2025)

Water Year	Water Year Type	Net Recharge (AF)
2021	Critical	55.6
2022	Critical	0
2023	Wet	72.7
2024	Above Normal	343.5
2025	Above Normal	326.1
Total		**797.7**

4.1.1.3. Regional Conjunctive Use / Water Bank

The Regional Water Authority (RWA) is developing a water bank in both the North American Subbasin (NASb) and the SASb. In support of the water bank, agencies completed the Water Bank governance document, advanced modeling improvements, started the California Environmental Quality Act (CEQA) documentation, evaluated the benefits of previously banked water, and developed and are piloting the water accounting system. Participating agencies will advance CEQA documentation, advance groundwater and surface water modeling, and complete a monitoring plan.

During development of the water bank, implementation of regional conjunctive use in the SASb continues. In the GSP, regional conjunctive use in the SASb was estimated to provide an average annual benefit of 7,200 acre-foot per year. In lieu recharge estimates for the SASb and NASb were reported in version 1 of the Analysis of Previously Banked Water dated September 10, 2025. The analysis accounted for in lieu recharge, or banked water, referred to as Previously Banked Water (PBW), based on the Sacramento Groundwater Authority's Water Accounting Framework and agency records. The analysis used the CoSANA model to provide estimates of PBW that contributed to river baseflows and neighboring subbasins.

In lieu recharge added to the water bank accounts in the SASb was estimated based on the reported PBW in the SASb for the water years 2021 through 2024. Table 4-3 reports the total conjunctive use in each water year for 2021 through 2024 and average in lieu recharge of 27,726 AF.

Table 4-3. Total in lieu recharge in the SASb (2021-2024)

Water Year	Water Year Type	In Lieu Recharge (AF)
2021	Critical	23,343
2022	Critical	23,935
2023	Wet	30,697
2024	Above Normal	32,930
Average (2021-2024)		**27,726**

4.1.2. Group 3 Projects (Supplemental)

Group 3 projects are supplemental projects that may be implemented if additional actions are needed to maintain groundwater sustainability under future conditions. These projects provide flexibility within the Subbasin's adaptive management framework and support long-term drought resilience.

4.1.2.1. SAFCA Flood-MAR Project

The Sacramento Area Flood Control Agency (SAFCA) Flood Managed Aquifer Recharge (Flood-MAR) Project is a planned regional effort to integrate Flood-MAR with proposed modifications to the three largest non-federal dams in the American River Basin. The project is intended to improve flood protection with a 1-in-500 annual probability occurrence while also enhancing water supply reliability through conditional storage, aquifer recharge, and beneficial use of winter runoff.

The American River Basin Study (ARBS, 2022) estimated that implementation of Flood-MAR could provide an average of approximately 32,400 AFY of recharge across the South American and Cosumnes Subbasins. These recharge benefits would contribute to increased groundwater storage, improved groundwater levels, and enhanced resilience to hydrologic variability. During WY 2025, SAFCA initiated development of a white paper describing potential benefits to agencies relying on American River water and outlining next steps.

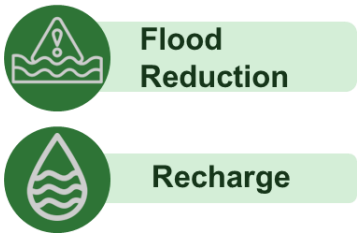
The Elk Grove Water District has also proposed a conceptual recharge project utilizing gravel pits located near the Folsom South Canal, as presented at the SCGA Board of Directors meeting in December 2025. This concept involves conveying surface water through the Folsom South Canal to the gravel pits for recharge.

Both projects remain conceptual and are not currently required to achieve the Subbasin's sustainability goal based on existing conditions and implemented projects. However, they represent important supplemental opportunities that could be advanced if future conditions warrant additional recharge or adaptive management actions.

4.1.3. Projects Planned and Implemented after GSP Development

Two project opportunities were identified after adoption of the 2022 GSP. The Flood Diversions for Groundwater Recharge project has been implemented to divert flood flows for recharge in accordance with Water Code Section 1242.1. The Wilton Road Floodplain Reconnection project is a conceptual project that would reconnect a floodplain area to the Cosumnes River to provide multiple benefits, including groundwater recharge, habitat enhancement, and flood risk reduction. Both projects are described below.

4.1.3.1. Flood Diversions for Groundwater Recharge Project



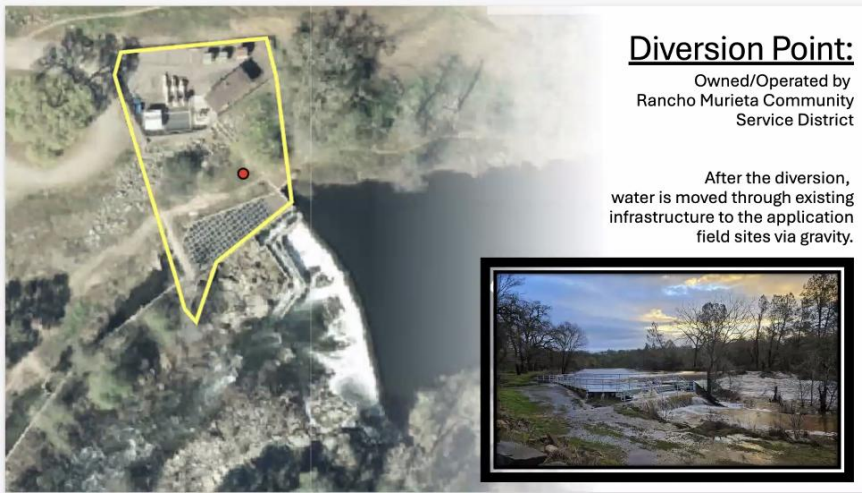
The County of Sacramento (project lead) is actively developing a Flood Diversions for Groundwater Recharge Annex to the County's Emergency Operation Plan that is aligned with Water Code Section 1242.1[3], which allows parties to divert flood waters for groundwater recharge without a water right if in compliance with certain requirements (Figure 4-2). Executive Order (EO) N-16-25, issued in January 2025, suspended the requirement to have the Emergency Operations Plan Annex in place to make diversions, as long as other code requirements are met. Following this EO, the County of Sacramento issued a Proclamation of Local Emergency in February 2025 and worked with Rancho Murieta Community Service District to divert flood flows from the Cosumnes River for groundwater recharge, as shown on Figure 4-2.

In February and March of WY 2025, diversions occurred for approximately 12 hours in February (2/13 to 2/16 in the volume of 112 AF) and approximately 12 hours in March (3/17 to 3/18, volume of 112 AF), resulting in a total volume of 224 AF of flood water diverted. Water was conveyed through an existing ditch system and then applied to agricultural fields for recharge. Benefits of this project are to:

- Reduce flood risks and impacts
- Recharge groundwater aquifers

The County of Sacramento intends to continue exploring opportunities under Water Code Section 1242.1 in future years, including 1) final adoption of a Flood Diversion for Groundwater Recharge Annex to the County's Emergency Operation Plan and 2) expanding the sites prepared to divert and recharge flood waters. There is opportunity to expand this type of project to additional sites and potentially additional watersheds (currently focused on the Cosumnes River Watershed).

Figure 4-2. Sacramento County Flood Diversion for Recharge Project Location



[3] More information on Water Code Section 1242.1: https://www.waterboards.ca.gov/waterrights/water_issues/programs/groundwater-recharge/recharge-diversions.html

4.1.3.2. Wilton Road Floodplain Reconnection Project

The Wilton Road Floodplain Reconnection Project shown on Figure 4-3, led by the County of Sacramento, provides an opportunity to enhance the Cosumnes River watershed's health and resilience. The project is located within the OHWD GSA area at 10865 Wilton Road, Elk Grove, CA 95624, between the Cosumnes River and Deer Creek. Conceptually, the project involves modifying floodplain elevations to connect two gravel pits (locally referred to as the "Hanford Gravel Pits") to the Cosumnes River and Deer Creek when flows in the Cosumnes River exceed a threshold. An initial project report was finalized in September 2025, with preliminary costs estimated between $8-24 million, depending on the scale of the project.

Primary project goals are to:

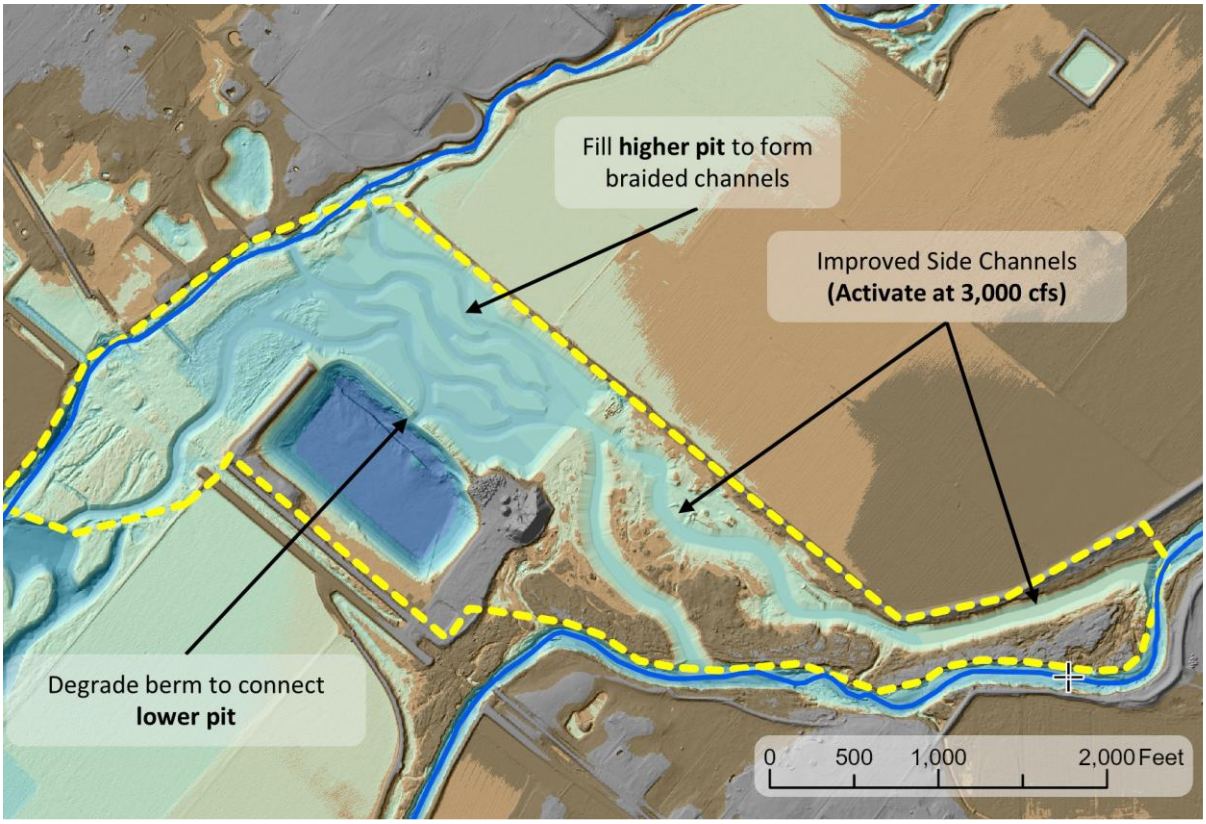
- Reduce flood risk: Implement innovative flood management strategies to lower flood elevations and minimize property damage.
- Enhance groundwater recharge: Restore natural recharge opportunities to support agricultural production, drinking water supplies, and ecosystem functions.
- Improve habitat: Reconnect the river to its floodplain to provide critical habitat for native vegetation, fish, and wildlife.

Expected Annual Benefits are listed below:

- Recharge: 2,700 AF of additional recharge per average water year
- Flood: Flood elevation reduction by over 1 foot in Wilton area
- Habitat: Increase of over 10,000 acre-days per year of aquatic/riparian habitat

Sacramento County is actively searching for funding to finalize engineering/design work on the project.

Figure 4-3. Wilton Road Floodplain Reconnection Project



4.2. Management Actions

Four management actions are being actively implemented to support groundwater sustainability. These actions focus on domestic well protection, interagency coordination, regulatory compliance, and addressing key data gaps.

4.2.1. Management Action No. 1 – Domestic/Vulnerable Well Protection Program

The Domestic Well Advisory Group (DWAG), established in January 2024, coordinates outreach, engages stakeholders, and supports development of the well protection program. The DWAG established the Volunteer Monitoring Program (VMP) to collect groundwater level measurements from volunteers supporting monitoring efforts.

Key actions include:

- **Improved Well Inventory** - The DWAG assists with outreach to domestic well owners and works to obtain information to improve the domestic well inventory.
- **Volunteer Monitoring Program** - A volunteer has collected groundwater levels from 29 wells since January 2022.

