

PERIODIC REVIEW AND ASSESSMENT
OF THE
SANTA YNEZ RIVER VALLEY GROUNDWATER BASIN
CENTRAL MANAGEMENT AREA
GROUNDWATER SUSTAINABILITY AGENCY
GROUNDWATER SUSTAINABILITY PLAN

PUBLIC DRAFT



AUGUST 2026



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Cover Photographs

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Back Cover: National Agriculture Imagery Program (NAIP) natural color orthographic photo mosaic of Central Management Area photographed on May 21, 2022.

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CENTRAL MANAGEMENT AREA

GROUNDWATER SUSTAINABILITY AGENCY

**Periodic Review and Assessment of the
Santa Ynez River Valley Groundwater Basin
Central Management Area
Groundwater Sustainability Agency
Groundwater Sustainability Plan**

PUBLIC DRAFT

August 28, 2026

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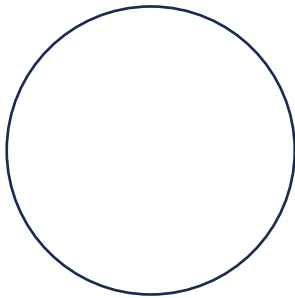
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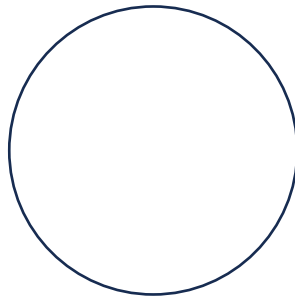
Preparers

This Periodic Evaluation of the Groundwater Sustainability Plan for the Santa Ynez River Valley Groundwater Basin Central Management Area Groundwater Sustainability Agency has been prepared under the direction of professional engineers and geologists licensed in the State of California as required per California Code of Regulations, Title 23 Section 354.12, and consistent with professional standards of practice.

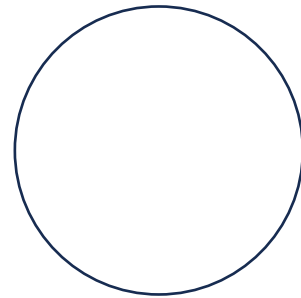
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The CMA GSA appreciates and acknowledges the funding contributions from the California Department of Water Resources Proposition 68, Sustainable Groundwater Management Grant Program, and Urban Community Drought Relief Grant Program for the implementation of the Groundwater Sustainability Plan Projects and Activities.

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[No Appendices]

List of Acronyms and Abbreviations

AF	acre-feet
AFY	acre-feet per year
BMPs	Best Management Practices
CCR	California Code of Regulations
CCWA	Central Coast Water Authority
CEQA	California Environmental Quality Act
CGPS	Continuous Global Positioning System
CMA	Central Management Area
CMA GSA	Santa Ynez River Valley Groundwater Basin Central Management Area Groundwater Sustainability Agency
COMB	Cachuma Operation and Maintenance Board
CSD	Community Services District
CWC	California Water Code
DBID	Database Identification Number
DWR	Department of Water Resources
EMA	Eastern Management Area
EMA GSA	Santa Ynez River Valley Groundwater Basin Eastern Management Area Groundwater Sustainability Agency
EPA	U.S. Environmental Protection Agency
ET	Evapotranspiration
FYE	Fiscal Year Ending (fiscal years run: July 1 through June 30)
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWL	Groundwater Level
GWS	Groundwater Storage
ILRP	Irrigated Lands Regulatory Program
InSAR	Interferometric Synthetic Aperture Radar
ISW	Interconnected Surface Water

mg/L	milligrams per liter
NAIP	National Agriculture Imagery Program
PWSR	Public Water System Reporting
RMW	Representative Monitoring Well
RWQCB	Regional Water Quality Control Board
SFB	Space Force Base
SGMA	Sustainable Groundwater Management Act
SW	Surface Water
SWP	State Water Project
SWRCB	State Water Resources Control Board
SYRA	Santa Ynez River Alluvium
SYRVGB	Santa Ynez River Valley Groundwater Basin
SYRWCD	Santa Ynez River Water Conservation District
USBR	United States Bureau of Reclamation
USGS	United States Geological Survey
VSFB	Vandenberg Space Force Base
VVCSD	Vandenberg Village Community Services District
WMA	Western Management Area
WMA GSA	Santa Ynez River Valley Groundwater Basin Western Management Area Groundwater Sustainability Agency
WR	Water Rights Order
WY	Water Year (October 1 through September 30)

Executive Summary

This is the first Periodic Evaluation of groundwater sustainability in the Central Management Area of the Santa Ynez River Valley Groundwater Basin. This evaluation finds that groundwater conditions for this area are sustainable as of fall 2024. It also reviews and updates the assessment of sustainability based on new information and updated guidance.

The Santa Ynez River Valley Groundwater Basin Central Management Area Groundwater Sustainability Agency (“CMA GSA”) has prepared this Periodic Evaluation. The CMA GSA serves as the Groundwater Sustainability Agency (“GSA”), pursuant to Sustainable Groundwater Management Act (“SGMA”) for the Central Management Area (“CMA”) of the Santa Ynez River Valley Groundwater Basin, Basin No. 3-015 (“SYRVGB” or “Basin”). This is an evaluation of the Groundwater Sustainability Plan (“GSP” or “Plan”) that the CMA GSA adopted in 2022. This five-year periodic evaluation is intended to cover the same period as the annual reports submitted under the 2022 CMA GSP, including Water Years 2019 through 2024.

SGMA regulations require Periodic Evaluations at least every five years.¹ It reviews conditions, methods of assessing sustainability, and actions taken by the CMA GSA. In compliance with SGMA, the CMA GSA will file this Periodic Evaluation with the California Department of Water Resources (“DWR”). The CMA GSA adopted and submitted its GSP to DWR for review in 2022, and this Periodic Evaluation will be submitted in 2027. The next Periodic Evaluation is expected to be submitted by 2032.

1ES. UPDATED GSA INFORMATION

The Basin is organized into three groundwater sustainability agencies. West of the CMA GSA is the SYRVGB Western Management Area Groundwater Sustainability Agency (“WMA GSA”) in the

¹ 23 CCR § 356.4 “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. [...]”

Lompoc and Santa Rita Valleys. East of the CMA GSA is the SYRVGB Eastern Management Area Groundwater Sustainability Agency (“EMA GSA”) in the Santa Ynez Upland. These divisions of the SYRVGB into three separate GSAs reflect the limited physical hydrology connection and political complexities. Each GSA in the Basin is a separate public entity formed and existing pursuant to the California Joint Exercise of Powers Act¹ and SGMA. Each GSA has different member agencies and distinct constituents. The GSAs each have their own separate GSPs and each have separate specific Periodic Evaluations. The CMA GSA works collaboratively and in coordination with the two other GSAs to achieve groundwater sustainability.

The City of Buellton and the Santa Ynez River Water Conservation District (“SYRWCD”) are the two voting members of the CMA GSA’s Board of Directors. The Santa Barbara County Water Agency has a non-voting seat. The CMA GSA has added a second non-voting seat for an agricultural representative.

2ES. NEW INFORMATION COLLECTED

The CMA GSA has made substantial progress in data collection, model improvement, and monitoring upgrades. This new information improves the scientific basis for groundwater management and informs future decision-making. This new information was evaluated, and the evaluation found this new information does not require a change or amendment to the CMA GSP. Many projects to fill data gaps are ongoing and will be included in future CMA GSA Annual Reports and Periodic Evaluations. As explained in the sections below, the CMA GSA will continue to collect data and will add more when needed.

Results from a new geophysical survey became available in May 2022. This data was used to update both the geologic and groundwater flow models. These updates improve the understanding of the Basin and are described in later sections. The survey used airborne electromagnetic methods to

¹ Gov. Code section 6500, et seq

characterize subsurface conditions. It mapped features like soil layers, faults, and other structures. The survey covered 710 miles and focused on the top 1,000 feet, where most wells are located.

The CMA GSA is improving surface water and environmental monitoring. A new stream gage is being installed near the WMA GSA boundary to track surface water outflows. A field study is also underway to confirm groundwater-dependent ecosystems. The CMA GSA also considers work conducted by external agencies, including fish monitoring and other new reports. The CMA GSA works to better understand groundwater conditions and plan for long-term sustainability.

3ES. GROUNDWATER SUSTAINABILITY STATUS UPDATE

The CMA GSA remains on track to meet its sustainability goals based on monitoring data from 2019 to 2024. Groundwater levels in all four monitoring wells stayed above required minimum thresholds. Groundwater storage has increased from WY 2015 to WY 2024. Groundwater pumping from WY 2015 to WY 2024 has remained stable compared to the GSP Current Period, WY2011 to WY2018. Water quality indicators are stable. There are no signs of serious problems like land subsidence or impacts to connected surface water. These results indicate that CMA conditions remain within established sustainability criteria and are expected to remain sustainable through 2042.

Based on the evaluation presented in this Periodic Evaluation, the CMA GSA finds that:

- Groundwater conditions remain above Minimum Thresholds for all sustainability indicators.
- Measurable Objectives are generally achieved or exceeded.
- No Undesirable Results have occurred within the CMA during the evaluation period (WY 2019 – WY 2024).

Accordingly, the CMA GSA finds that, within the CMA GSA, the Basin is currently operating in a sustainable manner and is on track to achieve the Sustainability Goal by 2042 under current conditions.

4ES. UPDATES TO SUSTAINABILITY ASSESSMENT

As part of this Periodic Evaluation, the CMA GSA evaluated the methods of assessing sustainability. This assessment looked at changes in data collection, public comments, and new guidance. The CMA GSA also addressed specific guidance from DWR. The DWR provided a list of proposed Recommended Corrective Actions (“RCAs”). The following table, **Table ES-1**, lists sections where each RCA is addressed and shows the CMA GSA gave each of the proposed RCAs due consideration. The CMA GSA has taken actions to address all seven DWR Recommended Corrective Actions. Four RCAs (#1, #3, #5 and #6) are substantially addressed through completed administrative clarifications, evaluations or implementation measures. Three RCAs (#2, #4, and #7) require continued monitoring, data collection, model development, and potential future GSP amendments as additional information becomes available. The CMA remains sustainable, with no undesirable results observed during WY 2019-2024.

Table ES-1:
Summary of Recommended Corrective Actions

Recommended Corrective Action #	Description	Actions Taken by GSA	Key Outcomes	Section Where Addressed in Periodic Evaluation
1	Incorporate the Action Plan associated with the management of the Santa Ynez River Alluvium into the GSP and GSP implementation.	Conducted outreach workshops; identified Above Narrows wells and reporting status; incorporated Action Plan activities into PMAs, coordination, reporting, and monitoring programs.	Action Plan integrated into ongoing GSP implementation and annual reporting processes.	SECTION 2: New Information SECTION 4: PMAs SECTION 5: Basin Setting SECTION 8: GSA Actions SECTION 9: Coordination, Outreach, and Engagement
2	Fill data gaps and better understand the principal aquifers.	Completed AEM geophysical survey; updated 3D geologic model; revised groundwater flow model; added monitoring programs; initiated new monitoring well design and stream gage project; identified further data gap needs	Improved understanding of aquifer geometry, hydrogeology, and groundwater/surface-water interactions. Additional data collection and modeling will improve future assessment.	SECTION 2: New Information SECTION 3: Groundwater Conditions SECTION 5: Basin Setting
3	Evaluate methodologies and terminology in the water budgets for better consistency across the three management areas.	Coordinated evaluation of water budget assumptions, terminology, and accounting methods across WMA, CMA, and EMA.	Consistent basin-wide framework for sustainable yield and water budget reporting.	SECTION 5: Basin Setting

4	Reevaluate the sustainable management criteria for the chronic lowering of groundwater levels.	Reviewed groundwater level trends, monitoring network, drought considerations, seasonal lows, and well impact guidance; identified further data gap needs.	Existing basin remains sustainable, but additional evaluation and possible future refinements to groundwater-level SMCs are recommended.	SECTION 3:Groundwater Conditions SECTION 7: Undesirable Results and Sustainable Management Criteria SECTION 10: Proposed Revisions
5	Reevaluate the sustainable management criteria for the degradation of water quality.	Updated monitoring network; evaluated constituent trends; revised methodology; incorporated new regulatory and monitoring information.	No undesirable results observed; updated approach improves defensibility of water quality assessment.	SECTION 3: Groundwater Conditions SECTION 7: Undesirable Results and Sustainable Management Criteria SECTION 10: Proposed Revisions
6	Address inconsistencies in the sustainable management criteria for land subsidence.	Reviewed InSAR and CGPS data; evaluated DWR subsidence guidance; updated land subsidence framework.	No significant subsidence observed; monitoring methods aligned with current guidance.	SECTION 3:Groundwater Conditions SECTION 6:Monitoring Networks SECTION 7: Undesirable Results and Sustainable Management Criteria
7	Reevaluate the sustainable management criteria for the depletions of interconnected surface water.	Evaluated new DWR guidance; updated proxy groundwater-level approach; initiated stream gage installation; identified need for model recalibration.	Conditions remain above thresholds; additional data collection and modeling will improve future assessment.	SECTION 5: Basin Setting SECTION 7: Undesirable Results and Sustainable Management Criteria

5ES. AGENCY ACTIONS

The CMA GSA worked with the two other Basin GSAs, the WMA GSA and EMA GSA, in implementing the Lower Santa Ynez River Action Plan. This helped provide information to the State Water Resources Control Board regarding wells that are likely producing Santa Ynez River underflow water from a known and definite channel, the Santa Ynez River alluvium, within the DWR Basin boundaries. Work by the Basin GSAs included mapping wells, holding public workshops, and improving coordination.

The recent CMA GSA projects include establishing and collecting new groundwater fees, improving data collection and monitoring, and SGMA compliance. The CMA GSA's SGMA sustainability is on track, so there are limited actions targeted at affecting conditions. Key efforts include collecting improved well information and additional surface flow measurements. New monitoring wells are planned, and in the process of being developed. The existing monitoring wells are being maintained or replaced where needed.

6ES. EVALUATION OF PLAN EFFECTIVENESS

The CMA GSA evaluated whether implementation of the CMA GSP is achieving the GSP's measurable objectives, and whether those objectives are sufficient to achieve the sustainability goal. Groundwater conditions remain above minimum thresholds for all sustainability indicators, and measurable objectives are generally achieved or exceeded. No undesirable results have occurred during the evaluation period. The CMA GSA notes that the subject evaluation period includes recent wet conditions. Additional evaluation during extended dry periods will be important to confirm long-term effectiveness of the CMA GSP. An explanation of why no CMA GSP plan amendment is required or being made at this time is contained in Section 10, Summary of Proposed or Completed Revisions to Plan Elements.

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SECTION 1: Introduction

The Santa Ynez River Valley Groundwater Basin Central Management Area Groundwater Sustainability Agency (“CMA GSA”) has prepared this Periodic Evaluation of the Groundwater Sustainability Plan (“GSP” or “Plan”) for the Central Management Area (“CMA”) of the Santa Ynez River Valley Groundwater Basin (“SYRVGB” or “Basin”), Basin 3-015. The CMA portion of the Basin consists of the area of the Buellton Upland and Santa Ynez River alluvium east of Santa Rosa Park to just west of the City of Solvang. This document is intended for submission to the California Department of Water Resources (“DWR”) to meet the Sustainable Groundwater Management Act (“SGMA”) periodic evaluation requirements, which are at least every five years.¹ This Periodic Evaluation represents CMA GSA’s findings after a detailed evaluation of the current implementation of the CMA GSP that DWR approved on January 18, 2024. This periodic review is intended to cover the same period as the annual reports since the 2022 CMA GSP, which includes water years (“WY”)² 2019 through 2024³.