These efforts improve understanding of groundwater conditions affecting domestic wells and support proactive identification of potential impacts.

4.2.2. Management Action No. 2 – Well Permit Coordination

The GSAs coordinated with the Sacramento County Environmental Management Department to implement requirements of the Governor's EO's related to well permitting during drought conditions. Under this coordination, GSAs reviewed proposed well permits to ensure that new or modified groundwater extraction would not be inconsistent with the GSP or reduce the likelihood of achieving the sustainability goal.

This coordination supported sustainable groundwater management by preventing potential localized impacts associated with new groundwater development. As described in Section 7, these requirements were later rescinded, and formal GSA review is no longer required.

4.2.3. Management Action No. 3 – Coordination Activities

The SASb Executive Committee, in collaboration with NASb GSA, has coordinated with the RWA on the Sacramento Regional Water Bank. Many of the same GSA staff are involved in both the SASb and the Cosumnes Subbasin GSAs, such that separate coordination meetings are needed less. The Executive Committee meets regularly and coordinates the following activities:

- ISW SMCs
- Projects that benefit neighboring subbasins
- Coordinating with other initiatives, including the recently completed the American River Watershed Resilience Pilot Study.

4.2.4. Management Action No. 4 – Actions to Address Data Gaps

The GSAs continue to address key data gaps identified in the GSP. Progress has been made, although some activities have advanced more slowly than anticipated due to funding constraints. Three specific data gaps presented in the GSP to be addressed during plan implementation are:

- **Monitoring Network Update** - Missing well depth information has been obtained and added to the Data Management System (DMS). Access ports on wells missing screened interval information are too small for video access, thus SCGA staff are assessing nearby wells with screened information as potential new monitoring wells.
- **Cosumnes Surface Water Data Collection** - OHWD was awarded a California Stream Gage Improvement Program (CalSIP) grant in WY 2025 for the upgrade of the two streamflow gages on the Cosumnes River between Michigan Bar and Highway 99. The grant additionally funded the installation of a new stream gage on Deer Creek near the upper OHWD recharge site. These stream gages will assist in assessing stream-aquifer interaction, understanding the recharge benefits, and support diversion criteria monitoring for the OHWD recharge project.
- **Groundwater Quality Sample Collection** - Analysis of groundwater quality samples collected by domestic well owners in collaboration with the VMP is being discussed with the DWAG.

5. Basin Setting Based on New Information or Changes in Water Use

GSP Emergency Regulations §356.4(d) include a requirement that the Periodic Evaluation shall include:

> *An evaluation of the basin setting in light of significant new information or changes in water use, and an explanation of any significant changes. If the Agency's evaluation shows that the basin is experiencing overdraft conditions, the Agency shall include an assessment of measures to mitigate that overdraft.*

Basin Setting

- No major changes in basin setting
- Subbasin is not in overdraft
- Subbasin expected to be sustainable in 2042 when all PMAs are implemented
- Average groundwater extractions 75% of sustainable yield

The Subbasin is not in overdraft, therefore there is no assessment of measures to mitigate that overdraft. The remainder of this section describes the hydrogeologic conceptual model, groundwater conditions, water quality, water use, and updates to the model.

5.1. Hydrogeologic Conceptual Model

The AEM surveys were completed by DWR in the SASb in April 2022. This data provides electrical resistivity data that can be used to improve the understanding of the subbasin's subsurface geology and will be used to inform the GSAs' groundwater management decisions. The AEM data will be reviewed in detail to determine how to best utilize the information, potentially supporting improvements to the subbasin's hydrogeologic conceptual model for inclusion in the next update of the CoSANA model.

5.2. Groundwater Conditions

Since implementation of the 2022 GSP, additional data sources and tools have been incorporated to enhance evaluation of groundwater conditions in the Subbasin. For example, the Dry Well Reporting System has been utilized to improve tracking and assessment of domestic well impacts. Another example of use of DWR tools is InSAR data, which has been integrated into the monitoring network to assess land subsidence, as described in Section 6.3. The GSAs continue to submit groundwater monitoring data to DWR for inclusion in statewide databases, consistent with the Subbasin's monitoring network and reporting requirements. The GSAs also utilize data, applications, and analytical tools provided by DWR to support understanding of regional groundwater conditions.

In combination with these resources, the GSAs maintain and operate a groundwater level monitoring network that provides sufficient spatial and temporal coverage to characterize groundwater conditions in the Subbasin. This integrated approach supports effective implementation of the GSP to maintain sustainable groundwater management.

More detailed discussion on the well vulnerability assessment and Subbasin water quality is presented in the following sections.

5.2.1. Well Vulnerability Assessment

An updated well inventory and vulnerability assessment was completed to update the assessment originally presented in Appendix 3-C of the 2022 GSP. The updated assessment uses the revised DWR Online System for Well Completion Reports (OSWCR) datasets through 2025, VMP information, and new DWR domestic well assessment tools.

The updated evaluation was completed to determine whether revised well inventory information or new vulnerability assessment tools substantially altered the conclusions presented in Appendix 3-C of the 2022 GSP regarding domestic well vulnerability and the protectiveness of groundwater level MTs.

The new information supports the earlier conclusion that domestic wells are primarily within rural residential and agricultural-residential portions of the Subbasin. Incorporation of revised OSWCR datasets and VMP information increased the total number of domestic wells included in the inventory and improved representation of shallow domestic wells. However, the updated inventory did not substantially alter the overall spatial distribution of domestic wells previously identified in the 2022 GSP.

5.2.1.1. Well Inventory and Characteristics

The updated well inventory identified a total of 2,653 domestic wells, 524 agricultural wells, and 239 public supply wells within the South American Subbasin (Table 5-1). Active well counts were evaluated using both 31-year and 40-year retirement assumptions to account for uncertainty regarding the operational lifespan of a typical well; in addition to those retirement assumptions; this analysis presents results for 50- and 60-year retirement ages to better understand the influence of retirement age on predicted impacts to wells.

The DWR OSWCR dataset and additional local VMP data do not account for all wells in the Subbasin. Stakeholders have identified wells not included in the dataset, and assessment of well locations, census data, and land use by the UC Berkeley Water Equity Science Shop identifies the count of parcels and households where wells could exist but are not identified in the DWR data set. However, the combined DWR and local VMP data represent the best available data on well locations and well depth for the subbasin. As additional local well data is collected by stakeholders it can be incorporated into the well inventory to better assess the potential impact of Subbasin MTs on shallow wells.

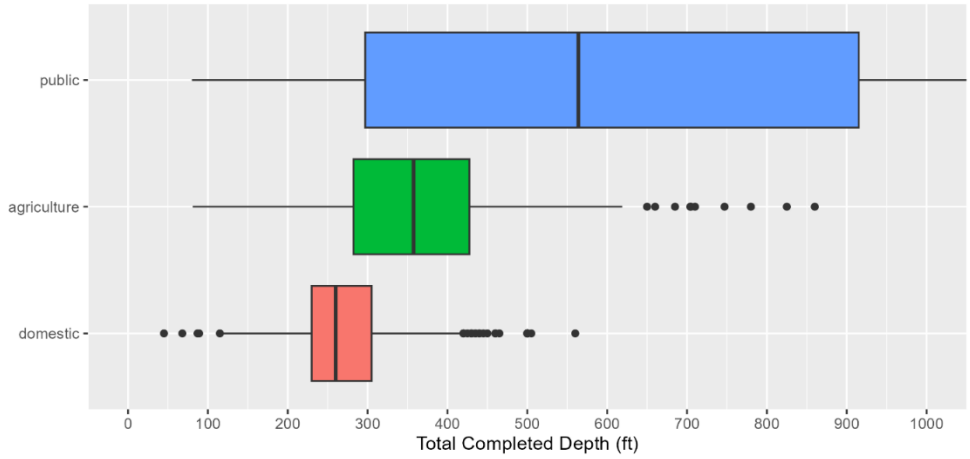
Table 5-1. Updated Well Inventory, Comparison of 2022 GSP Results to 2027 Periodic Evaluation Results for Total Well Count and Well Count by Retirement Age

Well Type	2022 GSP Well Count			2027 Periodic Evaluation Well Count				
	Total	31-Year	40-Year	Total	31-Year	40-Year	50-Year	60-Year
Agricultural	532	72	99	524	59	90	176	215
Domestic	2,600	372	709	2,653	420	643	1,268	1,511
Public Supply	237	62	101	239	57	93	119	143

Figure 5-1 presents the distribution of completed well depths for domestic wells included in the updated inventory. The left and right side of the boxes represent the 1st and 3rd quartiles (25% and 75%) of the depth distribution, and the thick black line represents the median value, the black line extends to the minimum and maximum expected values which are equal to the 1st quartile minus and the 3rd quartile

plus 1.5 times the interquartile range. Domestic wells within the Subbasin are generally shallower than agricultural and public supply wells, with many domestic wells completed between approximately 200 and 300 feet below ground surface (bgs). Review of updated OSWCR and VMP information indicates that the average depth of VMP wells is approximately 217 feet bgs, which is slightly shallower than the approximate 25th percentile depth of the broader OSWCR domestic well inventory. Median domestic well depth of the updated inventory is approximately 260 feet bgs. The updated well depth distributions remain generally consistent with the conclusions presented in Appendix 3-C of the 2027 GSP, which identified shallow domestic wells as the most vulnerable beneficial user category during periods of groundwater level decline.

Figure 5-1. Relative Depth Distributions of Domestic, Agricultural, and Public Wells



The updated well vulnerability analysis incorporated revised well counts, updated well depth information, and VMP data to reassess the protectiveness of groundwater level MTs in the 2027 GSP. The projected scenarios evaluated as part of the analysis are described in Section 3.4 of Appendix 3-C of the GSP. The analysis results show that less than five percent (the working group approved threshold identified in Page 4 of the 2027 GSP's Appendix 3-C) of any well category is predicted to be impacted under the PMAs with climate change scenario, which was used to define the groundwater level MTs (see 2027 GSP Section 3.3.1.2 for additional details on scenarios evaluated during GSP development). The 2027 GSP analysis was extended to 50- and 60-year retirement ages to better understand the impact of well retirement age on the predicted number of impacted wells.

As presented in Table 5-2**,** the percent of predicted impacted wells remains fairly consistent between the Fall 2015 observed groundwater conditions and the PMA CC conditions under all retirement ages. The 60-year retirement age under Projected PMA CC indicates an increase in the percent of predicted impacted domestic wells from less than 1% to 3.8% and predicts 3.2% of wells impacted under Fall 2015 conditions. The DWR dry well dataset does not contain any dry well reports in the Subbasin in 2015, indicating that some of the wells predicted to be impacted are already inactive, (i.e., retired before 60 years), or that well owners deepened their pump or well which help avoid future impacts. Overall, the updated analysis continues to indicate that the adopted groundwater level MTs remain protective of wells within the subbasin and are expected to avoid significant and unreasonable impacts due to chronic lowering of groundwater levels.

Table 5-2. Vulnerability Impact Analysis Under the Fall 2015 Observed Conditions and the Projected Management Action with Climate Change Conditions by Well Retirement Age

Scenario	Retirement Age	Agriculture	Domestic	Public
Projected PMA CC	31	1.7% (1/59)	0.7% (3/420)	0% (0/57)
Fall 2015	31	1.7% (1/59)	0.5% (2/420)	0% (0/57)
Projected PMA CC	40	1.1% (1/90)	0.5% (3/643)	1.1% (1/93)
Fall 2015	40	1.1% (1/90)	0.3% (2/643)	0% (0/93)
Projected PMA CC	50	0.6% (1/176)	0.4% (5/1,268)	0.8% (1/119)
Fall 2015	50	0.6% (1/176)	0.2% (3/1,268)	0% (0/119)
Projected PMA CC	60	0.5% (1/215)	3.8% (57/1,511)	0.7% (1/143)
Fall 2015	60	0.5% (1/215)	3.2% (49/1,511)	0% (0/143)

CC = climate change

5.2.1.2. DWR Domestic Well Screening Tools

DWR domestic well screening tools developed since adoption of the 2022 GSP were reviewed as part of this evaluation. Review of the DWR Water Shortage Physical Vulnerability Index[4], after filtering to Public Land Survey System (PLSS) sections with at least one domestic well or state small water system, indicates that the majority of PLSS sections within the subbasin exhibit relatively low physical vulnerability index values (average of 18.1) compared to statewide index values (average of 37.9) as displayed in Figure 5-2. The lower the Water Shortage Physical Vulnerability Index the lower the vulnerability of wells going dry. The Index represents the weighted sum of multiple physical vulnerability factors (e.g., domestic well count) predicted temperature change, groundwater decline, which are then scaled by the maximum score in the dataset to create an index from 0 to 100.