1.1 Central Management Area (CMA) Description

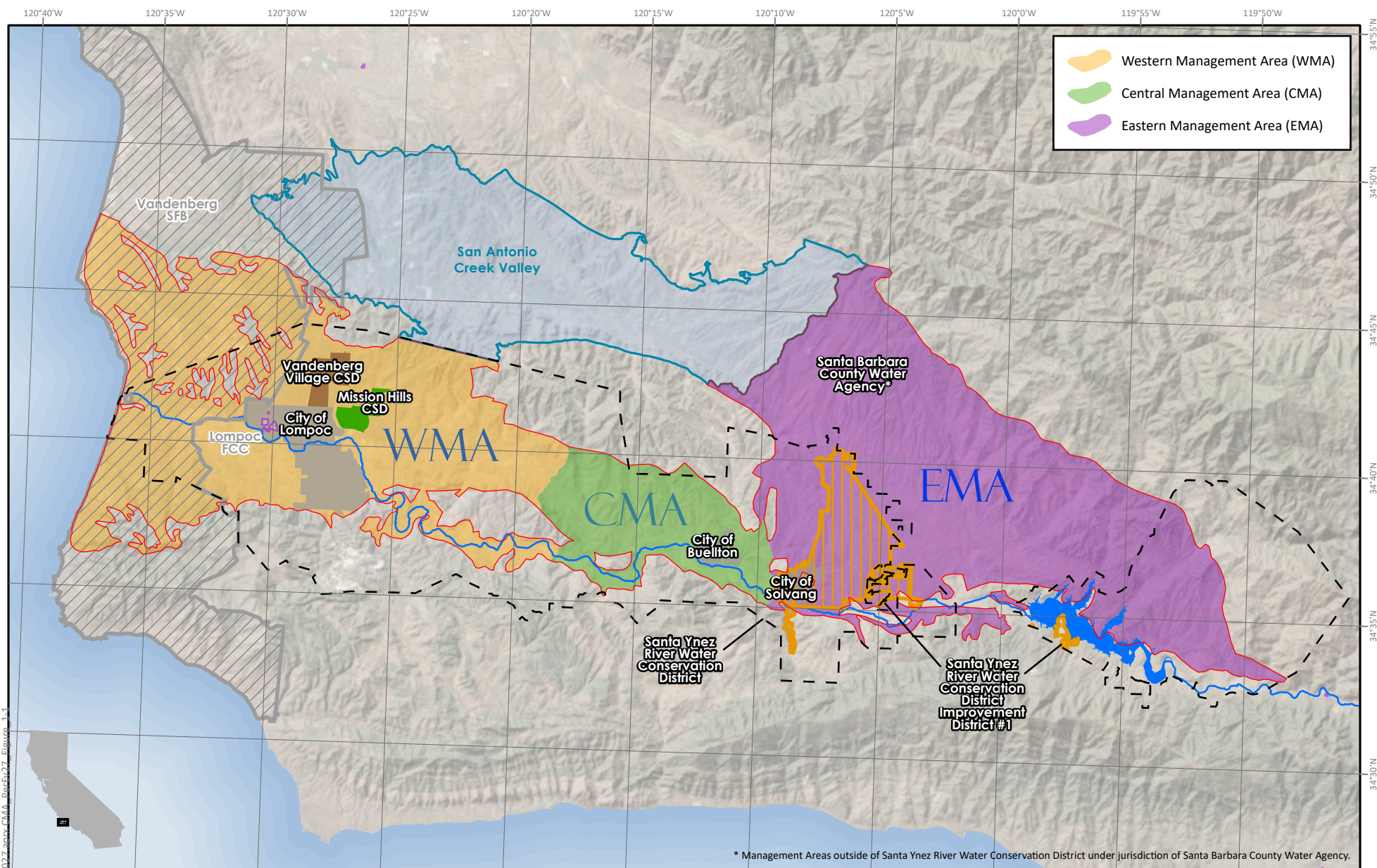
The Basin is a series of aquifers located in central Santa Barbara County in the central coast region of California. The Basin (No. 3-015) encompasses approximately 317.4 square miles (203,100 acres), located within the larger Santa Ynez watershed. **Figure 1-1** shows the location of all three GSAs of the Basin.⁴ **Table 1-1** summarizes the physical description and member agencies of all three Basin GSAs.

¹ CWC Section 10728.2 and 23 CCR § 356.4.

² CWC Section 10721(aa) and 23 CCR § 351(am)

³ The WY2021 annual report also provided new information on groundwater extraction data for water years 2019 and 2020.

⁴ 23 CCR § 356.2(a) “[...] location map depicting the basin covered by the report.”



SANTA YNEZ RIVER VALLEY GROUNDWATER BASIN
(DWR BULLETIN 118 BASIN NO. 3-015)
AND MANAGEMENT AREA BOUNDARIES



Sources:
 NAIP (2018)
 USGS National Elevation Dataset, 2002
 Groundwater basin boundary from DWR Bulletin 118, 2018

0 2 4
 Miles



Table 1-1:

Santa Ynez River Valley Groundwater Basin Groundwater Sustainability Agencies

GSA	Management Area Description	Board Member Agencies
	133.7 square miles	
	• Santa Ynez River alluvium west of Santa Rosa Park to the Lompoc Narrows • Lompoc Plain • Lompoc Terrace • Burton Mesa • Lompoc Upland • Santa Rita Upland.	• City of Lompoc • Vandenberg Village Community Services District • Mission Hills Community Services District • Santa Ynez River Water Conservation District • Santa Barbara County Water Agency (non-voting member)
	32.8 square miles	
	• Santa Ynez River alluvium east of Santa Rosa Park to just west of the City of Solvang • Buellton Upland	• City of Buellton • Santa Ynez River Water Conservation District • Santa Barbara County Water Agency (non-voting member)
	150.9 square miles	
	• Santa Ynez River alluvium from City of Solvang east • Santa Ynez Upland	• City of Solvang • Santa Ynez River Water Conservation District, Improvement District No. 1 • Santa Ynez River Water Conservation District • Santa Barbara County Water Agency

Each of the three GSAs in the Basin is independent in terms of management decisions and responsibility for collecting groundwater and related data within its respective domain. Each management area's groundwater aquifers are almost entirely isolated with substantial groundwater barriers or constrictions between the EMA and CMA, and between the CMA and WMA. The CMA GSA

is the exclusive groundwater sustainability agency responsible for complying with SGMA¹ requirements in the central management area portion of the Basin.

Figure 1-2 shows the extents of the CMA² and the boundaries of the constituent member agencies within the CMA GSA: the City of Buellton, the Santa Ynez River Water Conservation District (“SYRWCD”), and the Santa Barbara County Water Agency (“SBCWA”). All CMA GSA member agencies are local agencies, meaning they are a local public agency that has water supply, water management, or land use responsibilities within the CMA GSA.³

1.2 Purpose of Plan Periodic Review and Assessment

The following SGMA statute identifies the following items that are to be included in SGMA periodic review and assessment reports:

“A groundwater sustainability agency shall periodically evaluate its groundwater sustainability plan, assess changing conditions in the basin that may warrant modification of the plan or management objectives, and may adjust components in the plan. An evaluation of the plan shall focus on determining whether the actions under the plan are meeting the plan’s management objectives and whether those objectives are meeting the sustainability goal in the basin.”

(California Water Code [CWC] Section 10728.2)

¹ CWC Section 10720 et seq. and 23 CCR § 350 et seq.

² 23 CCR § 356.2(a) “[...] location map depicting the basin covered by the report.”

³ CWC Section 10721(n)

The SGMA regulations add the requirement that the CMA GSA shall conduct this Periodic Evaluation every five years:

“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, and shall include [..]”

(California Code of Regulations [CCR] 356.4)

Appendix 1-A includes the SGMA statute and regulations related to the required elements of this periodic review and assessment. This includes regulations on the five-year assessments. This is the first periodic review and assessment of the CMA GSP adopted in 2022.



Santa Ynez River Valley Groundwater Basin
Central Management Area
Groundwater Sustainability Agency

**CENTRAL MANAGEMENT AREA BOUNDARY
SANTA YNEZ RIVER VALLEY GROUNDWATER BASIN
GROUNDWATER SUSTAINABILITY AGENCY**

0 0.5 1 Miles



FIGURE 1-2

In DWR's letter approving the CMA GSP (Letter of Approval), dated January 18, 2024, DWR stated that "[t]he Department has determined the Plan is approved."¹ as the three GSPs "satisfy the objectives of the Sustainable Groundwater Management Act (SGMA) and substantially comply with the GSP Regulations." Accompanying the letter of approval was a Staff Report that proposed Recommended Corrective Actions ("RCAs"). **Appendix 1-B** is an excerpt from the Staff Report on the RCAs. This review addresses DWR's RCAs before the next DWR's plan evaluation, which are required by SGMA to be conducted at least once every five years.²

This Periodic Evaluation includes:

- An evaluation of CMA groundwater sustainability. The evaluation looks at current groundwater sustainability, and a review of changes and trends since the filing of the 2022 CMA GSP.
- A review of new information including significance and implications for the CMA GSP.
- A methodological evaluation of how sustainability is evaluated, and how to update evaluation criteria.
- Updates to the monitoring network and an evaluation of monitoring network adequacy.
- An assessment of the effectiveness of Projects and Management Actions.
- A determination of whether modifications to the CMA GSP are warranted.
- Items to address any specific guidance or comments which are not included in the above.

The evaluation is based on the best available information through Water Year 2024 and incorporates new guidance and new RCAs provided by DWR since the filing of the 2022 CMA GSP.

¹ In DWR's Letter of Approval and attached documents, "the Plan" refers to the collection of the three GSPs submitted by the Western Management Area, Central Management Area, and Eastern Management Area Groundwater Sustainability Agencies and their coordination agreement.

² CWC Section 10733.8 "At least every five years after initial submission of a plan [...], the department shall review any available groundwater sustainability plan [...] and the implementation of the corresponding groundwater sustainability program for consistency with this part, including achieving the sustainability goal. The department shall issue an assessment for each basin [...] with an emphasis on assessing progress in achieving the sustainability goal within the basin. The assessment may include recommended corrective actions to address any deficiencies identified by the department."

1.3 New SGMA Guidance

Since the CMA GSP was finalized and submitted in January 2022, DWR developed and published new guidance on SGMA implementation. As these documents were not available prior to the CMA GSP's adoption, the CMA GSA was unable to consider them in the initial GSP. Many of these DWR documents are in draft state, indicating they are provisional and the contents are works in progress that are not formally approved and subject to correction and change. **Table 1-2** is a list of new guidance documents from DWR that the CMA GSA considered as part of this periodic evaluation.

*Table 1-2:
New SGMA Guidance Documents, 2022-2025*

Calendar Year	Month	Status	Report Title	Pages	SYWATER ID
2023	March	FINAL	Water Shortage Planning for Rural Communities and Sustainable Groundwater Management: Guidance for Sustainable Groundwater Management Act Implementation	6	501
2023	April	FINAL	Considerations for Identifying and Addressing Drinking Water Well Impacts: Guidance for Sustainable Groundwater Management Act Implementation	24	500
2023	October	FINAL	Groundwater Sustainability Plan Implementation: A Guide to Annual Reports, Periodic Evaluations, & Plan Amendments	44	551
2023	October	FINAL	Frequently Asked Questions and Available Resources: A Guide to Annual Reports, Periodic Evaluations, & Plan Amendments	8	565
2024	February	DRAFT	Depletion of Interconnected Surface Water: An Introduction	25	539
2024	March	FINAL	Funding SGMA Implementation	32	564
2024	March	FINAL	Groundwater Well Permitting: Observations and Analysis of Executive Orders N-7-22 and N-3-23	29	541
2024	September	DRAFT	Examples for Estimating Interconnected Surface Water Depletion Caused by Groundwater Use	37	549
2024	September	DRAFT	Techniques for Estimating Interconnected Surface Water Depletion Caused by Groundwater Use	27	548
2025	July	DRAFT	Land Subsidence: Best Management Practices for the Sustainable Management of Groundwater	108	558

Calendar Year	Month	Status	Report Title	Pages	SYWATER ID
2026	January	FINAL	Land Subsidence: Best Management Practices for the Sustainable Management of Groundwater	121	577

Note: Draft documents indicated with gray highlighting.

1.3.1 New SGMA Guidance and RCAs

Several of the RCAs relate to new guidance provided by DWR after the January 2022 submittal of the CMA GSP. RCA #4 discusses an additional well impact analysis, which has new draft guidance from April 2023: "Considerations for Identifying and Addressing Drinking Water Well Impacts: Guidance for Sustainable Groundwater Management Act Implementation." RCA #6 directs the Basin GSAs to review Land Subsidence, and in July 2025 DWR posted a draft best management practice document on Land Subsidence. RCA #7 directs the Basin GSAs to "consider utilizing the interconnected surface water guidance, as appropriate," and referencing then-unpublished guidance on Interconnected Surface Waters. This guidance is presumed to be the series of DWR documents that were released in draft form in 2024.

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SECTION 2: New Information Collected

This section summarizes “*significant new information that has been made available since Plan adoption [..]*”¹ with a focus on new data collected at the direction of the CMA GSA to improve the CMA’s sustainable groundwater management. New data has been obtained to fill in data gaps and used to address DWR’s seven RCAs, described in Sections 1.2 and 9.3.2. The CMA GSA has continuously collected new data and information to improve understanding of the CMA and inform the CMA GSA’s ongoing groundwater management. This is consistent with the SGMA statute that groundwater resources be managed using the “best available science.”²

2.1 Significant New Data

The CMA GSA has made substantial progress in data collection, model refinement, and monitoring improvements. While no immediate changes to the CMA GSP are warranted based solely on new information, the new data strengthens the scientific basis for sustainable groundwater management and informs future evaluations and actions. The following table, **Table 2-1**, summarizes the progress of projects conducted at the direction of the Basin GSAs for improving the understanding of sustainability in the Basin and addressing data gaps in the GSPs. Many of the implementation projects used to fill data gaps were initiated in 2025 and will be further discussed in future annual reports and periodic evaluations as more data is collected moving forward.

¹ 23 CCR § 354.4(f) 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.

² CWC Section 10733.8. It is the policy of the state that groundwater resources be managed sustainably for long-term reliability and multiple economic, social, and environmental benefits for current and future beneficial uses. Sustainable groundwater management is best achieved locally through the development, implementation, and updating of plans and programs based on the best available science.

*Table 2-1:
Progress of Ongoing and Completed Projects and Related New Information
Conducted at the Direction of the WMA GSA, CMA GSA, and EMA GSA*

Funding Source	Project (or Component)	WMA GSA Consultant	CMA GSA Consultant	EMA GSA Consultant	New Data or Information from Project	Status
Proposition 68	Grant Administration	SYRWCD	SYRWCD	SYRWCD	n/a	In progress
	Well Extraction Measurement and Reporting	EKI	EKI	EKI/ConfluenceES	Mechanical meters and power consumption tracking system (3 sites), Outreach	
	SGMA Rate Study	Raftelis	Raftelis	WRE	Outreach and Workshops, Fee Calculations	
	Annual Report and Periodic GSP Evaluation	Stetson	Stetson	GSI	n/a	
	Monitoring Improvements	EKI & Geosyntec	EKI & Geosyntec	EKI/ConfluenceES & Geosyntec	New monitoring wells, new stream gage, and GDE verification. Seawater intrusion (WMA only)	
	Storm Water Capture	EKI	n/a	n/a	WMA only	
	Water Use Efficiency	EKI	n/a	n/a	WMA only	
	Recycled Water Feasibility Study	EKI	n/a	n/a	WMA only	
-	Data Management System	Stetson	Stetson	n/a	Routine updates and maintenance	In progress
	Action Plan for Management of All Well Production Along the Santa Ynez River, Above Lompoc Narrows	Stetson/GSI	Stetson/GSI	Stetson/GSI	Outreach and Well Registration, Preparation of Related Technical Memoranda	Complete
Proposition 68	Aerial electromagnetic survey ("AEM")	Ramboll	Ramboll	Ramboll		Complete

Notes: Table adapted from EKl Environment & Water presentation to the CMA GSA's Board of Directors on March 7, 2025, and June 23, 2025. Grey font indicates project not applicable to the CMA GSA but included for completeness.