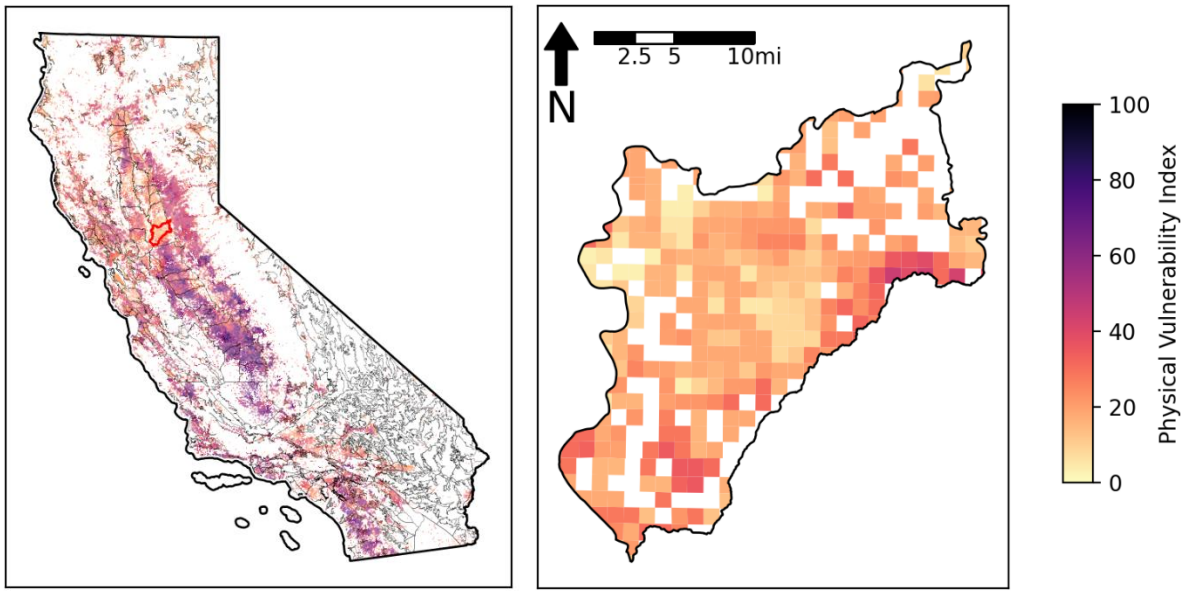
The DWR Dry Well Susceptibility Tool[5], based on groundwater levels observed between 2021 and 2025, identified a maximum of three domestic wells potentially susceptible to going dry within the subbasin between 2026 and 2030. Review of the DWR Dry Well Reporting System Data[6] found there has only been one well on the eastern edge of the subbasin, that has been reported as going dry. The report provided an issue start date of 06/09/2022, which coincides with the last year of the prolonged dry period of WY 2020-2022. Overall, the well vulnerability analysis and DWR screening tools indicate that domestic well vulnerability conditions within the Subbasin remain generally consistent with the conclusions presented in Appendix 3-C of the 2027 GSP and that adopted groundwater level MTs remain protective of domestic wells within the Subbasin.

[4] DWR. (2024). *Water Shortage Vulnerability Scoring and Tool.* https://water.ca.gov/Programs/Water-Use-And-Efficiency/SB-552/SB-552-Tool

[5] DWR. (2025). *Dry Domestic Well Susceptibility within Groundwater Basins*. California's Groundwater Live https://www.arcgis.com/apps/dashboards/f876cfa53ce3466c8b3778e7f4adb50e

[6] DWR. (n.d.). *Dry Well Reporting System Data*. https://data.cnra.ca.gov/dataset/dry-well-reporting-system-data

Figure 5-2. Water Shortage Physical Vulnerability Index Score for the SASb (right) and State of California (left) State Data Filtered to PLSS Sections with at Least One Domestic Well or State Small Water System, Developed by DWR



5.2.2. Water Quality

A discussion of water quality is provided below.

5.2.2.1. Evaluation of Arsenic, Iron, and Manganese against Water Quality Objectives

The initial evaluation of groundwater quality conducted for the 2022 GSP identified elevated concentrations of arsenic, iron, and manganese in some wells in the SASb. These constituents were not assigned SMCs, but their concentrations at the groundwater quality RMPs are monitored to track potential mobilization or exceedances of the primary MCLs or SMCLs. Arsenic has a primary MCL of 10 micrograms per liter (µg/L), iron has an SMCL of 300 µg/L, and manganese has an SMCL of 50 µg/L. Primary MCLs are established based on human health effects from constituents and are enforceable standards for public water supply wells and state small water supply wells. SMCLs are unenforceable standards established for constituents that may negatively affect the aesthetics of drinking water quality, such as taste, odor, or appearance.

Table 5-3 presents summary statistics of arsenic, iron, and manganese concentration data collected at the groundwater quality RMPs during the period WY2021 through WY2025. For each RMP, the table provides the average, minimum, and maximum measured concentration, along with the total number of measurements collected during the period. Wells without available measurements are identified as not sampled (NS). This evaluation is also conducted annually for an extended time period (beginning in 2005) and included in the Subbasin's Annual Report.

As shown in Table 5-3, groundwater quality data were available for most of the 23 RMP wells included in the updated groundwater quality RMP monitoring network, with only two RMPs lacking sample data.

During WY2021 through WY2025, arsenic concentrations exceeded the applicable 10 µg/L MCL at 3 of the 21 RMP wells that were sampled, iron concentrations exceeded the applicable 300 µg/L SMCL at 3 of the 20 RMP wells that were sampled, and manganese concentrations exceeded the applicable 50 µg/L SMCL at 9 of the 20 RMP wells that were sampled. The majority of evaluated RMP wells remained below the applicable drinking water objectives during the reporting period. Overall, the results indicate that exceedances of arsenic, iron, and manganese are limited to a subset of the wells in the groundwater quality RMP monitoring network and do not represent widespread groundwater quality degradation within the subbasin.

Table 5-3. Summary Statistics for Arsenic, Iron, and Manganese During the Period WY2021 to WY2025

Representative Monitoring Point	Arsenic (µg/L; MCL of 10 µg/L)				Iron (µg/L; SMCL of 300 µg/L)				Manganese (µg/L; SMCL of 50 µg/L)			
	Avg	Min	Max	n	Avg	Min	Max	n	Avg	Min	Max	n
CA3410020_009_009	3.5	3.4	3.6	2	11	10	11	2	20 [1]	20	20	2
CA3410029_002_002	4.5	4.5	4.5	1	30 [1]	30	30	1	10 [1]	10	10	1
CA3410029_016_016	3.2	3.2	3.2	1	30 [1]	30	30	1	10 [1]	10	10	1
CA3410029_029_029	4.7	4.7	4.7	1	30 [1]	30	30	1	10 [1]	10	10	1
CA3410033_006_006	3.1	3.1	3.1	1	30 [1]	30	30	1	10 [1]	10	10	1
L10005519750-MW-G(S)	2.0	2.0	2.0	1	50 [1]	50	50	1	10[1]	10	10	1
L10008601447-MW-13	10.0 [1]	10.0	10.0	1	2200	2200	2200	1	280	280	280	1
CA3400101_001_001	3.7	3.7	3.7	1	NS [2]							
CA3410029_024_024	48.2	13	55	13	663	120	800	12	298	280	330	12
CA3410029_025_025	11.5	4.7	24	42	246	130	360	33	657	280	990	33
CA3901216_001_001	3.0	3.0	3.0	1	240	240	240	1	50	50	50	1
CA3400229_003_003	39.5	37	42	2	110	110	110	2	520	510	530	2
CA3410027_003_003	2	2	2	2	100 [1]	100	100	2	20 [1]	20	20	2
CA3410015_020_020	2.5	2.5	2.5	1	30 [1]	30	30	1	10 [1]	10	10	1
CA3410015_022_022	2.7	2.7	2.7	1	110	110	110	1	24	9.2	87	19
CA3410023_015_015	NS [2]											
CA3410029_015_015	2.0 [1]	2	2	2	68	40	96	2	107	100	110	3
CA3410029_026_026	2.0 [1]	2	2	1	110	110	110	1	240	240	240	1
CA3410029_027_027	2.0 [1]	2	2	2	42	42	42	1	150	150	150	1
CA3410704_001_001	2.0 [1]	2	2	1	91	91	91	1	150	150	150	1
L10007396297-MW-40B	NS [2]											
CA3410029_050_050	2.0 [1]	2	2	2	65 [1]	30	100	2	42	41	43	2
CA3410010_009_009	2	2	2	2	100 [1]	100	100	2	20 [1]	20	20	2

Note:
1. All results during the sampling period were either non-detect or estimated values.
2. NS, not sampled during the period of analysis.

5.2.2.2. Trend Analysis of Recent Water Quality Data

In addition to a comparison of the past five years of water quality against SMCs for Nitrate as N and SC, time series data for both constituents were evaluated to confirm trends align with the current understanding of water quality in the Subbasin, as well as the current sustainability goals. The trend analysis was also completed for arsenic, iron, and manganese as they are water quality constituents of interest. Time series are presented for the original 21 RMP wells in the 2022 GSP's water quality monitoring network, as well as the four wells added to the network during the 2027 Periodic Evaluation.

For wells with at least five measurements of a constituent during the period of analysis, a Mann-Kendall analysis (with pre-whitening to account for time series effects) was applied to identify significant trends. Wells with significant trends then had a linear regression estimated to quantify the slope of the trend in units of the constituent per day. Table 5-4 summarizes the results of the trend evaluation.

The results for WYs 2021-2025 show that for nitrate, SC, iron, and manganese the RMPs show no trend, decreasing trends for a few wells, or had insufficient data to evaluate. The data for arsenic shows there is one well with an increasing trend over the period of evaluation. A review of data from 2005-2025 finds that this well historically had arsenic concentrations in the range of 20 µg/L. While there is a recent increasing trend in the well, the well is not experiencing long-term increasing concentrations. The trends of the last 5 years indicate that water quality conditions in the subbasin remain stable or within the range of historically observed conditions, thus there has been no degradation of water quality.

Table 5-4. Summary of Mann-Kendall Assessment of Water Quality Trends for Arsenic, Iron, Manganese, Nitrate as N, Specific Conductance

Result of Mann-Kendall Assessment	Arsenic	Iron	Manganese	Nitrate as N	Specific Conductance
No Trend	1	1		22	7
Decreasing		1	3	1	
Increasing	1				
<5 data points	23	23	22	2	18

5.2.2.3. New Information that May Affect the Evaluation of Water Quality

Since the submission of the 2022 GSP, there have been changes to regulatory thresholds for hexavalent chromium and per- and polyfluoroalkyl substances (PFAS), but they do not change the results of the evaluation of these constituents conducted during GSP development that indicated SMCs were not required. SWRCB adopted an MCL of 10 parts per billion (ppb) for hexavalent chromium in 2024, it had previously been set to 10 ppb but was invalidated in 2017 by a court ruling. During the 2022 GSP's development it was found that there were no exceedances of the previously defined 10 ppb MCL for hexavalent chromium, thus based on this and additional considerations as outlined in the 2027 GSP's Section 3.3.3 it was not assigned SMCs.

The US EPA extended the compliance deadline of PFAS monitoring for public water supply agencies to 2027 and the initial compliance deadline to 2029. The EPA has established MCLs of 4 parts per trillion (ppt) for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS), 10 ppt for perfluorohexane sulfonic acid (PFHxS), 10 ppt for perfluorononanoic acid (PFNA), and 10 ppt for

hexafluoropropylene oxide dimer acid and its ammonium salt (HFPO-DA). The extension of monitoring deadlines suggests that improved data will be available after 2027 for evaluation of Subbasin conditions, thus PFAS will be evaluated at the next 5-year implementation period when additional data is available.

5.3. Water Use Changes and Associated Water Budget

Groundwater and surface water use during the evaluation cycle (WYs 2021 through 2025) were evaluated relative to historical conditions and the projected water budgets presented in the 2022 GSP. As shown in Table 5-5, the evaluation period includes two critical water years, one wet year, and two above normal years, reflecting a representative range of hydrologic conditions.

Table 5-5. Recent Hydrologic Conditions Compared to Projected

Water Year Type	WY 2021-2025		WY 1970-2019	
	Number	Percent	Number	Percent
Wet	1	20%	17	34%
Above Normal	2	40%	7	14%
Below Normal	0	0%	7	14%
Dry	0	0%	9	18%
Critical	2	40%	10	20%
Total	**5**		**50**	

Average annual groundwater pumping (including for remediation) during the evaluation cycle ranged from approximately 178,000 to 224,100 AFY, with an average of approximately 195,400 AFY. This is below the estimated sustainable yield of 235,000 AFY identified in the GSP and consistent with projected pumping levels used in the GSP water budget.

Figure 5-3 shows a summary of groundwater pumping from 1995 to 2025. Figure 5-4 presents total water use (excluding groundwater pumping for remediation) by water year type.

Water use patterns during the evaluation period generally reflect hydrologic variability, with increased groundwater reliance during critical water years and reduced pumping during wetter periods. Overall, groundwater demand has remained within the range anticipated in the GSP and has not resulted in conditions indicative of overdraft.

Figure 5-3. Summary of Groundwater Pumping

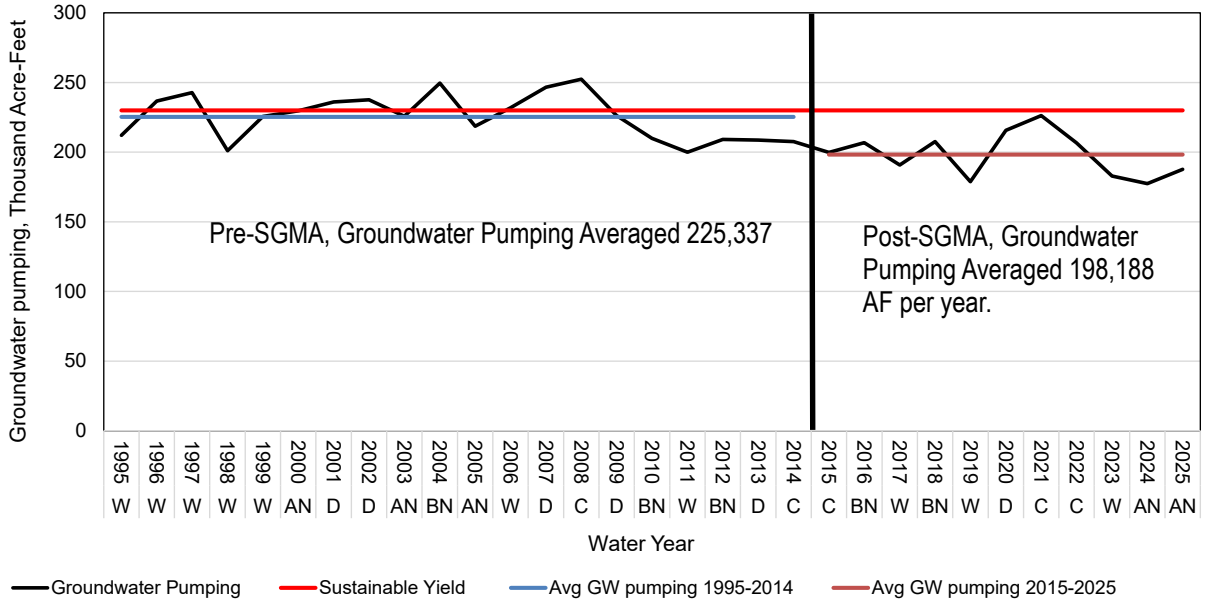


Figure 5-4. Total Water Use by Water Year and Type (not including groundwater remediation)

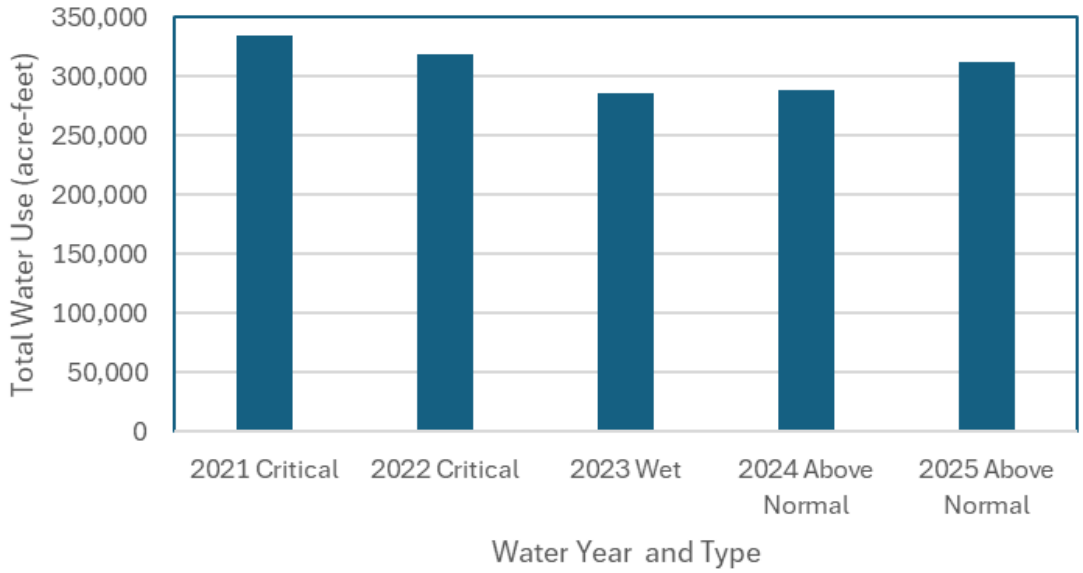


Table 5-6 summarizes total water use during the evaluation cycle by water year type compared to historical average conditions. As shown, total water use in each year is generally consistent with historical averages for the corresponding water year type, with only minor variations. Deviations from historical averages range from approximately -5 percent to +3 percent and reflect expected variability associated with annual hydrologic conditions.

These results confirm that water use during the evaluation cycle is consistent with historical conditions and projected water budgets. These results indicate that water use patterns remain consistent with GSP assumptions and do not suggest any significant changes in demand or system behavior.

Table 5-6. Current Water Use Compared to Historical Averages

Water Year	Water Year Type	Total Water Use[1] (AF)	Historical Average (AF)	Difference (AF)	Difference (%)
2021	Critical	333,700	327,000	+6,700	+2.1%
2022	Critical	317,800	327,000	-9,200	-2.8%
2023	Wet	285,600	283,300	+2,300	+0.8%
2024	Above Normal	288,000	304,200	-16,200	-5.3%
2025	Above Normal	312,400	304,200	+8,200	+2.7%
Average		**307,500**	**309,140**	**-1,640**	**-0.50%**

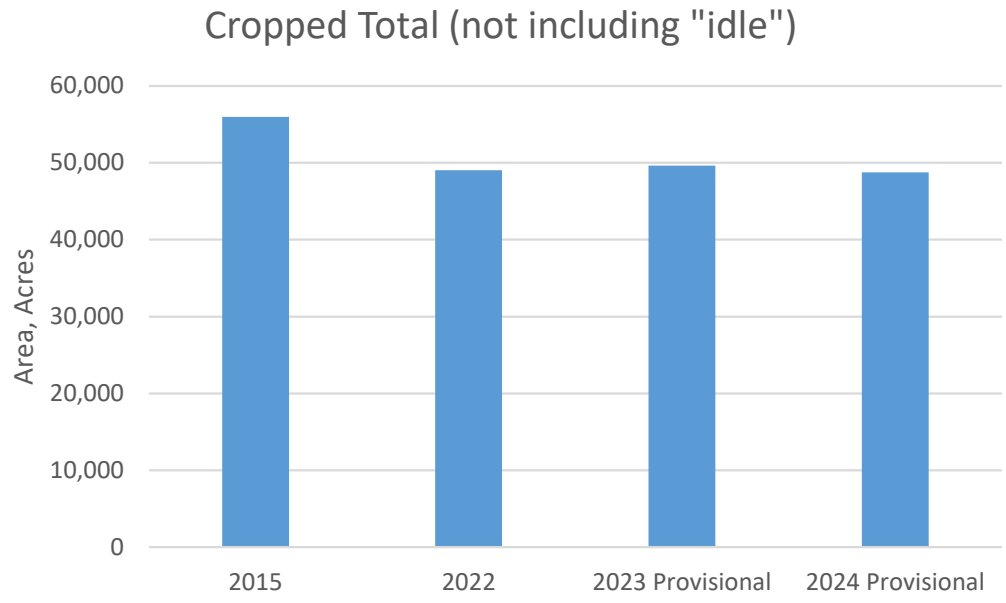
Note:

1. Total water use does not include groundwater pumping for remediation.

Land Use and Cropping Patterns

No significant changes in land use or cropping patterns were identified during the evaluation cycle that would materially affect overall water use within the Subbasin. There have been no major changes in the basin setting. The total cropped acreage, excluding idle land, is approximately 7,000 acres less than in 2015, as shown in Figure 5-5. No large-scale land conversions or changes in cropping intensity were observed that would alter projected water use assumptions in the GSP.

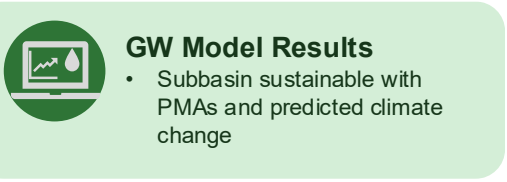
Figure 5-5. Cropped Total Land (not including "idle") since 2015



Surface Water Supply Reliability

Surface water supply availability during the evaluation cycle reflected expected hydrologic variability, with reduced availability during critical water years and increased availability during wetter periods. Surface water reliability continues to support conjunctive use practices, which reduce reliance on groundwater during periods of greater surface water availability.

For this evaluation cycle, no updates were made to the current or projected water budgets presented in the GSP. The most recent climate change assumptions and water supply projections incorporated in the 2027 GSP remain valid and the most up to date, and implementation of projects and management actions is proceeding as planned. Model results presented in the 2027 GSP demonstrate that planned projects are sufficient to achieve sustainability under projected conditions.



Accordingly, there have been no changes in surface water supply reliability or other factors that would warrant modification of the water budget assumptions at this time. The need for updated water budget and model evaluations will be considered during the next periodic evaluation, when additional data are available and project implementation progressed.

Updated Water Budget and Sustainable Yield

Comparison of observed water use and hydrologic conditions during the evaluation cycle with the projected water budgets presented in the 2027 GSP indicates that the Subbasin's water budget remains consistent with projections. Groundwater pumping during the evaluation cycle remained below sustainable yield, and observed groundwater levels indicate that groundwater storage has increased, as described in Sections 3.1 and 3.2.

No revisions to the Subbasin's sustainable yield are necessary based on current data and analysis.

Overdraft Conditions

The Subbasin is not experiencing conditions of overdraft. Groundwater levels and storage trends indicate stable conditions, and no long-term declines indicative of overdraft have been observed.

Overall, water use and water budget conditions during the evaluation cycle demonstrate that the Subbasin is operating within its sustainable yield and progressing toward its sustainability goal. This is consistent with groundwater conditions described in Section 3.

5.4. Model Updates

As described in the Basin Setting and Water Use sections, groundwater use, land use, climate assumptions, and available data have not significantly changed since model development in 2021. As a result, the updates to the model were limited to the hydrologic and water supply data for the historical model. However, other refinements and upgrades to the model for the SASb area of the CoSANA groundwater model were not necessary for this evaluation cycle.

The hydrologic period of the historical model, which previously included WY 1990 through 2018, was extended to allow for simulation for the period from WY 1990 through 2025. This included the collection and incorporation of stream, hydrological and water supply data for the period from October 2018 through September 2025, as shown in Table 5-7.

Table 5-7. Summary of Updated CoSANA Model Data

Major Data Category	Minor Data Category	Data Source
Stream Data	Stream Inflow	CDEC and U.S. Geological Survey stream gages
Hydrological Data	Precipitation	PRISM (Parameter-elevation Regressions on Independent Slopes Model)
Water Supply	Groundwater Pumping	Local Municipal Water Purveyors
	Surface Water Deliveries	Local Municipal Water Purveyors

The NASb received grant funding to update the CoSANA model. As part of this regional effort, minor updates to model inputs and representation in the northern portion of the SASb were completed. The remainder of this section describes the upgrades performed to the CoSANA model in the SASb area to improve representation of the model for the evaluation of historical conditions. The model representation of current and projected conditions was last updated in 2021 as described in the 2027 GSP.

The representation of the wastewater collection network was enhanced by utilizing a new version of the Integrated Water Flow Model that provides the capability to separate the urban stormwater discharge point from the indoor wastewater discharge point. This allowed for indoor water use within the Sacramento Regional County Sanitation District's service area to be routed to their wastewater treatment plant discharge point.

Note that significant additional improvements have been made to the CoSANA model in the NASb area using grant funding provided by DWR. These improvements are described in the technical report *CoSANA Model Upgrade and Refinement for North American Groundwater Subbasin* (Woodard & Curran, March 2026). The NASb improvements include incorporation of AEM survey data conducted by the DWR, updated land use data, and other improvements that further enhance the simulation of historical, current and projected conditions. Similar improvements can be made in the future in the SASb area of the model if funding is available.