*Environmental/Design, Implementation/Construction, Monitoring/Assessment, Engagement/Outreach

SYRWCD = Santa Ynez River Water Conservation District, EKl = EKl Environment & Water, Stetson = Stetson Engineers, GSI = GSI Water Solutions, Geosyntec = Geosyntec Consultants, Ramboll = Ramboll Group, ConfluenceES = Confluence Engineering Solutions

2.1.1 New Geophysical Survey Data

After the three basin GSPs were adopted by the GSAs and submitted to DWR in January 2022, the results of the recently completed geophysical survey were made available. This new data was then used to update the geological model and the groundwater flow model. These updated models represent an improved understanding of the basin and are discussed in later sections.

At the direction of the WMA GSA and CMA GSA, the Ramboll Group conducted an airborne electromagnetic (“AEM”) survey.¹ This survey provided information about the resistivity structure of the ground. The survey also collects magnetic data, which are primarily used for mapping magnetic anomalies, fractures, faults and metallic objects. Helicopter flights were conducted in November 2020. Data processing and analysis occurred, and the report was completed in May 2022 setting forth the results of an airborne electromagnetic (“AEM”) survey across the WMA GSA and CMA GSA portions of the Basin. This Ramboll Group geophysical report is included as **Appendix 2-A**.

A total of 710 miles was flown with a flight-line spacing of approximately 800 feet (Ramboll, 2022). The study particularly targeted the shallow water-bearing geological formations in the top 1,000 ft of the ground where most water wells are screened. The data was converted into resistivity models and presented as horizontal slices, depth slices, and vertical sections. Cross-sections, along with borehole information from other sources (i.e., well completion reports), were also included.

Updated Regional Geology and 3D Geologic Model for the Santa Ynez River Valley Groundwater Basin (WMA and CMA)

The subsurface three-dimensional geological model for the Basin was updated to incorporate this new geophysical information. As described in the CMA GSP, the geological model is developed in Seequent Leapfrog Works (Leapfrog) and represents an improved understanding of the subsurface geology, based on the best available data. Using the new geophysical survey information and the new geological map (described below), Geosyntec Consultants refined and updated the Leapfrog

¹ The EMA GSA also conducted an AEM survey for the EMA, as a different, distinct, project. The EMA GSA organized and conducted the EMA AEM survey separately from the WMA GSA and CMA GSA.

model. This work involved interpreting geophysical data to gain a geological understanding, considering the context of multiple sources of geological information. Updates to the 3D Geologic Model included changes to all seven geologic layers included in the principal aquifers.

Updated WMA/CMA Numerical Model (Groundwater Flow Model)

The numerical groundwater flow model was updated to incorporate changes to the geological model resulting from the new geophysical data collection. The WMA/CMA Numerical Model is an unstructured grid MODFLOW model. It numerically simulates the movement of water through the WMA and CMA, including both groundwater and surface water systems. Stetson Engineers updated the elevations of the model layer as appropriate to reflect the changes to the geologic model based on the new geophysical data. Adjustments included changes to elevations in Layers 6, 7, and 8.

Updates based on the new geophysical data regarding the geology and numerical model, are discussed further in Section 5 (Basin Setting).

2.1.2 Monitoring Network Enhancements

New monitoring is based on data gaps identified in the CMA GSP. The following is a summary of key monitoring enhancements completed and planned for the 5-year period since the GSP (2022-2026):

- **Monitoring Wells:** No new wells drilled yet, but one deep well and one shallow well (piezometer) have been designed and put out for bid (with construction scheduled to be completed in the first quarter of 2027). Existing wells are being integrated into the network to address data gaps.
- **Well Construction Data:** Video logs and surveys are planned to fill gaps in well construction data.
- **Surface Water Monitoring:** One new stream gage is planned to improve surface water outflow estimates near the CMA/WMA boundary along the Santa Ynez River.
- **GDE Monitoring:** Plans to enhance monitoring of Groundwater Dependent Ecosystems (“GDEs”) through additional data collection.

Monitoring Wells – Water Levels and Water Quality

The CMA GSA is in the process of improving its monitoring network by drilling two new monitoring wells and incorporating existing wells as monitoring wells. One deep well and one shallow well (piezometer) have been designed and put out for bid (with construction scheduled to be completed in the first quarter of 2027) The CMA GSA is also coordinating the integration of one to four existing wells into the supplemental monitoring network. The additional wells will help fill data gaps and improve understanding of the Buellton Upland subarea.

The CMA GSP identified that the water quality monitoring consisted of wells associated with the Irrigated Lands Regulatory Program (“ILRP”), the Public Water System Reporting (“PWSR”) program, and the United States Geological Survey (“USGS”). The ILRP wells were planned to be part of the Representative Monitoring Well (“RMW”) network due to the tiered criteria identified in the GSP. Based on communications with the Central Coast Regional Water Quality Control Board, the ILRP program will no longer report on all water quality parameters identified in the CMA GSP's SMCs. Also, the monitoring frequency deviated from expectations at the time of the GSP. The USGS water quality monitoring also deviated from the expected operations. These updates are evaluated in the monitoring networks section (Section 6), which examines how these monitoring networks are reassessed and updated for the CMA RMW network program.

Per the GSP, multiple RMWs require video logs or surveys to determine geographic coordinates/locations, total well depth, depth interval(s) of perforations, and elevation of the measurement point for water level readings. These surveys are planned to be completed by Geosyntec in 2026 and will fill data gaps in the monitoring network.

New Surface Water Monitoring

The CMA GSA collected field data in 2025 and 2026 as part of the installation of a new stream gage downstream of the reach where the groundwater aquifer underlies the surface water system (Santa Ynez River alluvium). The new stream gage will provide critical data regarding the surface outflow

from the CMA and potential interconnected surface water depletions. This location will fill the associated data gap.

Biological Monitoring

An important new monitoring study sponsored by the CMA GSA involves verifying the GDEs presented in the 2022 GSP. The GSP acknowledged that the CMA GSA did not conduct field verification of GDEs for the 2022 GSP. Currently, as part of the Proposition 68 grant work, GeoSystems Analysis is preparing a field study and report that is expected to be completed in 2026. The CMA GSA plans to conduct and collect additional data based on the findings of the GDE identification report.

In addition, the Cachuma Operation and Maintenance Board (“COMB”) annually conducts fish surveys of the Santa Ynez River from Lake Cachuma to the Pacific Ocean. These surveys focus on evaluating the presence of Southern California Steelhead/rainbow trout (“*Oncorhynchus mykiss*” or “*O. mykiss*”) and supporting habitat conditions. COMB publishes the annual report containing this data concurrently or after SGMA annual reporting. The results of this monitoring of the southern steelhead are discussed further in Section 5 (Basin Setting).

2.1.3 Significant New Reports

Information and conclusions from new reports since the adoption of the GSP inform the CMA GSA’s understanding of sustainable management of the CMA.

New Geological Map

Late in the development process of the GSPs, the USGS (USGS, 2021)¹ released a new regional-scale (1:100,000) map that covered the Santa Maria 30' by 60' quadrangle, which revised and superseded the earlier 1992 USGS map (also 1:100,000). The GSAs were able to review this map before

¹ USGS. 2021. Sweetkind, D.S.; Langenheim, V.E.; McDougall-Reid, K.; Sorlien, C.C.; Demas, S.C.; Tennyson, M.E. Geologic and Geophysical Maps of the Santa Maria and Part of the Point Conception 30'x60' Quadrangles, California. [1:100,000] USGS Scientific Investigations Map 3472. doi: 10.3133/sim3472. SYWATER 384.

publishing the GSPs in January 2022 and found that this geologic map (USGS, 2021) was consistent with the hydrogeologic conceptual models in each of the GSPs. The GSAs have since further reviewed and incorporated items, as appropriate, from this map into the 3D Geological Model and the Groundwater Flow Model.

Updated Water Quality Control Plan

The Central Coast Regional Water Quality Control Board published an updated “Water Quality Control Plan for the Central Coastal Basin” (“Basin Plan”) for 2024,¹ which includes updates since the 2019 Basin Plan, which the CMA GSP considered. The following is a summary of the content contained in the new 2024 Basin Plan.

- Adoption of Total Maximum Daily Loads (“TMDLs”) and Load Allocations for nitrogen compounds that target three waterbodies in the WMA:
 - Lower Santa Ynez River from Floradale Road downstream to the confluence with the estuary: nitrate and un-ionized ammonia.
 - San Miguelito Creek from monitoring site 314MCM (treatment plant effluent discharge point) downstream to the Santa Ynez River: nitrate and un-ionized ammonia.
 - Sloans Canyon Creek, all river reaches upstream of West Central Avenue downstream to the confluence with the Santa Ynez River: un-ionized ammonia.
- Adoption of TMDLs for the entire Santa Ynez River Basin.
- No changes to Beneficial Uses (on Santa Ynez River, downstream of Lake Cachuma).
- No changes to Groundwater or Surface Water Quality Standards.

¹ Central Coast Regional Water Quality Control Board. July 2026. Water Quality Control Plan for the Central Coastal Basin, June 2024 (Incorporating amendments approved by the California Office of Administrative Law through February 25, 2026). California Environmental Protection Agency. SYWATER 583. Includes changes approved by OAL on February 25, 2026, and then USEPA on June 30, 2026.

The Central Coast Regional Water Quality Control Board adopted the TMDLs on June 22, 2023, with U.S. Environmental Protection Agency (“EPA”) approval on April 3, 2025.¹ The 2024 Basin Plan identifies surface water impairment due to one or more of the following: “excessive concentrations of nitrogen compounds such as nitrate, total nitrogen, and un-ionized ammonia, and low dissolved oxygen.” The new targets identified seek to protect groundwater recharge. The 2024 Basin Plan notes that the lowermost portion of the Santa Ynez River (in the WMA GSA) is the area of focus. Within this area, the most significant controllable source of nitrogen compounds is the wastewater treatment facilities. **Table 2-2** summarizes the new TMDLs.

Table 2-2:

TMDL Loading Capacities from the Water Quality Control Plan for the Central Coast Basin (2024)

Pollutant	Stream Reaches	Loading Capacity	Primary Beneficial Uses Protected
Nitrate as N (NO ₃ -N)	All stream reaches	10 mg/L	MUN, GWR
Un-ionized ammonia as N (NH ₃ -N)	All stream reaches	0.025 mg/L	Aquatic habitat (COLD, WARM, SPWN)
Total Nitrogen (N)	Santa Ynez River at Floradale Road downstream to the confluence with the Santa Ynez River estuary	8 mg/L	Aquatic habitat (COLD, WARM, SPWN)

Notes:

MUN = municipal and domestic supply, GWR = groundwater recharge, COLD= cold fresh water habitat, WARM= warm fresh water habitat, SPWN= spawning, reproduction, and/or early development.

Adapted from 4.9.23-1 in the Water Quality Control Plan for the Central Coastal Basin (2024)

The 2024 Basin Plan proceeds to assign waste load allocations (“WLA”) to responsible parties (NPDES-permitted facilities)² and load allocations (“LA”) for non-point sources to achieve the TMDLs above. The parties and areas identified for the WLA and LA are primarily the three water bodies identified earlier in this section. The parties responsible include a member agency of the CMA GSA, Santa Barbara County Water Agency. The implementation actions generally involve reducing use of nitrogen in application, increasing treatment, and for some, maintaining current practices. As discussed in Section 3 (Groundwater Conditions), based on the WY 2023 and WY 2025 Annual

¹ Section 4.9.23 Total Maximum Daily Loads (TMDLs) for Nitrogen Compounds in the Santa Ynez River Basin, Santa Barbara County, California

² National Pollutant Discharge Elimination System (NPDES), a program established under the Clean Water Act in 1972

Report, data for all components indicated that concentrations in the principal aquifers were below the minimum thresholds. Thus, these additional guidelines are expected to lead to improvement of Basin water quality conditions, but these guidelines are not immediately relevant to the GSAs. The federal Clean Water Act (Section 303 (c)) and the Porter-Cologne Water Quality Control Act require the Basin Plan to be reviewed and updated periodically (at a minimum every three years).¹ The new Water Quality Control Plan will also be reviewed in the next Periodic Evaluation.

New Climate Change Guidance – Water Deliveries

The State Water Project (“SWP”) is a source of imported water that is used in lieu of local water sources in the CMA – notably, by the City of Buellton. However, the amount of water that is delivered is typically less than full Table A allocation.² SWP Table A allocations are often not delivered in full due to a lack of supply compared with the total Table A amount. Every two years DWR produces projections of the expected typical delivery of Table A amounts over the long term. The GSP used the 2019 Delivery Capability Report which estimated long term delivery allocation of 58 percent. In 2024, DWR finalized the 2023 Delivery Capability Report with an updated delivery allocation of 41 to 46 percent for future periods under drought.³ This decrease in the projected deliveries during dry periods impacts the surface water reliability for the City of Buellton’s allocation of SWP water. The impact of the projected decrease in SWP water deliveries is considered further in the water budget of the Basin Setting (Section 5).

Threatened and Endangered Species Updates

There are two new updates to the threatened and endangered species status since the 2022 GSP regarding southern steelhead and spadefoot toads. As of May 2025, California Department of Fish and Wildlife (“CDFW”) added the southern steelhead population to the endangered species list

¹ Central Coast Regional Water Board. Basin Planning Triennial Review. https://www.waterboards.ca.gov/centralcoast/water_issues/programs/basin_plan/tri-review.html Accessed 2025-08-12.

² Table A is the maximum Annual Table A Amount of State Water Project (SWP) water, as stated in Table A to a SWP’s contractor’s long-term water supply contract, which is made available for delivery by DWR to the contractor. Typically, a percentage of this is actually allocated and delivered, as total delivery requests of all contractors are typically greater than the SWP supplies available for delivery to all contractors.

³ DWR. 2024. The Final State Water Project Delivery Capability Report 2023. Department of Water Resources. 75 pg.

under the California Endangered Species Act (“CESA”). The Southern Steelhead, *O. mykiss*, is an anadromous species that utilizes the Santa Ynez River for spawning. The southern steelhead remains on the Federal endangered species list under the Federal Endangered Species Act (“ESA”).

The Western Spadefoot (*Spea hammondi*) toad has also been federally proposed as a threatened species as of 2023. Western Spadefoot toad has potentially critical habitat within the Santa Ynez River watershed but is unconfirmed to be within the watershed due to lack of data by United States Fish and Wildlife Service (US FWS). Western spadefoot toad migrates to seasonal vernal pools to reproduce. They will use small temporary pools of water and can share the same habitat as endangered Tiger salamanders.

2.1.4 Summary of Significant New Information

Table 2-3 is a summary of significant new information collected and the applicable sections. Table 2-3 summarizes information that has become available since the last Periodic Evaluation (or Plan Adoption) that has informed the CMA GSA’s decisions and approaches to implement its GSP. Each item of new information was reviewed to determine whether it:

- Changes the understanding of basin conditions.
- Affects Sustainable Management Criteria.
- Requires modification to monitoring or management actions.

While new data, model updates, and guidance improve the understanding of the basin, they do not materially change conclusions regarding sustainability within the Central Management Area at this time.

Table 2-3:
Summary of Significant New Information Collected

Significant New Information	Description	Plan Sections Affected								Warrant Change to Any Aspects of the Plan	
		PA	HCM	GC	WB	SMC	PMA	MN	CA	Yes/No	If yes, Plan Section(s)
New Geophysical Data	AEM Geophysical Survey	-	X	-	-	-	-	X	-	No	-
Updated 3D Geological Model	Updates to include new data.	-	X	-	-	-	-	X	-	No	-
Updated Groundwater Flow Model	Updates to include new data.	-	-	-	X	-	-	-	-	No	-
New GWL Monitoring Wells	Added wells.	-	-	X	-	X	-	X	-	No	-
New Surface Monitoring	Added surface water sites.	-	-	X	-	X	-	X	-	No	-
New Geological Map	New USGS map.	-	X	-	-	-	-	X	-	No	-
Updated Water Quality Control Plan	New TMDLs	-	X	X	-	X	-	X	-	No	-
New Seawater Rise Guidance	New climate change projections.	-	-	-	X	X	-	-	-	No	-
Threatened and Endangered Species Update	New State and Federal listings	-	X	X	-	X	-	-	-	No	-

Notes:

X indicates aspects of the plan that are potentially affected by significant new data.

Plan Section Abbreviations: PA = Plan Area, HCM = Hydrogeological Conceptual Model, GC = Groundwater Conditions, WB = Water Budget, SMC = Sustainable Management Criteria, PMA = Projects and Management Actions, MN = Monitoring Network, CA = Coordination Agreement. The Basin Setting includes HCM, GC, and WB sections.

2.2 Additional New Data and Updates

The GSP included reviews of the biological, physical, social, and infrastructure systems within the CMA GSP Plan Area, and Basin Settings of the GSP. Most of the new information collected about these systems documents changes but the information and changes are not considered significant to sustainable groundwater management in the CMA. Most of the data relevant to analyzing water conditions on an annual basis is updated in the CMA GSA's Annual Reports, and is described in Section 3, Groundwater Conditions.

2.2.1 New Population Census Information

New population information is periodically collected, both as part of the decadal census in 2020, and as part of projected population changes. **Table 2-4** contains the decennial census data for 2010 and 2020, which indicates that the population growth in the City of Buellton was slightly greater than expected in 2013. Census data includes updated demographic information including Median Household Income.¹

Table 2-4:
Population for City of Buellton and Santa Barbara County

Location	Population	
	2010 Decennial Census	2020 Decennial Census
Buellton City	4,828	5,161
Santa Barbara County	423,895	448,229

Source: United States Census Bureau. <https://data.census.gov/> Accessed 2025-08-01

¹ Disadvantaged Community (DAC) and Severely Disadvantaged Community (SDAC) for the purposes of SGMA are based on the relative income in an area to the state of California as a whole. A community is a DAC if it is $\leq 80\%$, and a SDAC if it is $\leq 60\%$.

2.2.2 Land Use Updates

Agricultural Land Use

Agricultural irrigation is one of the primary uses of groundwater in the CMA. With new LandIQ data released in 2023, the following tables update the agricultural land use. The total agricultural land use has not changed significantly since the CMA GSP, which used 2016 data. The total irrigated acreage for the identified crops is 3,080 acres, based on the 2023 data. This is a slight decrease of total acres from the 3,180 acres reported in the CMA GSP. The proportion of the total land used for agriculture dedicated to various agricultural classes remained similar to the proportions from the 2016 land use analysis. **Table 2-5** is a summary of land use for 2023.

Table 2-5:
Summary of CMA Land Use for Agriculture

CMA Subarea	Agricultural Class ^A							Total Acres ^B	Agricultural Use (% total)
	Truck Crops (acres)	Vineyard (acres)	Pasture (acres)	Grain and Hay (acres)	Field Crops (acres)	Deciduous Fruits / Nuts (acres)	Citrus / Subtropical (acres)		
Buellton Upland	280	630	170	110	0	0	60	1,250	8.80%
SYR Alluvium	950	480	320	40	0	40	0	1,830	26.90%
Total	1,230	1,110	490	150	0	40	60	3,080	14.70%

Notes:

^A Source of agriculture land use is from the 2023 LandIQ database. "Idle", "Urban", and "Young Perennial" lands not included.

^B All numbers rounded to nearest 10 acres after summing.

Table 2-6 includes the statistics of agricultural land use for 2023, in addition to 2016 and 2018 that were evaluated in the GSP. There is a slight net decrease in acres used as agricultural lands. The Buellton Upland decreased slightly in agricultural lands while the Santa Ynez River Alluvium remained constant. Lands that were irrigated in 1984/1986 continue to decrease in 2023, with only 51% of lands irrigated in 1984/1986 also irrigated in 2023.

Table 2-6:

CMA Agriculture Land Use for 1984/1986, 2016, 2018, and 2023

CMA Sub-area	Agricultural Land (acres)				Continuation of Land Use (1984/86 Baseline)					
					Irrigated in 2016		Irrigated in 2018		Irrigated in 2023	
	1984/1986	2016	2018	2023	Acres	Percent	Acres	Percent	Acres	Percent
Buellton Upland	1,270	1,370	1,380	1,250	550	43%	550	43%	510	40%
SYR Alluvium	2,510	1,810	1,720	1,830	1,420	57%	1,420	57%	1,420	57%
Total	3,780	3,180	3,100	3,080	1,970	52%	1,970	52%	1,930	51%

Notes:

Acreage rounded to nearest 10 acres. "Idle", "Urban", and "Young Perennial" lands not included.

Subarea is based on geographic extents in this table.

Sources: FMMP 2016 shapefile; 2016 LandIQ database, 2018 LandIQ Database, 2023 LandIQ Database

While overall there was not a significant change in land use, it is important to monitor as various crops differ in water demands and return flows. **Figure 2-1** provides an updated map of the active agricultural area, depicting the spatial spread of the agricultural classes.

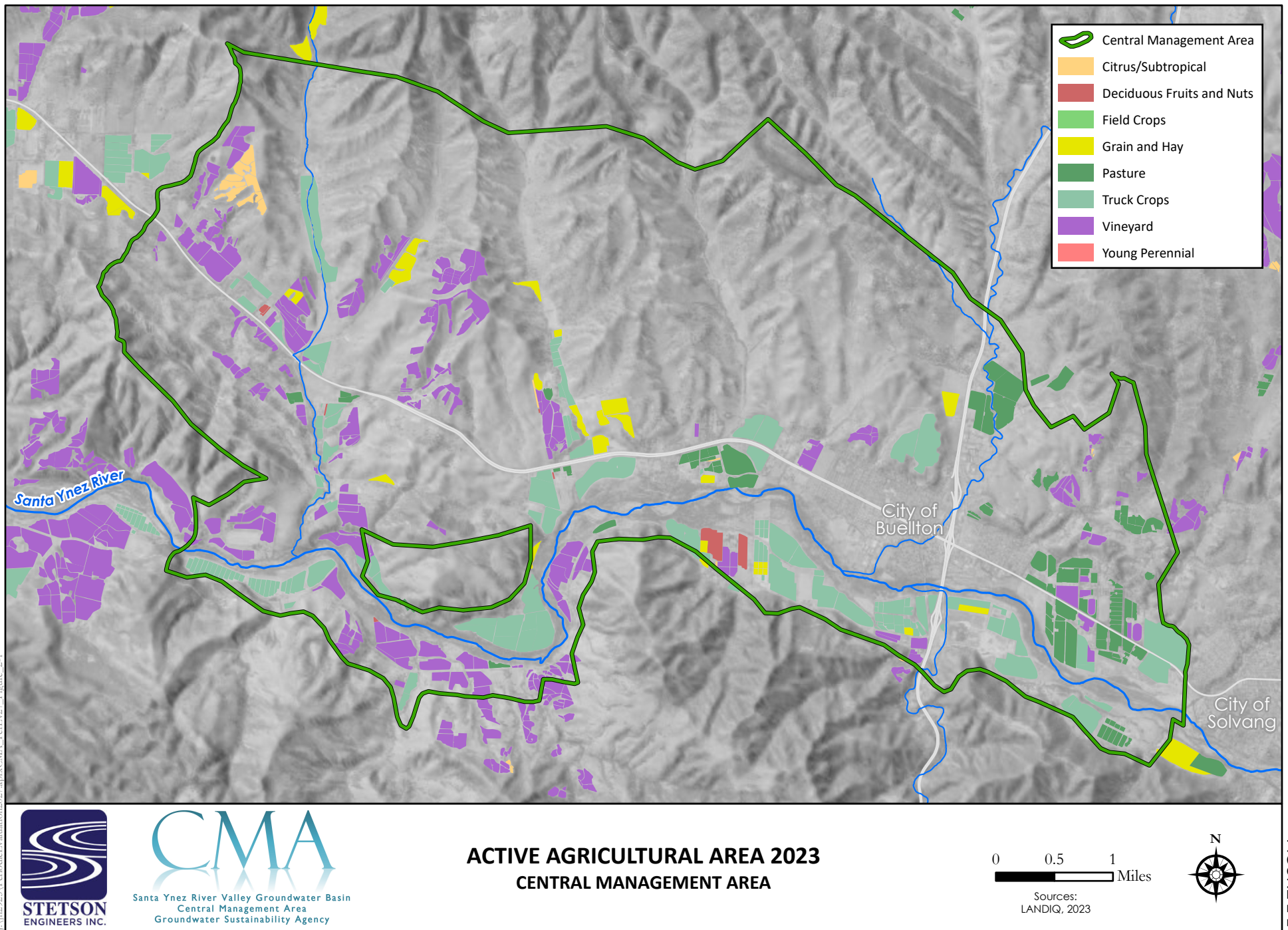


FIGURE 2-1

Cannabis Permits

In response to CDFW comments, the CMA GSA initiated a plan to periodically track and provide updates on the number and status of cannabis cultivation permits. These are commercial cannabis permits and permit applications from the Santa Barbara County Executive Office Cannabis Division. **Table 2-7** compares the status of cannabis applications in August 2021 with those in August 2025.

*Table 2-7:
CMA Cannabis Cultivation Land Use Permits as of August 2021 Compared to August 2025*

CMA Subarea	Permits Issued		Applications in Review						Total Applications	
			Approved		Processing		Closed			
	2021	2025	2021	2025	2021	2025	2021	2025	2021	2025
Buellton Upland	1	5	3	6	7	1	2	11	13	23
SYR Alluvium	3	9	4	13	7	2	11	28	25	52
Total	4	14	7	19	14	3	13	39	38	75

Notes:

County of Santa Barbara Commercial Cannabis Application status as of 2021-08-30 and 2025-08-21

Subarea is based on geographic extents in this table.

For 2025, processing means either: final review, in review, conceptual review, preliminary review, final processing, feedback sent to applicant, hearing pending, appeal filed, application complete, or open.

From August 2021 to August 2025, the CMA GSA saw an increase from a total of four permits to 14 cannabis cultivation permits. There were more permitting requests and approvals in the SYR Alluvium than in the Buellton Upland.

As explained in the GSP, the cultivation of cannabis often replaces other crops and therefore may not represent a significant increase in water demand. Using the maximum diversion rate per SWRCB (2019b) of 10 gallons per minute (“gpm”) for the 10 new permits, the maximum potential water use for cannabis cultivation would be 160 acre-feet per year (“AFY”). The volume represents the absolute maximum, however; the expected amount is likely much lower due to likely non-continuous diversions and replacement of other previous crops with cannabis. To assess if cannabis cultivation represented an increase in agricultural area, the CMA GSA examined land use before cannabis legalization (i.e., 2016) for the parcels included in cannabis applications. In the CMA, approximately

60% of the cannabis applications were tied to land used for agriculture in 2016. Since this suggests that a significant portion of the new cannabis applications may involve new water rights or diversions, further analysis may be necessary to confirm the extent of the impact.

Since the adopted GSP, several factors may limit the expansion of the cannabis cultivation in the CMA. The County of Santa Barbara has established additional limits on cannabis cultivation, including a more restrictive cap on the total acreage allowed for cannabis cultivation in unincorporated Santa Barbara County, which the County enforces through its permitting process. Effective September 2025, the cultivation acreage in unincorporated lands is reduced from 1,761 acres to 1,551 acres.¹ Market forces may also limit the future expansion of cannabis cultivation in the CMA. A June 2025 Santa Barbara County Grand Jury report² identified that “[cannabis] revenue has since declined steadily from its high of \$15.7 million in 2020-2021 to less than \$6 million in 2023-2024.” This was attributed to “market oversupply and price collapse.” As a result of these additional regulations and economic forces, cannabis water use in the Basin is not expected to materially increase in the future or have a larger impact on groundwater supplies than those considered in the GSP.

2.2.3 Updated Watershed Studies

To address the DWR comment regarding the evaluation of updated watershed studies that may influence recharge project assumptions³, the CMA GSA conducted a targeted search for studies related to the Santa Ynez watershed hydrology published since 2021. The review focused on materials from the County of Santa Barbara (Santa Barbara County Water Agency), the State of California (DWR and SWRCB), USGS, USBR, and the Cachuma Operation and Maintenance Board (COMB). Agency websites and public portals were searched using terms such as “Santa Ynez

¹ Santa Barbara County Code § 50-7 (2025) Limits on cannabis business licenses in Santa Barbara County Codes https://library.municode.com/ca/santa_barbara_county/codes/code_of_ordinances?nodeId=CH50LICAOP_S50-7LICABULI Access date 2025-10-13.

² Santa Barbara County Grand Jury (2024) Cannabis Taxation and Expenditures Report. <https://sbcgj.org/general-information/final-reports-responses-2024-2025/> Access date 2025-10-13.

³ DWR Staff Report on Santa Ynez GSPs comment (pg 72): “Evaluate updated watershed studies that may modify assumed frequency and magnitude of recharge projects”.

watershed”, “recharge”, “hydrology”, and “groundwater”, filtered by publication date of 2021. No relevant new information regarding groundwater or aquifer recharge was found that would affect the assumptions used in the current GSP.

2.2.4 Updated Hazard Mitigation Plan and Drought Resilience Plan

The County of Santa Barbara produced an updated Hazard Mitigation Plan in 2023,¹ including appendices specifically for the City of Buellton. This is an update to the 2017 version. This series of documents includes hazard assessments and mitigation, addressing impacts on water supply and land use related to the SGMA efforts. Specific topics related to the SGMA indicators include drought and water shortages, floods, and coastal hazards, such as sea-level rise.

As part of this hazard planning effort, the County also developed a Drought Resilience Plan, which was completed in June 2025. This process included public meetings held in the Santa Ynez River Valley during July 2024. This reviewed drought vulnerabilities and concerns at the county-wide level. The Santa Barbara County Water Agency, a CMA GSA member agency, ensured that the Multi-Jurisdiction Hazard Management Plan (“MJHMP”) and the drought plan were consistent with the CMA GSP. Section 9.1 describes the coordination efforts in more detail.

2.3 Data Management

The CMA GSA continues to use a Data Management System (“DMS”) as a centralized location for water information, as described in the GSP and in the Data Management Plan (“DMP”). This is consistent with the SGMA regulations that require the use of a DMS.² The following domain name is reserved for access to the DMS:

¹ County of Santa Barbara Office of Emergency Management (OEM). (2023). Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP). SYWATER 567.

² 23 CCR § 352.6 Each agency shall develop and maintain a data management system that is capable of storing and reporting information relevant to the development or implementation of the Plan and monitoring of the basin.”

<https://sywater.info>

Regularly updated data on the DMS includes the water level, water quality, and water use data. Work supporting this includes routine updates to the website including recent data and general functionality improvements. This assists in monitoring and managing conditions within the CMA.

The Outreach section (Section 9, Coordination Outreach and Engagement) further discusses the DMS in the context of public access.

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SECTION 3: Groundwater Conditions

This section is an evaluation and update concerning the sustainability of groundwater conditions in the CMA GSA. This section describes the hydrologic year type (Section 3.1). It also looks at conditions in the CMA GSA compared to the Santa Ynez River Valley Groundwater Basin sustainability goal.¹ In addition, it compares current groundwater conditions to the Sustainable Management Criteria (“SMCs”)² set in the 2022 CMA GSP. The SMCs are the measurable objectives, interim milestones, and minimum thresholds.