6. Monitoring Network

GSP Emergency Regulations §356.4(e) include a requirement that the Periodic Evaluation shall include:

> *A description of the monitoring network within the basin, including whether data gaps exist, or if any areas within the basin are represented by data that does not satisfy the requirements of Sections 352.4 and 354.34(c). The description shall include the following:*
>
> *(1) An assessment of monitoring network function with an analysis of data collected to date, identification of data gaps, and the actions necessary to improve the monitoring network, consistent with the requirements of Section 354.38.*
>
> *(2) If the Agency identifies data gaps, the Plan shall describe a program for the acquisition of additional data sources, including an estimate of the timing of that acquisition, and for incorporation of newly obtained information into the Plan.*
>
> *(3) The Plan shall prioritize the installation of new data collection facilities and analysis of new data based on the needs of the basin.*

This section provides an assessment of the monitoring network for the four sustainability indicators applicable to the SASb. Seawater intrusion is not applicable to the Subbasin and therefore does not have a monitoring network (2027 GSP).

Each sustainability indicator monitoring network is evaluated in the subsections below. As described in the GSP, groundwater levels are used as a proxy for groundwater storage; therefore, the monitoring networks for these two sustainability indicators are discussed together. In addition, ten groundwater level monitoring wells are also used to support monitoring of interconnected surface water.

Monitoring Networks
- Meet DWR BMP requirements
- Superfund site wells will become SGMA monitoring wells

Overall, the monitoring network continues to provide sufficient spatial and temporal coverage to assess groundwater conditions and evaluate sustainability. Updates to the monitoring network since GSP adoption include removal of destroyed wells, improvements to monitoring frequency, and redesignation of eight SGMA representative wells as SGMA wells. The groundwater level monitoring network remains sufficient to:

- Evaluate groundwater conditions relative to the SMC
- Track long-term groundwater level trends
- Support assessment of groundwater storage conditions

Planned improvements and ongoing data gap resolution efforts is expected to further enhance the reliability and representativeness of the monitoring network in future periodic evaluations.

6.1. Groundwater Levels and Groundwater Storage

The groundwater level monitoring network consists of 43 active monitoring wells (excluding two destroyed wells), providing approximately 88.6 percent spatial coverage of the Subbasin.

Monitoring Network Changes

Since GSP adoption, two key changes to the monitoring network have occurred:

- Two representative monitoring points (RMPs 37 and 40) have been destroyed
- Transducers and SCADA equipment were installed at RMPs 03 and 05 in January 2026 to address seasonal access challenges and improve monitoring frequency

Responsibility for field groundwater level data collection has transitioned to the SCGA, which also continues to serve as the lead GSA for collecting fall and spring groundwater level measurements and uploading data to the SASb DMS and DWR.

Despite the loss of two wells, the monitoring network continues to function effectively and provides sufficient spatial coverage to evaluate subbasin conditions. The network maintains coverage well above recommended minimum densities, with more than twice the number of monitoring wells suggested by DWR Best Management Practices (DWR, 2017) and Sophocleous (1983).

Spatial coverage has decreased slightly from approximately 92 percent at the time of GSP development to 88.6 percent (Figure 6-1). However, this level of coverage remains adequate for evaluating groundwater conditions across the Subbasin.

Monitoring frequency has improved at select locations through installation of transducers and telemetry systems, allowing:

- Monthly data collection for upload to the DMS
- High-frequency (15-minute interval) data collection for detailed analysis

Data Gaps and Progress Toward Resolution

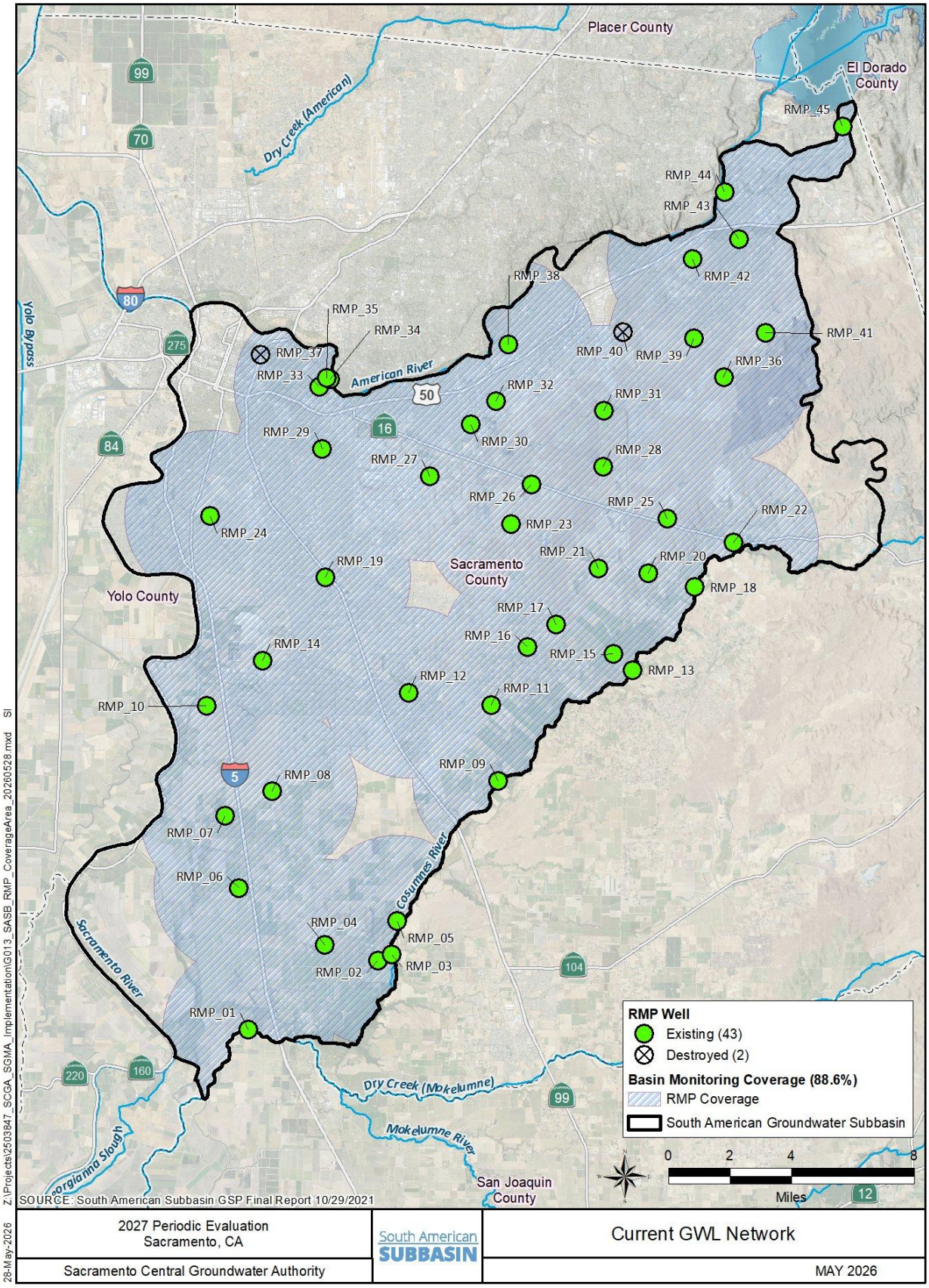
The GSP identified data gaps related to well construction information, including screened interval and total depth data. Thirteen wells in the network do not have screened interval information, and four wells did not have total depth information. In the RMP selection process, wells were selected primarily based on location, monitoring history for spatial representation in the subbasin, and longevity of monitoring history to establish long-term groundwater level trends.

- **Resolution of Missing Depth Information**. Depth for the four wells missing total depth information was obtained from the well owners and added to the well information in the DMS.
- **Resolution of Missing Screened Interval Information.** One of the wells without screened interval information (RMP_40) has been destroyed, thereby leaving 12 wells without screened interval information. Eleven of these wells are monitored by SCGA and to address this data gap, the feasibility of down-well video surveys for each well was assessed by SCGA staff.

Unfortunately, the ports for all these wells were less than two inches in diameter; therefore, video logging through the port was not feasible. Access may be possible at five of these wells by the removal of a topside mounted or submersible pump, wiring, and well cap to access the well column. To summarize, the screened information data gap has not been filled because the ports were too small to be accessed by video logging equipment. The GSAs plan to fill this data gap through a combination of coordinating with well owners to access the well for a video log or by identifying a nearby well with well depth and well screen interval information.

Despite these challenges, the absence of screened interval data does not significantly impair the ability of the network to track groundwater level trends at the Subbasin scale.

Figure 6-1. Groundwater Level Monitoring Network Water Years 2021 through 2026



Monitoring Network Improvements

As previously discussed, transducers and telemetry have been added to RMP_03 and RMP_05 to resolve access issues that arise during wet spring conditions. This allows an increased frequency of monitoring and will support monthly measurements for upload to the DMS. In addition, 15-minute data interval measurements will be stored in an off-line database and available for analysis upon request.

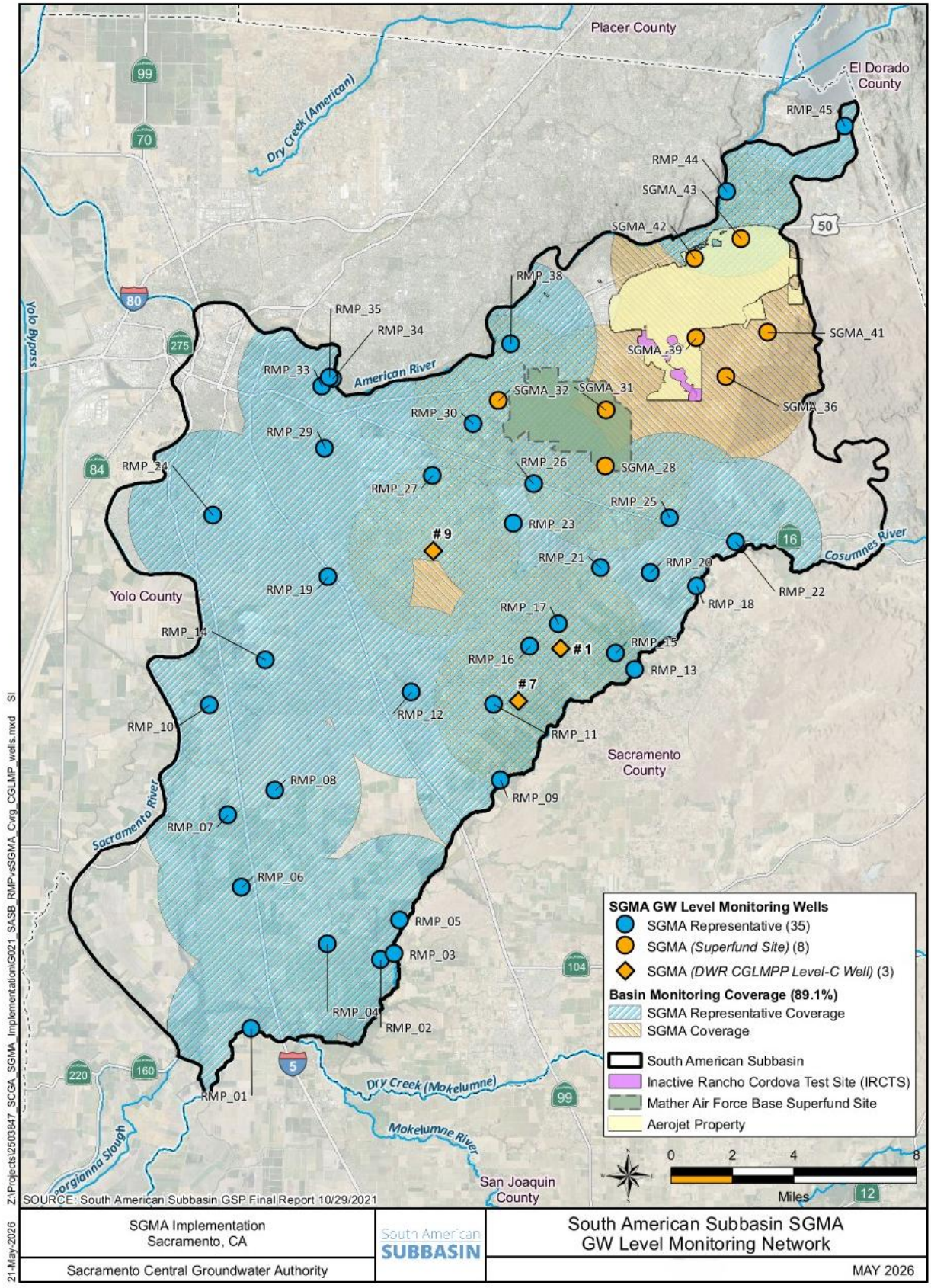
To address remaining data gaps and improve spatial coverage, the GSAs plan to expand the monitoring network through incorporation of additional wells from DWR's Community Groundwater Level Monitoring Pilot Program (Program C locations) as SGMA wells (Figure 6-2).

Inclusion of these wells will:

- Support future development of sustainable management criteria
- Improve coverage in currently underrepresented areas, including near Elk Grove area
- Increase overall Subbasin coverage from 88.6 percent to approximately 89.1 percent

As described in detail under Section 3.1, groundwater levels near the Aerojet and Mather Superfund sites are influenced by ongoing remediation pumping, which has resulted in localized groundwater level declines that differ from broader Subbasin conditions. The GSAs do not have regulatory authority over Superfund remediation activities. In response, the Subbasin GSAs plan to reclassify eight RMPs located within these Superfund-influenced areas. Due to localized and externally controlled groundwater level impacts, these wells will be retained as SGMA monitoring wells but will no longer be used as representative monitoring points for evaluating SMC. This adjustment ensures that monitoring network results are representative of basin-wide groundwater conditions and are not overly influenced by localized conditions outside of GSA management control.

Figure 6-2. Future Groundwater Level Monitoring Network Water Years 2027



6.2. Groundwater Quality

The updated groundwater quality RMP monitoring network is comprised of 13 wells screened within the upper aquifer zone and 10 wells screened in the lower aquifer zone. The RMP network relies on data collected from existing monitoring programs in the Subbasin that are publicly reported. Wells in the network are either municipal or monitoring wells and are sampled annually or semiannually for the two constituents with defined SMCs: nitrate as N and specific conductance. One well is currently sampled for specific conductance on a triennial basis; outreach with the monitoring entity is ongoing to increase the monitoring frequency to annual sampling for that well. Arsenic, iron, and manganese are not assigned SMCs; however, concentrations of these constituents sampled from wells within the groundwater RMP network are evaluated annually in the Annual Report to track any potential mobilization of elevated concentration or exceedances of the MCLs or SMCLs.

6.2.1. Recommended Corrective Actions

RECOMMENDED CORRECTIVE ACTION 4 - *Provide additional information on the monitoring network, including:*

a. Define the monitoring site type and data collection frequency in tabular format for the degraded water quality monitoring network in the GSP.

Table 6-1 provides this requested information about the monitoring network, including monitoring site type and data collection frequency, for the groundwater quality monitoring network.

b. Conduct a reconciliation between the details of the monitoring network provided in the GSP with the requirements of the data and reporting standards in the GSP Regulations. Where requirements of the data and reporting standards are not provided, the GSAs should include this information in the periodic evaluation of the GSP. As a reminder, modifications to the Subbasin's monitoring network must be reflected in the SGMA Portal's Monitoring Network Module.

Recommended corrective action 4b requested reconciliation between the details of the monitoring network provided in the GSP with the requirements of the data and reporting standards in the GSP Regulations. The Determination Letter cites missing well construction information for water quality wells. This information is provided in Table 6-1. The 2027 GSP (Tables 3-6, 3-7, and 3-8) also includes this information, as well as additional information relevant to the water quality RMP network.

Table 6-1. Location, Construction Details, and Sampling Frequency of Wells in the Water Quality RMP Network

Well ID	Facility or Water System Name	Well Type	Lat/Long	Top Depth of Screen (ft)	Bottom Depth of Screen (ft)	Aquifer Zone	Nitrate as N Sampling Frequency	Specific Conductance Sampling Frequency
CA3410020_009_009	City of Sacramento Main	Municipal	38.4675, -121.430556	91	164	Upper	Annual	Annual
CA3410029_002_002	SCWA - Laguna/Vineyard	Municipal	38.418056, -121.416667	176	236	Upper	Annual	Annual
CA3410029_016_016	SCWA - Laguna/Vineyard	Municipal	38.456944, -121.307222	150	286	Upper	Annual	Annual
CA3410029_029_029	SCWA - Laguna/Vineyard	Municipal	38.428056, -121.397222	153	183	Upper	Annual	Annual
CA3410033_006_006	Florin County Water District	Municipal	38.4923, -121.403458	127	152	Upper	Annual	Triennial
L10005519750-MW-G(S)	Florin-Perkins Landfill	Monitoring	38.5326864, -121.385189	59	79	Upper	Semi-annual	Semi-annual
L10008601447-MW-13	Elk Grove Class III Landfill	Monitoring	38.4159214, -121.354067	130	140	Upper	Semi-annual	Semi-annual
CA3400101_001_001	Hood Water Maintenance Dist. (SWS)	Municipal	38.367333, -121.518277	60	405	Upper	Annual	Annual
CA3410029_024_024	SCWA - Laguna/Vineyard	Municipal	38.415833, -121.479722	232	306	Upper	Annual	Annual
CA3410029_025_025	SCWA - Laguna/Vineyard	Municipal	38.429722, -121.457222	252	402	Upper	Annual	Annual
CA3901216_001_001	Santos Ranch PWS #5-CSA #35	Municipal	38.333587, -121.56747	292	492	Upper	Annual	Annual
CA3400229_003_003	Rio Cosumnes Correctional Center (SWS)	Municipal	38.304799, -121.422098	0	24	Upper	Annual	Annual
CA3410027_003_003	CAL AM - Security Park	Municipal	38.561187, -121.210795	0	45	Upper	Annual	Annual
CA3410015_020_020	Golden State Water Co. - Cordova	Municipal	38.574323, -121.293588	363	533	Lower	Annual	Annual
CA3410015_022_022	Golden State Water Co. - Cordova	Municipal	38.618611, -121.264444	430	590	Lower	Annual	Annual
CA3410023_015_015	CAL AM - Fruitridge Vista	Municipal	38.512211, -121.444126	340	440	Lower	Annual	Annual
CA3410029_015_015	SCWA - Laguna/Vineyard	Municipal	38.464722, -121.362778	744	896	Lower	Annual	Annual
CA3410029_026_026	SCWA - Laguna/Vineyard	Municipal	38.410833, -121.346667	979	1,219	Lower	Annual	Annual
CA3410029_027_027	SCWA - Laguna/Vineyard	Municipal	38.458889, -121.315556	720	794	Lower	Annual	Annual
CA3410704_001_001	SCWA Mather-Sunrise	Municipal	38.5400, -121.280556	300	520	Lower	Annual	Annual
L10007396297-MW-40B	Kiefer Landfill	Monitoring	38.5049953, -121.2016679	300	320	Lower	Semi-annual	Semi-annual
CA3410029_050_050	SCWA - Laguna/Vineyard	Municipal	38.396638, -121.424141	1,167	1,223	Lower	Annual	Annual
CA3410010_009_009	CAL AM - Suburban Rosemont	Municipal	38.552567, -121.339347	251	384	Lower	Annual	Annual

SCWA = Sacramento County Water Agency; SWS = State Small Water System; CAL AM = California American Water

6.2.2. Changes to the Water Quality RMP Network

The 2027 Periodic Evaluation recommends removing two wells and adding four wells to the SASb groundwater quality RMP network. Details on wells in the network, including the wells added and removed, are presented in Table 6-2.

The SASb planned to augment the groundwater quality RMP network with additional monitoring wells within the Harvest Water Project area. The 2027 Periodic Evaluation recommends adding a monitoring well located within the project area. Additionally, two wells in the network lack depth or screened interval information. Both wells are removed from the network due to a lack of publicly available monitoring data, and lack of construction information. No new data gaps have been identified, and no remaining actions are identified at this time to improve the water quality RMP network.

Figure 6-3 displays the updated groundwater quality RMP network and identifies the two wells that were removed from the network during the evaluation cycle. Changes to the groundwater quality RMP network are summarized below.

The following wells were removed from the network:

- CA3400375_001_001 is a municipal well installed in the lower aquifer zone and located at a church in the north-central portion of the Subbasin. Due to a change in the management that oversaw monitoring, the monitoring entity stopped monitoring and reporting specific conductance. Due to lack of SC data, the well was removed from the network.
- S7-SAC-SA10 is a domestic well installed in the lower aquifer zone located in the southern portion of the Subbasin. Data from the well was last reported in 2017. No information has been found regarding the well's owner or contact information. Due to a lack of monitoring data, the well was removed from the network.

The following wells were added to network:

- CA3410010_009_009 is a municipal well installed in the lower aquifer zone. The well replaces the spatial coverage previously provided by well CA3400375_001_001, which was removed from the network. The well is located in the north-central region of the subbasin.
- CA3410029_050_050 is a municipal well installed in the lower aquifer zone. The well replaces the spatial coverage previously provided by well S7-SAC-SA10, which was removed from the network. The well is located just north of the Harvest Water Project area.
- CA3400229_003_003 is a municipal well installed in the upper aquifer zone. The well provides coverage in the southern region of the subbasin and is located within the Harvest Water Project area. This region was a spatial data gap, and this well provides monitoring coverage.
- CA3410027_003_003 is a municipal well installed in the upper aquifer zone. The well provides spatial coverage in the northeastern portion of the subbasin which previously did not have spatial coverage.

Table 6-2. Status of Wells in the Water Quality RMP Monitoring Network

Well ID	Well Status	Aquifer Zone
CA3410020_009_009	Added to network during development of the 2022 GSP	Upper
CA3410029_002_002		
CA3410029_016_016		
CA3410029_029_029		
CA3410033_006_006		
L10005519750-MW-G(S)		
L10008601447-MW-13		
CA3400101_001_001		
CA3410029_024_024		
CA3410029_025_025		
CA3901216_001_001		
CA3400229_003_003	Added to the network during 2027 Periodic Evaluation	
CA3410027_003_003		
CA3410015_020_020	Added to network during development of the 2022 GSP	Lower
CA3410015_022_022		
CA3410023_015_015		
CA3410029_015_015		
CA3410029_026_026		
CA3410029_027_027		
CA3410704_001_001		
L10007396297-MW-40B		
CA3410029_050_050	Added to the network during 2027 Periodic Evaluation	
CA3410010_009_009		
CA3400375_001_001	Removed from network during 2027 Periodic Evaluation	
S7-SAC-SA10		

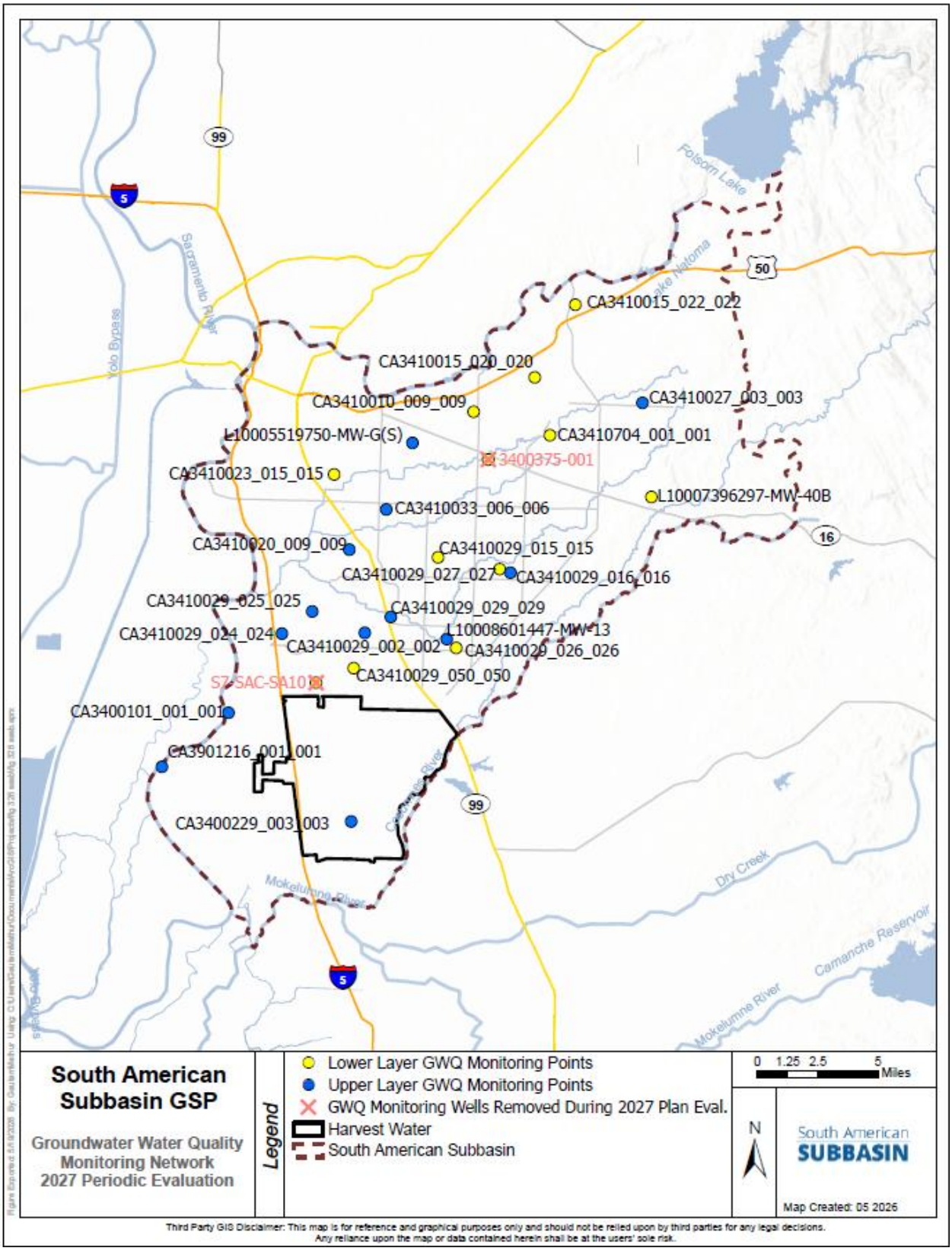
The revisions to the groundwater quality RMP monitoring network do not change the definition of occurrence of degraded water quality undesirable results for nitrate as N, or specific conductance. The definition for the updated network of 23 RMPs remains: significant and undesirable results for degraded groundwater quality occur when more than two RMPs experience exceedances above the MT.