This section reviews current groundwater conditions at Representative Monitoring Sites. The CMA GSA uses these sites to track progress toward plan goals. Regular review of groundwater conditions in the Basin is important to measure progress. The CMA GSA reports on these conditions in annual reports. This section of the Periodic Evaluation uses a longer-term perspective than the annual report. This includes some projections of current trends through to 2042. The year 2042 is the SGMA 20-year deadline for groundwater basin sustainability.

The following sections provide additional information about the methodological evaluation:

- Section 6 (Monitoring Networks) reviews the 2022 GSP monitoring network. It also describes updates to the network, including new monitoring sites that replace those no longer in use.
- Section 7 (Undesirable Results and Sustainable Management Criteria) of this report reviews and assesses the SMCs and discusses undesirable results. It also addresses DWR Recommended Corrective Actions (“RCAs”) related to groundwater levels (RCA #4), water quality (RCA #5), land subsidence (RCA #6), and surface water (RCA #7).

¹ 23 CCR § 354.4 [...] The assessment shall describe whether the Plan implementation, [...], are meeting the sustainability goal in the basin [...].

² 23 CCR § 354.4(a) A description of current groundwater conditions for each applicable sustainability indicator relative to measurable objectives, interim milestones and minimum thresholds.

3.1 Recent Hydrologic Conditions in the CMA

Both weather and human activities affect the amount of water available. The weather relates to the availability of water. This is a source of variability and change that is not directly related to human activity within the CMA. The water year type is a description of the water content of weather each year. The SGMA regulations require agencies to consider water year type in evaluating groundwater conditions¹ and in annual reporting on groundwater conditions.² The following table, **Table 3-1**, summarizes the precipitation and the water year type in the CMA for the recent years of WY 2015 through WY 2024.

The two most recent years of this Periodic Review (WY 2023 and WY 2024) are some of the wettest years within the instrumental record in the Basin. Current groundwater conditions, presented in this section, reflect this current relatively wet basin condition. Prior to WY2023, conditions in the Basin had been generally dry since WY2011.

These conditions are also observed in reservoir operations of the Santa Ynez River. Spills occur when the water flows over or through a spillway because the reservoir is full – as opposed to the typical controlled releases. This indicates that there is more water than a reservoir can contain. Lake Cachuma, the lowest and largest reservoir on the Santa Ynez River, spilled in WY 2023 and WY 2024 (345,000 and 206,000 AF respectively). Previously, the last time Lake Cachuma spilled was in WY 2011.

¹ See 23 CCR § 356.16 (b), 23 CCR § 356.18 (b)(6), 23 CCR § 356.18 (c)(2), 23 CCR § 356.18 (d), 23 CCR § 356.28 (c)(1), 23 CCR § 356.28 (c)(2)

² See 23 CCR § 356.2 (b)(1)(B), and 23 CCR § 356.2 (b)(5)(B)

Table 3-1:
Annual Precipitation and Water Year Classification for CMA
for Recent Years

Water Year	Buellton Fire Station		Hydrologic Year Type Classification USGS Gage 11132500 (Salsipuedes Creek)		
	Precipitation (in/year)	% of Average ^A	Percentile Rank	Water Year Type Classification	Consecutive Dry / Critically Year(s) ^B
2015	7.01	42%	0%	Critically Dry	4 [DROUGHT]
2016	10.68	64%	2%	Critically Dry	5 [DROUGHT]
2017	20.36	122%	71%	Above Normal	0
2018	7.92	48%	5%	Critically Dry	1
2019	19.22	117%	77%	Above Normal	0
2020	15.44	94%	33%	Dry	1
2021	8.56	52%	48%	Below Normal	0
2022	9.51	58%	22%	Dry	1
2023	21.80	175%	94%	Wet	0
2024	19.22	131%	90%	Wet	0

Notes:

Years are color-coded as follows: yellow indicates dry and critically dry years (below 40 percentile); blue indicates wet years (above 80 percentile); unshaded indicates years that were either in the below normal or above normal years (40 to 80 percentile). Percentages and percentiles are calculated from the respective periods of record.

^A The average is calculated as the mean of the period of record (WY1955-WY 2024).

^B The GSP defines two or more consecutive years that are classified as Dry or Critically Dry as drought years.

CMA = Central Management Area; USGS = U.S. Geological Survey; SWRCB = State Water Resources Control Board; in/year = inches per year.

Source: Precipitation from Santa Barbara County - Flood Control District station #233 - Buellton Fire Station

The evaluation period (WY 2019 – WY 2024), which includes recent wet years, was wetter than normal. Accordingly, groundwater conditions in this evaluation reflect favorable hydrologic conditions. Drought conditions have not occurred since the start of SGMA. In general, the CMA has not been evaluated under sustained drought conditions, such as those described by DWR as occurring prior to the historical period of record.¹ The CMA GSA recognizes that future drought

¹ “historically recorded hydrology of little more than a century does not represent the full range of the climate system’s natural variability” in California Department of Water Resources (2015) California’s Most Significant Droughts: Comparing Historical and Recent Conditions. 136 pg. Excerpt, page 28.

conditions and varied surface water reliability may require the implementation of the adaptive management strategies described in the GSP.

3.2 Basin Sustainability Goal and Evaluation

The three GSPs that cover the Santa Ynez River Valley Groundwater Basin identified the following coordinated sustainability goal for the Basin:

“to manage groundwater resources in the WMA, CMA and EMA for the purpose of facilitating long-term beneficial uses of groundwater within the Basin. Beneficial uses of groundwater in the Basin include municipal, domestic, and agricultural and environmental supply. The sustainability goal is in part defined by the locally defined minimum thresholds and undesirable results.”¹

Groundwater conditions and the relationship to sustainability, measurable objectives, interim milestones, and minimum thresholds are evaluated annually as part of the CMA GSA’s SGMA Annual Reports. Findings of the WY 2024 Joint Annual Report (2025) included that “*analyses conducted for the CMA GSP indicate that Basin conditions are sustainable with no current undesirable results during WY 2024.*”²

Following the adoption of the CMA GSP in 2022, there have been no documented cases of beneficial uses being impacted in the CMA. For example, there have been no reports of local groundwater well production going dry in the CMA during this 2019-2024 periodic evaluation period.³

¹ Same phrasing in 2022 WMA GSP, Section 3B.1 Sustainability Goal and 2022 CMA GSP, Section 3B.1 Sustainability Goal. 2022 EMA GSP, Section 5-4 phrased it as “*to sustainably manage the groundwater resources in the Western, Central, and Eastern Management Areas to ensure that the Basin is operated within its sustainable yield for the protection of reasonable and beneficial uses and users of groundwater. The absence of undesirable results, as defined by SGMA and the Groundwater Sustainability Plans (GSPs), will indicate that the sustainability goal has been achieved.*”

² See WY 2024 Joint Annual Report, CMA Chapter 6: Progress Toward GSP Implementation And Sustainability (pages 137-151):

³ DWR. Dry Well Reporting System Data. <https://data.cnra.ca.gov/dataset/dry-well-reporting-system-data> . Accessed 2026-06-15.

In the analysis below, the CMA GSA has considered whether the trends occurring since the GSP are likely to affect sustainability in 2042, similar to the concept of interim milestones. Interim milestones are used to track progress toward the sustainability goal, which are mostly applicable when conditions are unsustainable. These are not particularly applicable to the CMA as it was sustainable as of the GSP.

The CMA GSA utilized a weight-of-evidence approach to evaluate overall groundwater sustainability, integrating multiple lines of evidence. This included looking at each of the SGMA sustainability indicators as described below. While individual datasets contain uncertainties and data gaps, the collective evidence consistently indicates that conditions remain within acceptable operational ranges for sustainability. This weight-of-evidence approach supports the CMA GSA's conclusion that undesirable results are not occurring and that the Basin remains sustainable.

3.3 Current Groundwater Conditions and Progress Evaluation for Each Sustainability Indicator

Under SGMA,¹ six indicators of sustainability were considered as part of each GSA's GSP.² These are evaluated every year as part of the annual reporting.

The current CMA GSA monitoring network and SMCs have not indicated any significant or unreasonable impacts on the indicators as summarized in **Table 3-2**. The relatively stable conditions highlighted below resulted in no undesirable results occurring based on the definitions presented in the GSP.

¹ CWC Section 10721 (x), 23 CCR § 354.28(c), 23 CCR § 354.34(c),

² 23 CCR § 354.30(a) Each Agency shall establish measurable objectives, including interim milestones in increments of five years, to achieve the sustainability goal for the basin within 20 years of Plan implementation and to continue to sustainably manage the groundwater basin over the planning and implementation horizon.

Table 3-2:
Summary of SGMA Indicators based on Annual Reports covering the period after 2022 GSP

Water Year								
Water Year	Year Type	Drought	Chronic lowering of groundwater levels	Reduction of groundwater storage	Seawater intrusion	Degraded water quality	Land subsidence	Depletion of interconnected surface water
2019	Above Normal	No	OK	OK	NA	OK	OK	OK
2020	Dry	No	OK	OK	NA	OK	OK	OK
2021	Below Normal	No	OK	OK	NA	OK	OK	OK
2022	Dry	No	OK	OK	NA	OK	OK	OK
2023	Wet	No	OK	OK	NA	OK	OK	OK
2024	Wet	No	OK	OK	NA	OK	OK	OK

Note: Based on 2022 GSP SMC and prevalence of data (condition of the majority of the representative monitoring wells). Red denotes that the indicator exceeds minimum thresholds. Green denotes conditions between the minimum threshold and the measurable objective. Blue denotes conditions exceeds measurable objective. NA equals not applicable.

Other sections of this Periodic Evaluation focus on the monitoring network (Section 6, Monitoring Networks) and SMC suitability (Section 8, GSA Authorities and Enforcement Actions). The six sustainability indicators are listed as follows.

-  . Chronic lowering of groundwater levels
-  . Reduction of groundwater storage
-  . Seawater intrusion¹
-  . Degraded water quality
-  . Land subsidence
-  . Depletion of interconnected surface water

3.3.1 Chronic Lowering of Groundwater Levels



The Basin monitoring network continues to be updated with semi-annual data collected continuously for the 4 RMWs, providing critical information about the Basin. Current conditions are consistent with sustainability, as based on data collection and analysis in the annual reports and this periodic evaluation. **Appendix 3-A** is an appendix from the WY 2024 Annual Report that shows groundwater-level hydrographs for assessing chronic decline in groundwater levels.

¹ The seawater intrusion indicator is only applicable to the WMA, which is the sole coastal GSA for the Basin.

A brief methodological evaluation of groundwater levels:

- At least two new wells for the Buellton Aquifer will be added for the next evaluation. See Section 6 (Monitoring Networks) for more information about updates to the Monitoring Network.
- An in-depth discussion and evaluation of sustainable groundwater criteria is in Section 7 (Undesirable Results and Sustainable Management Criteria). This includes discussion of DWR's RCAs.

The CMA GSA's four representative groundwater level monitoring wells are shown in **Table 3-3**. This table compares the groundwater level elevations to the sustainable management criteria (measurable objective and minimum threshold) for each well¹. This table shows all wells were above their Minimum Threshold levels for WY 2024, both Spring and Fall levels. No undesirable results related to water levels occurred in WYs 2019 through 2024.²

Table 3-3 also includes a trend analysis of groundwater levels. The table includes the 5-year change in groundwater levels from Spring 2019 to Spring 2024,³ and the 5-Year Trend (an annualized rate). This annual rate was used to project the groundwater levels for Spring 2042. The year 2042 is the SGMA 20-year deadline for groundwater basin sustainability. The last two columns indicate if a projected 2042 groundwater water level is below the minimum threshold or above the measurable objective. This trend analysis does not account for future changes or variations in hydrologic conditions or human activity, which are currently unknown.⁴

¹ As noted in the 2022 GSP, because the CMA is not experiencing undesirable results associated with chronic groundwater level decline, the interim milestones for groundwater elevation are set to be the same as the measurable objectives.

² Water level data was not collected and is not available for fall 2019.

³ Note that due to no available data in the fall of 2019 and 2020, a similar comparison and 5-year trend analysis could not be performed using the fall data.

⁴ See Section 3.1. The five-year period 2019-2024 is slightly wetter than the historical average.

Table 3-3:
Groundwater Elevations for Buellton Aquifer Groundwater Levels (feet in NAVD88)

Name	Reference Values		Water Year 2019	Water Year 2024		Change from Water Year 2019 to 2024		5-Year Trend Evaluation (2019-2024)		
	Measurable Objective	Minimum Threshold	Spring	Spring	Fall			5-Year Trend (ft/year)	2042 ≤ MT?	2042 ≥ MO?
7N/33W-36J1	379	357	374	373	369	-1		-0.2	no	no
7N/32W-31M1	402	359	376	375	372	-1		-0.2	no	no
6N/32W-12K1, 12K2	301	276	300	302	298	2		0.4	no	yes
6N/31W – 7F1	307	292	305	307	308	2		0.4	no	yes

Notes:

n/a = No available data

NAVD88 = North American Vertical Datum of 1988

2042 ≤ MT = Projection for 2042 groundwater level is equal to or below the Minimum Threshold

2042 ≥ MO = Projection for 2042 groundwater level is equal to or above the Measurable Objective

Fill Colors:

Red fill indicates that the well is projected to be below or at the minimum threshold when using the 5-year trend and projecting to 2042.

Green fill indicates that the well is projected to be above the minimum threshold when using the 5-year trend and projecting to 2042.

Blue fill indicates that the well is projected to be above the measurable objective when using the 5-year trend and projecting to 2042.

Symbols:



Green upward arrow indicates increase in groundwater level elevation from spring 2019 to spring 2024.



Yellow dash indicates no change in groundwater level elevation from spring 2019 to spring 2024 or missing data.



Red downward arrow indicates decrease in groundwater level elevation from spring 2019 to spring 2024.

As shown in Table 3-3, the average annual change in water levels from 2019 to 2024 ranged from negative 0.2 to positive 0.4 feet per year for the western and eastern subareas, respectively. Consequently, the eastern subarea is currently on track to meet the measurable objectives, while the western subarea (along Santa Rosa Creek) is projected to remain above the minimum thresholds but not reach the measurable objectives. It is recommended that the CMA GSA closely monitor conditions in the western subarea (Santa Rosa subarea), but current water levels are still above the early warning triggers from the 2022 GSP (10 feet below 2020 water levels).

Overall, the CMA GSA is on track to meet sustainability goals related to groundwater levels by 2042, by exceeding measurable objectives during wet periods in a portion of the aquifer and remaining above minimum thresholds and avoiding undesirable results through the entire aquifer.

3.3.2 Reduction of Groundwater in Storage



Current indicators for groundwater in storage conditions indicate that the amount of groundwater in storage in the CMA has increased since March 2015, the starting baseline condition for SGMA. This is based on data collection and analysis included in the WY 2024 Annual Report. **Table 3-4** provides the cumulative storage change for the three GSAs.

Storage in the Annual Reports is calculated using a simple method: the Thiessen Polygon Method using spring water levels. This method uses observed spring water levels at representative well locations because fall water level data was not available until 2022. Spring water level data are the seasonal high, while fall water levels are the seasonal low. **Figure 3-1** depicts the change in storage from spring 2019 to spring 2024 using the Thiessen Polygon Method. Sections 5 and 7 include additional discussion: Section 5 includes a discussion of different storage methodologies, Section 6 includes more details on the current annual storage method, and Section 7 discusses planned revisions to the annual method used for assessing storage.

Table 3-4:
Cumulative Storage Change since March 2015

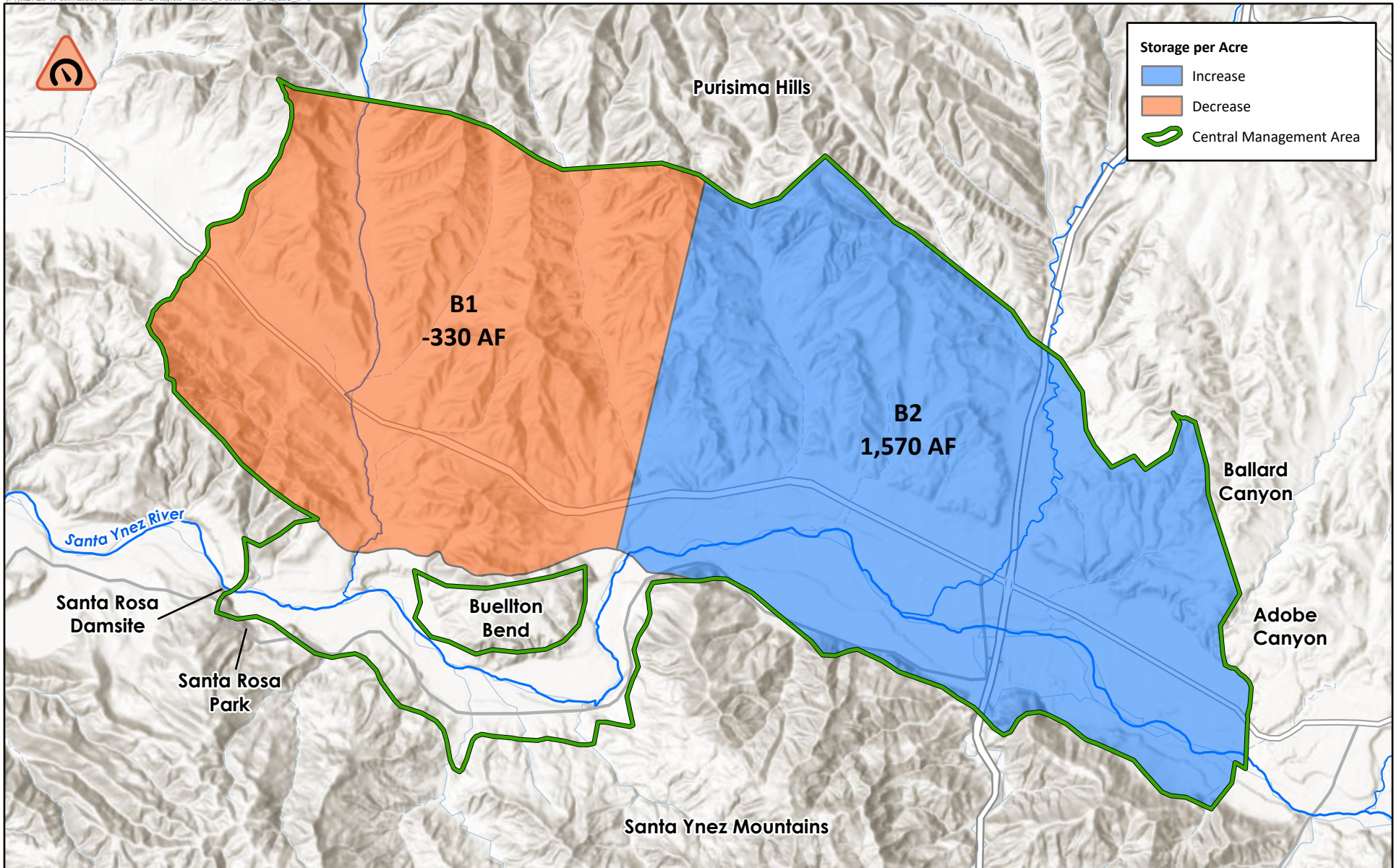
Water Year	CMA	WMA	EMA	Basin Total
	Cumulative	Cumulative	Cumulative	Cumulative
2016	1,200	2,400	-14,000	-10,400
2017	800	3,000	-11,100	-7,300
2018	3,200	1,800	-16,200	-11,200
2019	4,700	11,100	-12,200	3,600
2020	6,000	6,300	-14,300	-2,000
2021	5,800	-1,500	-27,900	-23,600
2022	4,700	2,300	-39,300	-32,300
2023	4,900	16,500	-21,400	0
2024	5,900	17,100	-15,200	7,800

Notes:

All values rounded to nearest 100 AF.

Years are color-coded based on water year type analysis from WY 2024 Annual Report.

As noted in the 2022 CMA GSP, undesirable results associated with a reduction of groundwater in storage have not historically occurred and are not currently occurring in the CMA. Therefore, the cumulative increase in groundwater storage of 5,900 acre-feet by 2024 further strengthens the resiliency of the available groundwater supplies within the CMA GSA against future droughts. Based on the increase in groundwater storage (Table 3-3), the CMA GSA is on track to meet its sustainability goals for groundwater storage by 2042.



**CHANGE IN GROUNDWATER IN STORAGE
SPRING 2019-SPRING 2024
BUELLTON AQUIFER
CENTRAL MANAGEMENT AREA**

0 0.5 1 Miles
Sources:
USGS National Elevation Dataset, 2002



3.3.3 Seawater Intrusion



The CMA is an inland management area of the Basin and is greater than 20 river miles¹ above the Pacific Ocean. Therefore, seawater intrusion is not an applicable sustainability indicator for the sustainable management of the CMA, and the CMA GSP did not set specific targets within the CMA for the CMA GSA to address. For the Santa Ynez River Valley Groundwater Basin as a whole only the WMA includes a portion of the coast, and the WMA GSA has a seawater intrusion sustainability indicator.

3.3.4 Degraded Water Quality



Current concentrations of constituents used for assessing groundwater quality have not significantly increased based on the available data collection and analyses since the 2022 GSP. The WY2023 and WY2025 Annual Reports² provided a periodic evaluation of the water quality in the CMA. **Appendix 3-B** is an appendix from the WY2025 Annual Report which shows the most recent groundwater quality evaluation. Based on the available data collection and analyses, the CMA GSA is on track to meet sustainability goals related to water quality by 2042.

The CMA GSP assesses water quality based on the following five water quality constituents:

- Salinity – Total Dissolved Solids (TDS)
- Chloride (Cl)
- Sulfate (SO₄)
- Sodium (Na)
- Nitrate (NO₃ as N)

¹ River miles are distance that water flows along the river which accounts for the bends and meanders of the river.

² The SGMA Regulations on Annual Reports (23 CCR § 356.2) do not include a specific reporting component on degradation of water quality; Any reporting on this indicator in the annual reports is under the general provision about “a description of progress towards implementing the Plan.”

For methodological evaluation of groundwater quality, please see Section 6 (Monitoring Networks) and 7 (Undesirable Results and Sustainable Management Criteria). Section 6 provides updates to the CMA GSA's water quality monitoring program. This includes the addition of new wells to replace sites that are no longer viable or decommissioned. Section 7 provides a discussion, review, and updates to the water quality SMCs as requested by DWR's RCAs on water quality.

Figure 3-2 shows the locations of seven wells in the 2022 GSP with SMCs for Water Quality. **Table 3-5** summarizes the undesirable results and measurable objective status for the CMA since the 2022 GSP.

Using data summarized in Table 3-5, the CMA GSA conducted an analysis to check for potential undesirable results. As explained in Section 6, four water quality monitoring sites have not been collecting samples as expected in the 2022 GSP, so an additional six sites are being added to the CMA GSA water quality representative monitoring program. The recent water quality data available, including a review of other ILRP or public water system data, indicates that water quality has been relatively stable during this review period. In addition, during this initial phase of implementing the CMA GSP, no projects have been implemented that would have affected water quality. Thus, no undesirable results were found for the CMA GSA with respect to any water quality constituents listed in the GSP. Additionally, a trend analysis did not find significant increases in the concentrations of indicator water-quality constituents. The CMA GSA is on track to meet sustainability goals related to water quality by 2042.

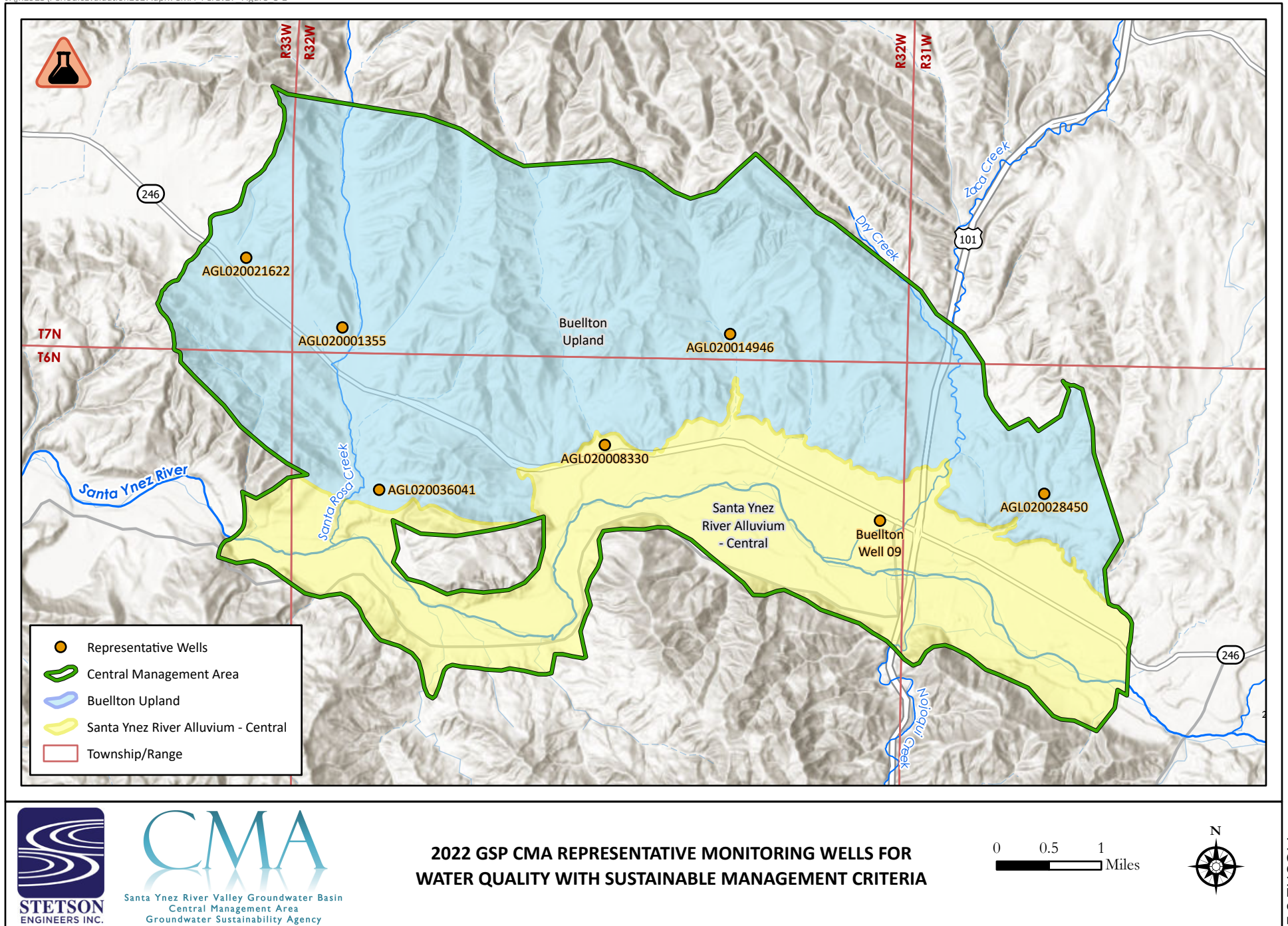


FIGURE 3-2

Table 3-5:
Summary of Water Quality Conditions and Relation to Sustainable Management Criteria

	Salinity as Total Dissolved Solids (TDS)	Chloride	Sulfate	Sodium	Nitrate as N
# of Wells with WQ SMCs set in 2022 GSP	7	7	7	7	7
# of Wells Missing Data after January 1, 2018	2	4	4	4	1
# of Wells Below MT ^A	4	3	3	2	6
# of Wells Worse than MT ^A	1	0	0	1	0
# of Wells Better than (or at) MO ^A	4	3	3	2	6
Percentage of Wells Worse than MT	14%	0%	0%	14%	0%
Undesirable Result? ^B	No	No	No	No	No
Percentage of Wells Better than (or at) MO	57%	43%	43%	29%	86%
Reached MO? ^B	Yes	No	No	No	Yes

Notes:

^A Wells with missing data after January 1, 2018, are not included. See Section 6 and 7 for updated water quality monitoring well network.

^B Based on 50% of monitoring wells.

WQ=Water quality, SMCs= Sustainable Management Criteria, GSP= Groundwater Sustainability Plan, MT = Minimum Thresholds, MO = Measurable Objective, NA= not assessed.

'Below MT' denotes a concentration less than the minimum threshold (criterion met); 'Worse than MT' denotes a concentration greater than the minimum threshold (criterion exceeded)

3.3.5 Land Subsidence (Aquifer Compaction)



Land subsidence (aquifer compaction) is the decrease of the vertical aquifer-system thickness.¹ Of primary concern for SGMA is aquifer compaction due to the groundwater withdrawals.¹ Current indicators of land subsidence demonstrate that aquifer compaction has not occurred significantly or unreasonably in the CMA since 2015. This is based on data collection and analysis included in the WY 2024 Annual Report.²

Aquifer compaction is not directly measured but is evaluated based on two systems that measure the movement of the land surface: continuous global positioning system (“CGPS”) and Interferometric Synthetic Aperture Radar (“InSAR”).³ Both quantitative indicators indicate that land subsidence is less than the SMCs in the 2022 CMA GSP. The 2022 CMA GSP undesirable result for land subsidence was a “decline of six inches from the 2015 land surface elevation resulting from groundwater extractions.” A decline from 2015 to 2025 of greater than 2.22 inches would indicate a trend towards this undesirable result in 2042. For methodological evaluation of land subsidence, and related discussion of land surface versus aquifer compaction, please see Section 6 (Monitoring Networks) and 7 (Undesirable Results and Sustainable Management Criteria).