Using the well density assumption referenced in the 2027 GSP, that each well roughly covers an area of 25-square miles, it is estimated that wells screened within the upper and lower layers of the aquifer would cover approximately 49% and 47% of the subbasin area, respectively.

Specific conductance was previously collected on a triennial basis at many wells in the network. Over the past five years, monitoring entities have been requested to increase the frequency of specific conductance monitoring. As of summer 2026, the monitoring entities have committed to collecting this data at least annually, with the exception of one monitoring entity that had not responded to outreach at the time of writing. Communication is ongoing to request increased monitoring frequency at that location.

The SGMA Monitoring Network Module (MNM) has been updated with the changes documented in this section of the Periodic Evaluation. Only DWR can remove wells from the MNM, and they have been notified of the wells to be removed.

Figure 6-3. Groundwater Quality RMP Monitoring Network



6.3. Land Subsidence

The Basin GSAs will use InSAR provided by DWR to monitor subsidence in the Subbasin. As described in the 2027 GSP and the annual reports, subsidence has not been observed in the Subbasin, and annual InSAR analysis indicates that there are no undesirable results for subsidence. Monitoring will occur during the preparation of the annual report, whereby the DWR InSAR website will be accessed and a map of subsidence in the last year will be created, reviewed and included in the annual report.

6.4. Interconnected Surface Water

The ISW RMP monitoring network uses a subset of the groundwater level RMP monitoring network wells and groundwater level measurements as a proxy for assessing changes in stream leakage (GSP Section 3.2.4). The subset of wells selected for the ISW RMP monitoring network during GSP development was based on wells located between ISW features and pumping zones in the Subbasin within the shallower depths, e.g., less than 300 ft deep, of the principal aquifer.

The ISW monitoring network will be evaluated along with the ISW SMCs during the next 5-year implementation period following the release of the ISW guidance from DWR. The ISW RMP monitoring network has not significantly changed since GSP development, and the water level data for ISW RMP wells is reported and evaluated against SMC in each annual report.

The only change to the ISW RMP monitoring network is that RMP_37 was destroyed. RMP_33 provides information on the same reach as RMP_37. The RMP ISW wells are identified in the GSP's Table 3-4, including information on well depth, latitude and longitude, and perforated interval depth. A map showing the location of ISW RMPs and ISW reaches is provided in the 2027 GSP and Figure 6-4 of the Periodic Evaluation shows the ISW groundwater level network; the ISW wells are a subset of those wells and are identified in Table 6-3 and Table 6-4. The table presents the minimum distance for each ISW RMP well to the identified ISW reach or reaches that it is intended to monitor.

Figure 6-4. Interconnected Surface Water, Groundwater Level Proxy, Monitoring Network Water Year 2026

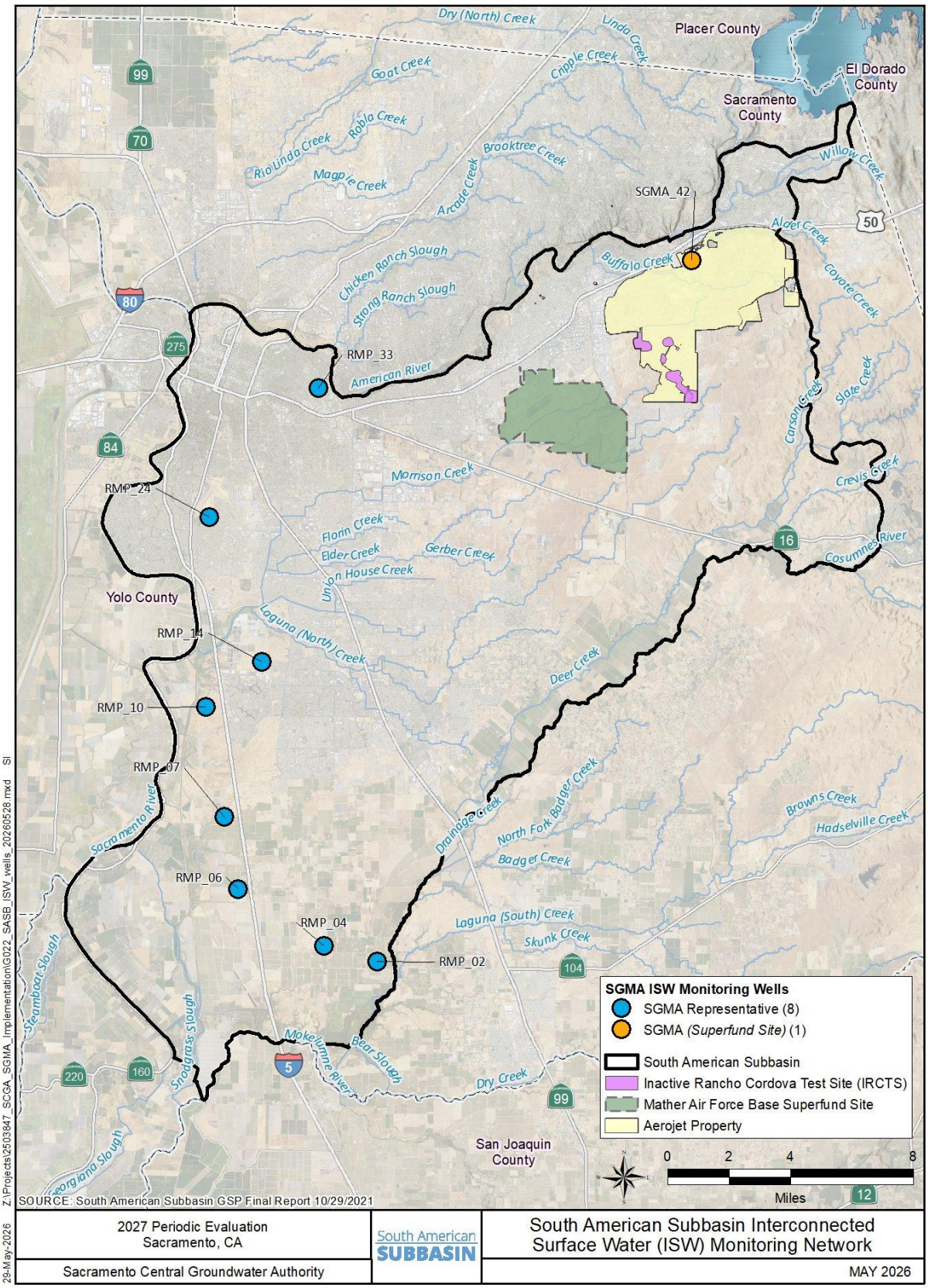


Table 6-3. Summary of the Minimum Distance to the ISW Reach from the ISW RMPs

RMP ID	ISW Reach Name	Minimum Distance to the Reach (ft)
RMP_02	Cosumnes River Upstream Mokelumne R.	4325
RMP_04	Mokelumne River Upstream Sacramento R. Confluence	17374
RMP_06	Sacramento River Upstream Mokelumne Confluence	18459
RMP_07	Sacramento River Upstream Mokelumne Confluence	10926
RMP_10	Sacramento River Upstream Mokelumne Confluence	6457
RMP_14	Sacramento River Upstream Morrison Crk	11947
	Morrison Creek Upstream Sacramento R.	7276
RMP_24	Sacramento River Upstream Morrison Crk	10712
RMP_33	American River Upstream Sacramento R.	2655
RMP_42[1]	American River Upstream Buffalo Crk	4723
	American River Upstream Alder Crk	5203
	Alder Creek	3677

Note:

1. RMP_42 is now defined as a SGMA monitoring well rather than an RMP.

Table 6-4. Summary of ISW RMPs Well Depth, and Perforation Depth Interval

RMP ID	Well Depth (ft)	Perforation Depth Interval (ft)	Reporting Frequency
RMP_02	334	NA-NA	Monthly
RMP_04	165	NA-NA	Biannual
RMP_06	125	88-125	Monthly
RMP_07	200	NA-NA	Biannual
RMP_10	175	135-175	Biannual
RMP_14	170	NA-NA	Biannual
RMP_24	172	150-162	Biannual
RMP_33	215	27-47	Biannual
RMP_42[1]	72	67-72	Biannual

Note:

1. RMP_42 is now defined as a SGMA monitoring well rather than an RMP.

To fill data gaps identified in the GSP, the GSAs requested CalSIP funding for the installation of a stream gage on the lower Cosumnes River by Twin Cities Road, but the funding was not awarded. The CalSIP Stream Gage Improvement Map[7] identifies a site that has been approved or is in progress on the lower Mokelumne River at Benson's Ferry near Thornton that will help fill the identified data gap on the Mokelumne River. Some of the RMPs for ISW are missing perforation interval or total depth information. The wells without perforation depth intervals were assessed for downhole video access to obtain the required information, but the access ports on all the wells were too small for video access.

The CalSIP Stream Gage Improvement Map identifies several sites that are approved or in progress, including a location on Laguna Creek (tributary to the Cosumnes River), two locations on Deer Creek (tributary to the Cosumnes River), and a location on the Sacramento River at the I Street Bridge. These new gages will help fill data gaps and inform understanding of surface water flows in assessment of groundwater contributions to surface water and provide data points of stream stage.

[7] CalSIP stream gage map https://water.ca.gov/Work-With-Us/Technical-Assistance/Stream-Gage-Improvement-Program

There have not been adjustments to the monitoring frequency or density of monitoring sites for ISW. While RMP_37 was removed from the network, its proximity to RMP_33 avoids a significant change in the density of monitoring sites for ISW. During the next 5-year implementation period, the GSAs will review the ISW Guidance and evaluate the ISW monitoring network and consider changes to the network as needed to monitor ISW per the undesirable results definition.

7. GSA Authorities and Enforcement Actions

GSP Emergency Regulations §356.4 include additional requirements that the Periodic Evaluation shall include:

(g) A description of relevant actions taken by the Agency, including a summary of regulations or ordinances related to the Plan.

(h) Information describing any enforcement or legal actions taken by the Agency in furtherance of the sustainability goal for the basin.

7.1. Relevant Actions

The GSAs continue to exercise their authorities under SGMA, including data collection, coordination with local agencies, and implementation of projects and management actions to support achievement of the Subbasin's sustainability goal.

During the evaluation cycle, the GSAs exercised their authorities in response to State of California EO's issued during drought conditions. In 2022, the Governor issued EO N-7-22, which was later superseded by EO N-3-23 in February 2023. These orders required the local well permitting agency (Sacramento County) to coordinate with the GSAs when reviewing applications for new or modified groundwater wells. Under these orders, the GSAs were required to provide written verification that groundwater extraction from proposed wells would not be inconsistent with the applicable GSP or decrease the likelihood of achieving the Subbasin's sustainability goal.

The SCGA GSA reviewed five well permit applications from three entities. Based on technical evaluation, the SCGA determined that groundwater extraction from the proposed wells was (1) not likely to interfere with the production and functioning of existing nearby wells, and (2) not likely to cause subsidence that would adversely impact or damage nearby infrastructure.

Subsequently, in a later EO, this GSA authority was withdrawn, and the GSAs no longer provide review of well permit applications.

In addition, the GSAs continued to support implementation of related programs and initiatives, including coordination with domestic well monitoring and drought planning efforts consistent with SB 552, and ongoing data collection and monitoring activities described in Sections 4 and 6.

7.2. Enforcement or Legal Actions

The GSAs in the SASb have not taken any enforcement or legal action as part of GSP or SGMA implementation since adoption of the 2022 GSP.

The Subbasin continues to maintain sustainable conditions due primary to the proactive implementation of conjunctive management by local water suppliers. Projects listed in the GSP remain on schedule, and with the completion of these projects sustainable conditions are projected through 2042 and beyond. As

described in Section 3, groundwater conditions remained within sustainable limits and no undesirable results occurred.

Based on current conditions and trends, enforcement actions have not been necessary to achieve or maintain the Subbasin's sustainability goal during this evaluation cycle.

8. Outreach, Engagement, and Coordination with Other Agencies

GSP Emergency Regulations §356.4(j) include a requirement that the Periodic Evaluation shall include:

> *Where appropriate, a summary of coordination that occurred between multiple Agencies in a single basin, Agencies in hydrologically connected basins, and land use agencies.*

The GSAs have continued to build on outreach and engagement efforts established during GSP development by regularly informing interested parties, soliciting feedback, and coordinating with agencies to support implementation of the GSP. These efforts support transparency, decision-making, and help ensure that groundwater management actions consider the needs of all beneficial users.

8.1. Outreach and Engagement

Outreach and engagement activities during the evaluation cycle included SASb Executive Committee meetings, DWAG meetings, and public meetings focused on GSP implementation and development of the 2027 Periodic Evaluation.

Public engagement efforts have focused on providing updates on groundwater conditions, implementation of projects and management actions, domestic well protection, and development of the 2027 Periodic Evaluation. Comments were limited in number and primarily consisted of requests for clarification on presentation materials. These comments were considered in refining analyses and presentation of results in this Periodic Evaluation.

The GSAs have evaluated outreach and engagement methods described in the GSP and determined that these methods remain effective and appropriate for supporting GSP implementation. Outreach activities will continue to be updated as needed to address evolving conditions and needs.

8.1.1. SASb Executive Committee

The SASb Executive Committee is composed of Board Members representing the five GSAs and is responsible for coordinating and implementing the GSP. The Committee was established through a Memorandum of Understanding (MOU) among the GSAs and meets approximately twice per year.

The Committee provides a forum for discussing shared groundwater management issues (also described in the January 26, 2023 MOU), reviewing implementation progress, and coordinating responses to regulatory requirements and stakeholder input.

Meetings of the Executive Committee during the evaluation cycle are summarized in Table 8-1.

Table 8-1. Summary of SASb Executive Committee Meetings

Meeting Date	Summary of Key Agenda Items
February 23, 2026	• MOU (changes in membership, boundary changes) • WY 2025 Annual Report • GSP 2027 Periodic Evaluation • DWAG Updates
October 27, 2025	• GSP 2027 Periodic Evaluation • Domestic Well Outreach • Local Initiatives (annexation, drought planning, water bank)
February 25, 2025	• Harvest Water Project • GSP 2027 Periodic Evaluation
October 22, 2024	• Water Year Trends and PMAs • Alignment with SB 552 • DWAG Updates • Interbasin Coordination (Solana and Cosumnes)
March 26, 2024	• DWAG Updates • WY 2025 Annual Report • GSP 2027 Periodic Evaluation
December 6, 2023	• Selection of SASB Domestic Well Advisory Committee • Annual Water Level Monitoring & Schedule • Schedule & Budget for GSP 2027 Periodic Evaluation

8.1.2. Domestic Well Advisory Group

The role of the DWAG is to provide input to and coordinate with the GSAs in the SASb with regard to domestic wells in the subbasin. DWAG provides a forum for engagement with domestic well owners and supports development of the Subbasin's domestic well protection program.

The DWAG:

- Provides community perspective from domestic well owners throughout the SASb
- Creates support for further development of the well protection program
- Facilitates a voluntary domestic well monitoring program
- Assists with outreach and implementation

Through regular meetings, DWAG members provide feedback on projects and management actions, monitoring, outreach activities, and more. This input has informed development of the VMP. A summary of DWAG meetings is provided in Table 8-2.

Table 8-2. Summary of DWAG Meetings

Meeting Date	Key Meeting Topics
December 5, 2025	• GSP 2027 Periodic Evaluation • Collaboration with DWR on Domestic Well Monitoring Program • Role of DWAG in Sacramento County Drought Planning
September 25, 2025	• Informational Meeting on the New Community Groundwater Monitoring Pilot Program - led by DWR in collaboration with the Sacramento County Drought and Water Shortage Task Force and the SASb GSAs to offer meaningful assistance to SASb domestic well owners that would like to monitor their wells.
October 15, 2024	Public Meeting: • SB 552 Overview • Domestic Well Protective Measures

8.1.3. Public Meetings

The GSAs conducted public meetings to present updates on groundwater conditions, implementation of projects and management actions, and development of the 2027 Periodic Evaluation. These meetings provided opportunities for interested parties to ask questions, provide feedback, and remain informed about Subbasin conditions and management actions.

Public meetings conducted during the evaluation cycle are summarized in Table 8-3.

Table 8-3. Summary of Public Meetings

Meeting Date	Key Meeting Topics
October 15, 2024	DWAG Public Meeting
December 18, 2025	GSP 2027 Periodic Evaluation Launch Briefing: • Sustainable Management Criteria and Conditions • Groundwater Conditions • Dry Well Reports • Status of Projects and Management Actions • DWR Corrective Actions
April 21, 2026	Periodic Evaluation 2027 Update: • New Information • Groundwater Conditions • Status of PMAs • Basin Setting Updates • Monitoring Networks • Outreach, Engagement, and Coordination with Other Agencies
June 23, 2026	Periodic Evaluation 2027 Update: • New Information • Groundwater Conditions • Status of PMAs • Basin Setting Updates • Monitoring Networks • Outreach, Engagement, and Coordination with Other Agencies

8.2. Responsibilities of GSA Boards

GSA Boards remain actively engaged in implementation of the GSP and development of the 2027 Periodic Evaluation. Board Members participate in Executive Committee meetings and receive updates through public meetings, technical discussions, and reporting activities. These efforts ensure Board Members are informed of basin conditions, implementation progress, and regulatory requirements, and can guide ongoing groundwater management activities consistent with the Subbasin's sustainability goal.

8.3. Coordination with Other Agencies

The GSAs continue to participate in inter-agency coordination with local, regional, and neighboring agencies to support effective implementation of the GSP and ensure consistency in groundwater management across basin boundaries.

Coordination efforts included:

- Collaboration with GSAs in the North American and Cosumnes Subbasins to develop a consistent ISW analysis according to DWR Guidelines, share data and discuss groundwater conditions
- Coordination with land use agencies, including Sacramento County, to align groundwater management with planning and well permitting activities
- Engagement with regional partners regarding drought planning, domestic well protection, and implementation of projects and management actions

These coordination efforts support data sharing, improve understanding of regional groundwater conditions, and help ensure that management actions are consistent across jurisdictional boundaries. Coordination meetings conducted during the 2027 Periodic Evaluation are summarized in Table 8-4. Additional coordination related to the water bank project being implemented in the NASb and SASb is occurring monthly.

Table 8-4. Coordination Meetings with Other Agencies

Other Agency Meetings	Meeting Date
North American Subbasin	February 5, 2026
Cosumnes Subbasin	February 18, 2026
Solano	Contacted, agreed to schedule meeting following release of DWR ISW Guidance
Yolo	Contacted, agreed to schedule meeting following release of DWR ISW Guidance

9. Other Information

GSP Emergency Regulations §356.4(k) include a requirement that the Periodic Evaluation shall include:

> *Other information the Agency deems appropriate, along with any information required by the Department to conduct a periodic review as required by Water Code Section 107033.*

9.1. Consideration of Adjacent Basins

The GSAs have continued coordination with adjacent basins, including the North American Subbasin and Cosumnes Subbasin, as described in Section 8.3. These coordination efforts support data sharing, consistency in groundwater management approaches, and understanding of regional groundwater conditions.

Analysis of model results concluded that implementation of the SASb GSP is not expected to adversely impact adjacent basins. Groundwater management actions within the Subbasin are focused on maintaining groundwater conditions within sustainable limits and results show positive affects on neighboring basins.

Similarly, analysis of model results concludes that conditions in adjacent basins are not expected to adversely affect the ability of the SASb to achieve its sustainability goal. Coordination efforts will continue for consistency and to identify any potential interbasin impacts in future evaluation cycles.

9.2. Challenges Not Previously Discussed

This section summarizes additional challenges and changes affecting GSP implementation during the evaluation cycle.

9.2.1. Sloughhouse Resource Conservation District Withdrawal from the SASb Memorandum of Understanding

In December 2025, the Sloughhouse Resource Conservation District withdrew from the SASb MOU. Notice was sent via email and U.S. Mail on December 17, 2025, and reads as follows:

> *"Pursuant to Section 4.13(a) of the Memorandum of Understanding Establishing a South American Subbasin Sustainable Groundwater Management Act Executive Committee and General Manager Committee and Identifying Cost Share Provisions for Groundwater Sustainability Plan Implementation ("SaSB MOU") Sloughhouse Groundwater Sustainability Agency ("SRCD") is hereby providing written notice that it is withdrawing from the SaSB MOU. Under Section 4.13(b), SRCD shall not be responsible for its proportional share of costs incurred under the SaSB MOU following the date identified above for this written notice*."

The notice was sent to the following parties:

- Northern Delta GSA
- Sacramento Central Groundwater Authority
- Omochumne-Hartnell Water District
- Sacramento County GSA

Withdrawal from being a GSA in SASb was filed with DWR and subsequently posted to the SGMA portal on December 19, 2025 (https://sgma.water.ca.gov/portal/gsa/withdrawals). Moving forward, Sloughhouse Resource Conservation District remains committed to working closely with the Executive Committee to identify a new GSA to manage the portion of SASb that will no longer be managed by the Sloughouse GSA.

This change represents a governance adjustment. GSAs are coordinating to ensure continued coverage and effective implementation of the GSP.

9.2.2. Omochumne-Hartnell Water District Expansion

OHWD is considering annexing non-district lands in response to requests from landowners. Several landowners requested OHWD examine the possibility of annexation of land west of Highway 99, south of the City of Elk Grove's Sphere of influence to the Cosumnes River and over to Interstate 5. These areas are not within the boundaries of any other water district and are represented by SCGA and Sacramento County. Landowners identified several potential benefits of annexation, including:

- Improved representation of agricultural interests
- Formation of a larger agricultural water district
- Support for implementation of the Harvest Water Project
- Expansion of groundwater level monitoring coverage

In response, OHWD staff prepared a written analysis (undated) of the expansion that describes the amount of land, benefits, fiscal impacts, effect on OHWD board elections, and disadvantages of the expansion. Information is available on OHWD's website at: https://ohwd.org/. The OHWD Board has decided to proceed with the annexation, and the application is currently under review by the Local Agency Formation Commission. This potential expansion represents a change in service boundaries.

9.3. Legal Challenges

There have been no legal challenges or matters involving the SASb GSAs as it relates to implementation of the SASb GSP. There is also no indication of potential legal challenges that would impact ongoing implementation of the Plan.

10. Summary of Proposed or Completed Revisions to Plan Elements

GSP Emergency Regulations §356.4(i) include a requirement that the Periodic Evaluation shall include:

> *A description of completed or proposed Plan amendments.*

A summary of identified GSP changes is provided in Table 10-1.

Table 10-1. Summary of GSP Changes Identified

GSP Changes Identified	Amendment Required (?)	2027 GSP Section Modified
Groundwater level Monitoring Network—Remove 2 destroyed RMPs	No	2.3.1, 3.5
Groundwater level Monitoring Network—Add 3 DWR Pilot Program Level C wells as SGMA wells	No	2.3.1, 3.5
Groundwater level Monitoring Network—Reclassify 8 RMPs in Superfund areas from "SGMA representative" to SGMA wells	No	2.3.1, 3.5
Groundwater level Monitoring Network—Apply SMC methodology to full record at 8 wells, no SMC changes resulted	No	2.3.1, 3.5
Respond to corrective actions—Update Arsenic analysis	No	2.3.4
Respond to corrective actions—Update ISW analysis	No	2.3.6
Respond to corrective actions—Revise Subsidence undesirable results	No	Executive Summary, 2.1.7, 2.3.5, 3.2.5, 3.2.6, 3.3.5, 3.4.5
Respond to corrective actions—Amend quantitative definition of undesirable results	No	3
Respond to corrective actions—Revise monitoring network	No	3, 4
Extend water budget through water year 2025	No	2.4.3
Add new projects—Flood Diversion for Groundwater Recharge	No	4.5
Add new projects—Wilton Road Floodplain Reconnection Project	No	4.5
Add new projects—Recharge Basin near Folsom South Canal	No	4.5

11. References

California Department of Water Resources (DWR), 2025. Cosumnes River Multi-Benefit Floodplain Restoration Pilot Study Summary. June.

California Department of Water Resources (DWR), 2023. Groundwater Sustainability Plan Implementation: A Guide to Annual Reports, Periodic Evaluations, and Plan Amendments.

California Department of Water Resources (DWR), 2017. Best Management Practices for the Sustainable Management of Groundwater.

Sophocleous, M., 1983. Groundwater Observation Network Design for the Kansas Groundwater Management Districts, U.S.A. Journal of Hydrology, 61(4), pp. 371-389. https://doi.org/10.1016/0022-1694(83)90002-1.

U.S. Bureau of Reclamation et al., 2022. American River Basin Study (ARBS).

Vankeuren, A., 2025. Water quality impacts during Flood-MAR on Vineyards.

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