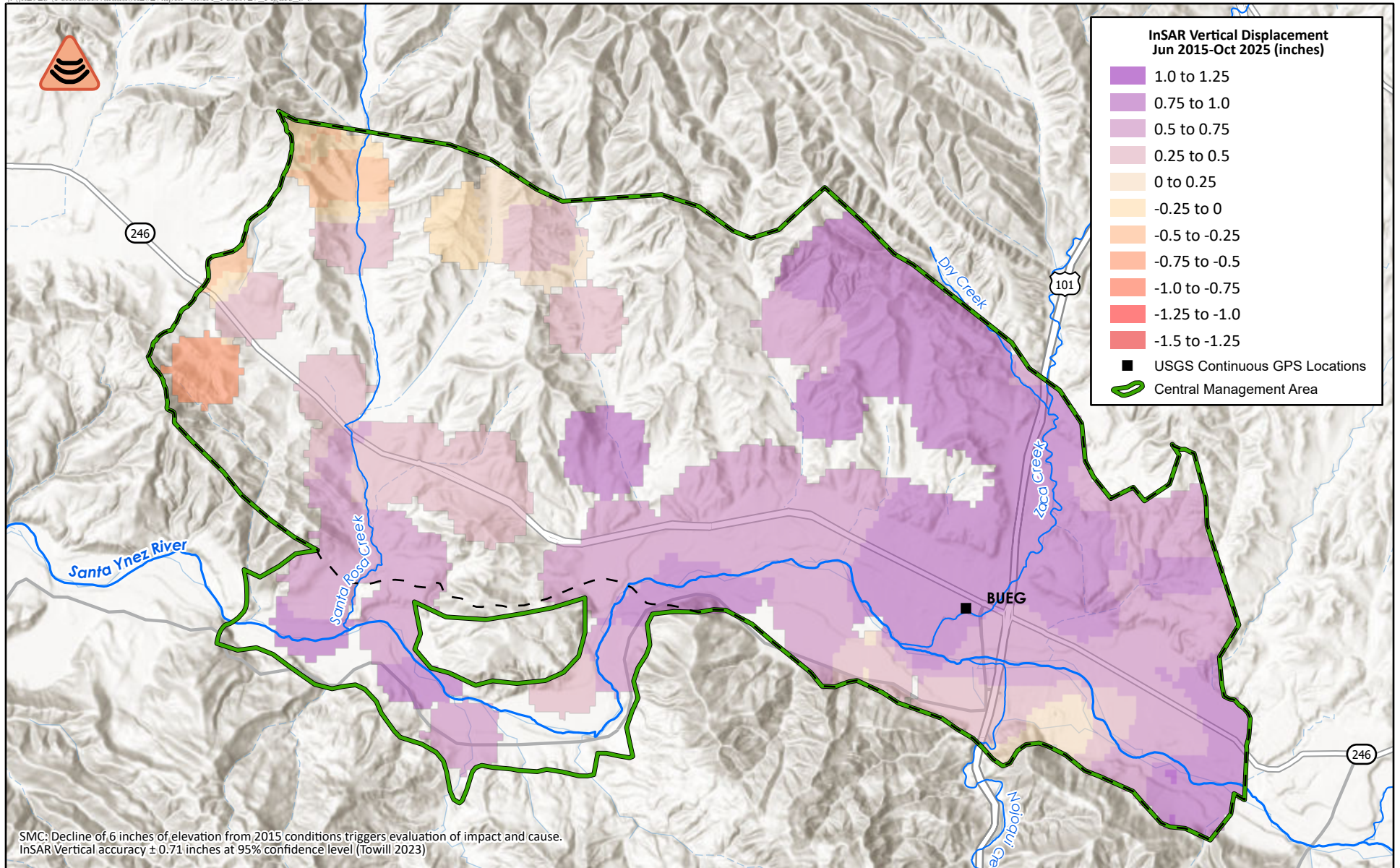
Figure 3-3 is a map comparison of June 2015 and October 2025 InSAR data showing cumulative change since 2015. InSAR data is a satellite-based remote sensing technique that compares the change in radar reflections over time. As indicated on this figure, the reported vertical accuracy of the InSAR method for 2015 to 2025 is ± 0.71 inches. Figure 3-3 indicates that most of the CMA GSA area is within method uncertainty of no change. Where vertical displacement is greater than method accuracy the InSAR data mostly shows an increase in the ground surface elevation in the CMA. All

¹ See Land Subsidence Fundamentals in DWR (2025) DRAFT Land Subsidence. Best Management Practices of the Sustainable Management of Groundwater. 108 pg.

² The SGMA Regulations on Annual Reports (23 CCR § 356.2) do not include a specific reporting component on depletion of land subsidence or aquifer compaction, any reporting on this indicator in the annual reports is under the general provision about “a description of progress towards implementing the Plan.”

³ InSAR data is collected by the European Space Agency (ESA) Sentinel-1A spacecraft, processed by TRE ALTAMIRA Inc. (TRE), and published by DWR.

the InSAR data within the CMA is significantly higher than the 2.22 inches of decline, which indicates that the CMA GSA is on track to meet the land subsidence sustainability goals.



LAND SUBSIDENCE JUNE 2015 TO OCTOBER 2025 INSAR DATA WITHIN CENTRAL MANAGEMENT AREA

0 0.5 1
Miles

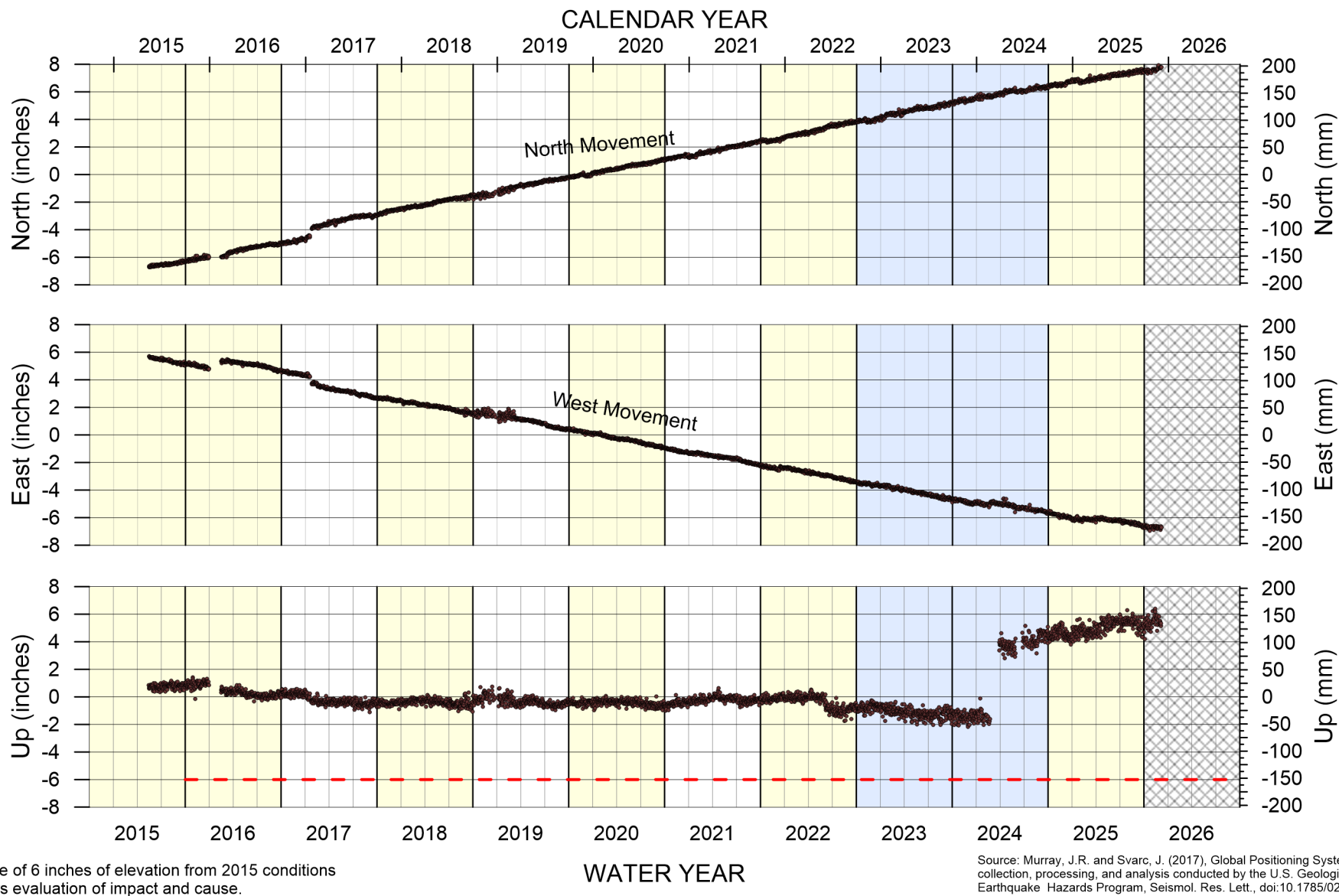
Sources:
USGS National Elevation Dataset, 2002
NAIP (2022), DWR (2025)



An additional method, CGPS, corroborates the InSAR data. CGPS records the change in position of a land base sensor. It records very high-resolution three-dimensional movement. The BUEG station is located near the City of Buellton, and the location also shown on Figure 3-3. Data from the BUEG station is graphed in **Figure 3-4**. Since 2015 the graph shows movement to the north of 14 inches and movement west of 12 inches. Vertical movement is up by five inches, but this includes datum entry change in 2024, which may account for up to four inches. This data shows the CMA is in an area of active tectonic activity. The graph shows that less than 2.22 inches of down movement has occurred, which indicates that the CMA GSA is on track to meet sustainability goals.

Based on the current trend from the last ten years, the movement of the land surface is less than would cause a 6-inch decline by 2042. This is shown in both the InSAR and CGPS data. This indicates that CMA GSA is on track to meet the sustainability goals related to land subsidence from the 2022 GSP.

\\NAS\main\DATA\2823\Analyses\WY2025-5\h_Report\2025-12 WY25 CGPS Land Subsidence\Fig 6-03 CMA_CGPS WY2025_shift_scale.gpj 8/20/2026 M. McCammon



**CONTINUOUS GLOBAL POSITIONING SYSTEM
BUEG STATION TRENDS
LAND SUBSIDENCE**



Water Year Type (1942-2025)

- | | |
|----------------------|---------|
| Wet | No Data |
| Above/Below Normal | |
| Dry / Critically Dry | |

3.3.6 Depletions of Interconnected Surface Water



Current indicators for the depletion of interconnected surface water¹ indicate that groundwater conditions affecting interconnected surface water are sustainable. This is based on data collection and analysis included in the WY 2024 Annual Report.² **Appendix 3-C** is an appendix from the WY 2024 Annual Report which shows groundwater level hydrographs for assessing interconnected surface water. For methodological evaluation of depletion of interconnected surface water monitoring network and sustainable management criteria see Section 6 (Monitoring Networks) and 7 (Undesirable Results and Sustainable Management Criteria).

The depletion of interconnected surface water is evaluated using three indicator monitoring wells located throughout the CMA. These wells are included in the monthly monitoring network operated by the U.S. Bureau of Reclamation pursuant to State Water Resources Control Board Order WR 2019-0148 (see Plan Area Regulatory Programs, Section 1d, of the 2022 GSP). Since adoption of the 2022 GSP, Reclamation has estimated subsurface water elevations for these wells using data from other wells in the existing monitoring network when access to the wells is unavailable. These estimated values are the official monthly elevations reported for the indicator wells. Please refer to Section 6.6 for the inclusion of additional wells in this monitoring program for the CMA GSA. **Table 3-6** compares the water level elevations to the 2022 CMA GSP sustainable management criteria for each well³. These tables show that all wells were above their Minimum Threshold and two wells were above the Measurable Objective levels for WY 2024, both Spring and Fall levels. As noted in the 2022 GSP, the Santa Ynez River flows are primarily influenced by upstream diversions and watershed exports and are maintained by the operation of the upstream Cachuma Reservoir. With Cachuma

-
- ¹ See definition in CWC Section 10721(x) “‘Undesirable result’ means one or more of the following effects caused by groundwater conditions occurring throughout the basin: [...] Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.”
- ² The SGMA Regulations on Annual Reports (23 CCR § 356.2) do not include a specific reporting component on depletion of interconnected surface water, reporting about this indicator in the annual reports is under the general provision about “a description of progress towards implementing the Plan.”
- ³ As noted in the 2022 GSP, because the CMA is not experiencing undesirable results associated with chronic groundwater level decline, the interim milestones for groundwater elevation are set to be the same as the measurable objectives for the surface water depletion sustainability indicator.

Reservoir spilling significantly in both 2023 and 2024, the current five-year trend shows that the CMA GSA is on track to meet sustainability goals related to depletion of interconnected surface water.

Table 3-6:

Groundwater Elevations for Groundwater Levels near Santa Ynez River Channel (feet in NAVD88)

Name	Reference Values		Water Year 2019	Water Year 2024		5-Year Trend Evaluation		
	Measurable Objective	Minimum Threshold	Spring	Spring	Fall	5-Year Trend (ft/year)	2042 ≤ MT?	2042 ≥ MO?
6N/31W-17R01	332	322	337	341	338	+0.8	no	yes
6N/32W-13G02	304	294	309	311	305	+0.4	no	yes
6N/32W-9G1	267	257	270	264	270	-1.2	no ¹	no

Notes:

Green fill indicates that the well is projected to be above the minimum threshold in 2042 using the 5-year trend.

Blue fill indicates that the well is projected to be at or above the measurable objective in 2042 using the 5-year trend.

1- 2042 trend for well 6N/32W-9G1 to remain above minimum threshold is based on recent recovery in 2025 (see Appendix 3-C).

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SECTION 4: Projects and Management Actions

This section describes “the implementation of any projects or management actions, and the effect on groundwater conditions resulting from those projects or management actions.”¹ The CMA GSP included both planned implementation projects and projects and management actions; this section collectively reports on the progress of both. This section also reviews Lower Santa Ynez River (“LYSR”)² Action Plan tasks that arose from recommended corrective actions received during the GSP approval process. Annual updates about the implementation progress of the projects and management actions are provided in the CMA GSA’s Annual Reports.³ **Table 4-1** below summarizes the groups of CMA GSA Projects and Management Actions (“PMAs”).

Table 4-1:
Groups of GSA Projects and Management Actions

PMA Group	Name	Short Description
-	Plan Implementation	Projects needed either for compliance with the SGMA or to address specific data gaps.
-	LSYR Action Plan	Material and technical assistance to support the management of surface water technically within the groundwater basin boundary.
Group 1	General Management	General projects and actions to improve sustainability and resilience under all conditions.
Group 2	Early Warning	Projects and actions to undertake if conditions are nearing undesirable.
Group 3	Minimum Thresholds	Project and actions intended to help restore the basin if conditions are undesirable.
Group 4	Other Actions	Additional fallback projects and management actions to improve basin conditions.

¹ 23 CCR § 354.4(b) A description of the implementation of any projects or management actions, and the effect on groundwater conditions resulting from those projects or management actions.

² Lower Santa Ynez River refers to the reach of the Santa Ynez River below and west of Bradbury Dam and Lake Cachuma to where it meets the Pacific Ocean. This reach is approximately 48.7 river miles, which is approximately half of the overall length of the Santa Ynez River.

³ See WY 2024 Joint Annual Report, CMA Chapter 6: Progress Toward GSP Implementation And Sustainability (pages 137-151):

The CMA GSP grouped PMAs depending on observed conditions within the Basin and the type of response necessary. The GSP identified more expensive and restrictive PMAs as reserve options for the CMA GSA if the CMA conditions were unsustainable and if less expensive or invasive options proved ineffective. Four PMA groups were defined: (1) general management, (2) early warning, (3) minimum threshold, and (4) others. Group 1-3 represents an escalating severity of management action, with the focus currently on Group 1 PMAs, as these were intended to be implemented in the first three years. Group 4 represents supplemental PMAs to be used at the discretion of the CMA GSA. Since the adoption of the GSP in 2022, the CMA GSA has met the sustainability goal (see Groundwater Conditions), so no Group 2 or Group 3 PMAs have been considered necessary to implement. The implementation projects and general management projects are in progress or do not have quantifiable impacts on the Basin.

This grouping of PMAs supports the adaptive management approach that is protective of the groundwater in the CMA GSA. This adaptive management approach includes:

- Ongoing monitoring of groundwater conditions and evaluation of sustainability.
- Evaluation of data and trends.
- Adjustment of Projects and Management Actions as needed.

This approach allows the CMA GSA to respond to changing conditions, including drought, new information, and updated guidance. Adaptive management supports long-term sustainability of groundwater resources in the basin.

4.1 CMA GSP Implementation Projects

The CMA GSP designated implementation projects to meet SGMA data and monitoring requirements. These efforts include improving reporting and filling data gaps, and monitoring Basin conditions. The GSP anticipated this work to start immediately following the adoption of the GSP during the first two years of implementation. The GSP scheduled well surveying and completing the

analysis of SkyTEM airborne geophysical survey in WY 2022 and video logging, RMW sounding, and stream gage planning by the end of WY 2023.

In general, the CMA GSP was a bit optimistic as to the timing and rate of this work, as some of these projects fell behind the GSP's schedule. The primary hurdle was the absence of a dedicated funding source immediately after completion of the GSP; the CMA GSA did not have funding dedicated for projects beyond the GSP nor the authority to collect independent revenue after GSP approval. However, these financial limitations, which resulted in a delayed project start, no longer exist due to funding sources that have been secured by the CMA GSA.

The CMA GSA has resolved these financial issues through restructuring into a joint exercise of powers agency ("JPA"), CMA GSA member agency loans, grants, and a groundwater management fee. The CMA GSA has worked to establish its own revenues, this started by restructuring as a JPA on November 28, 2023. The CMA GSA worked through a Proposition 218 process to establish and begin collecting on a Groundwater Management Fee. This included a five-year financial plan and fee study dated April 21, 2025, a Proposition 218 Majority Protest public hearing and adoption of Groundwater Management Fees for fiscal year ending ("FYE") 2026 on June 23, 2025, and an adoption of Groundwater Management Fees for FYE 2027 on May 18, 2026.¹ The fee went into effect July 1, 2025, for the "FYE" 2026.² The majority of billing is by direct charges on property tax bill, assessed through Santa Barbara Treasurer-Tax Collector Office, which has two installment due dates (November 1st, and February 1st).³ The CMA GSA has also successfully put together winning grant proposals. In a joint effort with the two other basin GSAs, the CMA GSA, and the Santa Ynez River Water Conservation District, as Grantee, put together a winning proposal for Proposition 68 grant funding and secured \$5.5 million for the benefit of all three GSAs in the Basin. DWR presented a ceremonial check on February 8, 2024. This Proposition 68 Grant funds GSP Implementation including the monitoring, data gap, and evaluation projects described in this section. Presently, the

¹ See CMA GSA Resolutions 2025-01, 2025-02, 2025-03, 2026-01, and 2026-02. Copies at <https://www.cma-santaynezwater.org/cma-gsa-resolutions> (Accessed 2026-08-14).

² Each fiscal year begins July 1 and ends June 30 of the following calendar year. For example, FYE 2026 is July 1, 2025, through June 30, 2026.

³ Santa Barbara Treasurer-Tax Collector Office. Secured Taxes. <https://www.countyofsb.org/tt-secured-taxes> Accessed 2026-08-14.

CMA GSA has the necessary funding to ensure all GSP implementation projects are complete, in progress, or scheduled as summarized in **Table 4-2**.

The following table, Table 4-2, lists the CMA GSA projects for the implementation of the GSP.

Table 4-2:
Summary of CMA GSP Implementation Projects

Project Category	Task	Occurrence	Original Planned Completion	Status	Expected Schedule
Completing Ongoing Field Investigations	Surveying Representative Wells	One Time	WY 2022	In Progress	Q1 2027
	SkyTEM Airborne Geophysics	One Time	WY 2022	Completed	-
Monitoring Network Expansion	Video Logging and Sounding Wells	One Time	WY 2023	In Progress	Q1 2027
	Groundwater Level Monitoring Wells (Outreach)	One Time	WY 2022	Completed	-
	Dedicated Monitoring Wells	One Time	WY 2023	In progress	Q1 2027
	SW Gage Installation (planning)	One Time	WY 2024	Completed	Q2 2026
	SW Gage Installation*	One Time	-	In Progress	Q1 2027
Improved Data Collection for Management	Well Registration Update	One Time	FY 2023-2024	Completed	Q3 2026
	Well Metering Requirement	One Time	CY 2024	In progress	Q1 2027
Data Management	Data Updates	Annual	Ongoing	In Progress	Ongoing
Reporting and Plan Updates	SGMA WY Annual Reports	Annual	Ongoing	In Progress	Ongoing
	SGMA Five-Year Plan Assessment	5-Year	Ongoing	In Progress	Ongoing
Notes: Quarters are based on calendar year, Q1 is January-March, Q2 is April-June, Q3 is July-September, Q4 is October-December *Not included in GSP but added as a logical next step for the Surface Water ("SW") Gage Installation (planning) project.					

As shown above in Table 4-2, all projects in this category are complete or are in progress. The New Information Collected section (Section 2, New Information Collected) discusses results for completed projects. The following is a description of the work involved in each project.

4.1.1 SkyTEM Airborne Geophysics

The Airborne Electromagnetic (“AEM”) Survey conducted by the Ramboll Group for the CMA GSA and WMA GSA is complete, and in May 2022 the Ramboll Group published a survey report (Appendix 2-A).¹ This work is described at length in Section 2 (New Information Collected). Since then, the CMA GSA and WMA GSA have been analyzing the data and integrating it into the three-dimensional geological model, through work by Geosyntec Consultants, and the groundwater flow model, through work by Stetson Engineers. The AEM Survey addresses a hydrogeologic data gap and does not directly impact groundwater conditions.

4.1.2 Surveying Representative Wells

Several of the wells used as part of the monitoring network do not have their locations identified with the level of accuracy needed for SGMA. This implementation project would improve the location information for these wells to an accuracy of better than plus or minus ($\pm$) half a foot (± 0.5 feet).² In addition to the wells identified as part of the GSP, new wells added to the monitoring networks as part of this Periodic Evaluation may potentially also need to be surveyed.

Geosyntec Consultants is expected to complete surveying the representative wells, including new wells, in the first quarter of 2027 (March 2027). This project is needed for compliance with the SGMA Data and Reporting Standards. Surveying representative wells addresses a data gap and does not directly impact groundwater conditions.

4.1.3 Video Logging and Sounding Wells

Some of the wells identified as representative wells in the Basin have missing well completion information. Missing well completion information includes the depth of screened or perforated

¹ Ramboll Group also completed an AEM survey for the EMA GSA, but under a different organizational structure and report.

² 23 CCR § 352.4.(a) (4) “Reference point elevations shall be measured and reported in feet to an accuracy of at least 0.5 feet, or the best available information, relative to NAVD88, or another national standard that is convertible to NAVD88, and the method of measurement described.

intervals and the total current depth of the well. This project is a field investigation to run a video log to identify perforation or screen intervals in each well. This is to be supplemented by sounding of the well bottom and the depth to water. This project is expected to be completed by EKI Environment & Water by January 2027. Video logging and sounding addresses a data gap and does not directly impact groundwater conditions.

4.1.4 Add Groundwater Level Monitoring Wells

The 2022 CMA GSP identified areas where the representative monitoring network has insufficient spatial coverage for groundwater levels and storage: primarily in the western portion of the Buellton aquifer. The GSP identified the Santa Rosa subarea as a priority area based on its localized long-term storage decline. Through landowner outreach and planned construction of two new monitoring wells, these higher priority data gaps are being addressed. One deep well and one shallow well (piezometer) have been designed and put out for bid (with construction scheduled to be completed in the first quarter of 2027). Wells added also need to be surveyed, logged, and sounded. The current status of network coverage is evaluated in Section 6 (Monitoring Networks). Additional groundwater level monitoring wells addresses a monitoring gap and does not directly impact groundwater conditions.

Outreach to Landowners

As it is relatively costly to drill a well, the CMA GSA attempted to identify alternatives. This component included an outreach to landowners in areas associated with the monitoring gaps requesting use of their wells as part of the basin monitoring networks. The CMA GSA conducted outreach to landowners from 2023 to 2026. One existing well is being integrated into the monitoring network.

The CMA GSA also worked extensively to keep an existing well in the representative monitoring network for water levels, Well 6N/31W - 7F1 (the Polo well), after it was designated for abandonment and destruction for a new housing project. The CMA GSA worked with the City of Buellton and

developers of a new housing development to preserve access to this monitoring well with a long history of water production data located in the CMA.

Dedicated Monitoring Wells

In the 2022 CMA GSP, the CMA GSA evaluated and identified candidate locations for the drilling of new monitoring wells to address these data gaps, public land and right of ways for dedicated monitoring wells. Two new dedicated monitoring wells (one deep and one shallow piezometer) are currently being designed and put out for bid (with construction scheduled to be completed in the first quarter of 2027). Both new wells are expected to be completed by the CMA GSA by January 2027. See Section 6.1 for an update and evaluation of the groundwater level monitoring wells.

4.1.5 Surface Water Gage

The surface water gage installation work is currently in progress. The efforts started with outreach and planning of the new monitoring locations. The GSP called for monitoring location at the western end of the CMA, near the previous USGS gage “Santa Ynez River at Santa Rosa Damsite near Buellton” (USGS ID 11131000). In this area, most of the streamflow is at the surface during the entire year, which allows for monitoring of the entire river flow. This project is needed for compliance with the GSP. This addresses a monitoring gap and does not directly impact groundwater conditions.

4.1.6 Update Well Registration Program and Metering Requirements

The CMA GSP had anticipated development of a well registration and metering program by this Periodic Evaluation, potentially as part of a groundwater management fee program. Wells in the CMA required to be registered with the SYRWCD, a CMA GSA member agency, and all water production is required to be reported semi-annually to the SYRWCD. To save costs and promote government efficiency, the CMA GSA has decided to continue to use the existing well registration and groundwater extraction reporting program and data which have been administered and maintained by SYRWCD for decades.

Since the filing of the GSP, SYRWCD has worked on modernizing and streamlining their well registry and reporting systems. This included developing a new web-based well registration and groundwater production reporting system which was made available to the public in July 2026.¹ The SYRWCD registry and reporting updates include support for future integration with the CMA GSA.

4.1.7 Other Updates

Other components of the GSP implementation are on track, including data updates through the Data Management System,² Annual Reports, and this Periodic Evaluation. The DWR has accepted all the CMA GSA's annual reports since the GSP. See Section 9 (Coordination, Outreach, and Engagement) for additional discussion of DWR and public comments on the CMA GSA's GSP and Annual Reports.

4.2 Lower Santa Ynez River (LSYR) Action Plan Tasks

The GSPs for the WMA GSA, CMA GSA, and EMA GSA each characterize, based on the best available science and data, a portion of the LSYR and its underflow – extending from Bradbury Dam to the Lompoc Narrows – as a surface water system that exists in parallel with the Basin's groundwater system. The SGMA statute explicitly excludes this underflow, which is water flowing through a known and definite channel, from the SGMA definition of groundwater.³ Water production in this area is almost exclusively done using wells from the underground channel rather than direct surface diversions.

In a coordinated joint effort, in response to the SWRCB staff comments on the GSP provided to DWR for review and approval, the WMA GSA, CMA GSA, and EMA GSA, in discussion with DWR and the

¹ SYRWCD Groundwater Production Reporting and Well Registration Website <https://syrwcd-report.com/> (Accessed 2026-08-17) Went live to the public on July 1, 2026, with the first reporting period using this portal due on July 31, 2026.

² Santa Ynez River Valley Groundwater Basin SGMA DMS – Western and Central Management Areas. <https://sywater.info/> (Accessed 2026-08-17).

³ CWC Section 10721. (g) "Groundwater" means water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water, but does not include water that flows in known and definite channels. Compare to the Water Conservation District statute, CWC Section 75502 "Ground water" means all water beneath the earth's surface, but does not include water which is produced with oil in the production of oil and gas, or in a bona fide mining operation, or during construction operations, or from gravity or artesian springs.

SWRCB staff, developed a plan to provide material and technical assistance to support the management of this water by the agencies with the appropriate authority. This plan is the January 5, 2024, *Action Plan for Management of All Well Production Along the Lower Santa Ynez River, Above the Lompoc Narrows* (LSYR Action Plan). DWR RCA #1 requires implementation of the Action Plan. This section updates on the material actions the GSAs have committed to as part of the LSYR Action Plan and what has been completed to date. The Action Plan states the following as objectives:

“The Groundwater Sustainability Agencies (GSAs) for the WMA, CMA, and EMA are committed to ensuring that all well production in the Basin is accounted for, quantified, reported to the appropriate regulatory agency or agencies, and managed in a sustainable and responsible manner. As a corollary, the GSAs are committed to the goal of ensuring that all well production and well owners in the Santa Ynez River Alluvium Area are registered and reporting to the applicable GSA, or to the State Water Resources Control Board (State Board), and the Santa Ynez River Water Conservation District (SYRWCD).”

The Action Plan identifies eleven actions to help achieve these goals, which are summarized into the following points (**Table 4-3**). These actions as part of the LSYR Action Plan are not expected to result in direct change in SGMA groundwater conditions.

Table 4-3:
Action Plan Task Summary Table for the WMA GSA, CMA GSA, and EMA GSA

Task Name	Task Status	Planned Completion
Illustration of Surface Water System	Completed	Q3 2025
Identify Existing, Known, LSYR Wells	Completed	Q4 2025
Identify Registration of Wells	Completed	Q4 2025
Educational Workshops for LSYR Area	Completed	Q4 2025
Conduct further analyses of interconnected surface and groundwater systems	In progress	Q4 2027
Include information obtained in future GSP Annual Reports and Periodic Evaluations	In progress	Ongoing

Note: LSYR= Lower Santa Ynez River, Quarters are based on calendar year, Q1 is January-March, Q2 is April-June, Q3 is July-September, Q4 is October-December

The three GSAs jointly committed to arranging educational workshops to educate all well owners and producers in the Above Narrows Alluvium Area with the goal of ensuring that all such diversions are properly reported either to the applicable GSA or the State Board and to SYRWCD. The GSAs completed the educational workshops with a series of four workshops in September 2025. The 2025 workshops were preceded by mailed notification (see Public Outreach section) to the owners of applicable parcels. A presentation from the 2025 workshop is attached as **Appendix 4-A**. There were three workshops held on Friday, September 12, 2025: 9 am to 11 am in Lompoc in the WMA, 1 pm to 3 pm in Buellton in the CMA, and 4 pm to 6 pm in Santa Ynez in the EMA. A fourth workshop was held on an alternative date, Friday, September 19, 2025, in Buellton from 1 pm to 3 pm.

As part of the public workshops, the GSAs prepared and published detailed illustrations of the surface water system for each of the GSPs for the WMA GSA, CMA GSA, and EMA GSA (referred to as the “Above Narrows Alluvium Area”). The GSAs developed and released these illustrations of the surface water system to the public as part of the 2025 educational workshops. The GSAs also identified all existing wells known to be located within the Above Narrows Alluvium Area and identified all parcels in the Above Narrows Alluvium Area currently reporting water diversions to either the District or the State Board. The ongoing further analyses of interconnected surface and groundwater systems recently performed by the CMA GSA are discussed in the Basin Setting Section of this report (Section 5).

Implementation of the LSYR Action Plan protects the groundwater levels and groundwater storage from unregulated and undocumented pumping. With the main theme of collaboration and stakeholder engagement from well owners, the tasks help to ensure that pumping in the Basin is documented and reported to the appropriate management and regulatory agencies.

4.3 PMA Group 1: General Management

Group 1 PMAs were identified to improve sustainability and resilience under all conditions. The primary objective is to ensure that the lowering of groundwater levels during periods of drought is sufficiently offset by increases in groundwater levels and storage during the other periods. An additional Group 1 PMAs objective is to protect current water quality and groundwater dependent ecosystems and to avoid impacts from land subsidence and depletion of surface water due to groundwater pumping.

As discussed throughout this report, the PMA of implementing a groundwater management fee, including an extraction charge component, was a focus of the CMA GSA's efforts since the GSP adoption and is necessary to help fund additional projects and actions. WY 2026 is the first water year with a groundwater management fee in place. The new fee allows the CMA GSA to fund projects that previously were in need of funding for implementation.

Table 4-4:
Group 1 Projects and Management Actions Summary Table

Project or Management Action Name	Project or Management Action Description	Targeted Sustainability Indicator	Project Status	Expected Schedule	Anticipated Benefits
Basin-Wide Conservation Efforts (PMA 1)	• Coordinate with the existing agencies and programs, and develop additional voluntary, rebate-based, or mandatory conservation efforts for domestic, municipal, and agricultural beneficial uses within the CMA. • A Water Conservation Strategic Plan, or similar document, will be developed. • The CMA GSA can coordinate with Santa Barbara County to investigate the potential for, and feasibility of, water conservation in the industrial water uses in the CMA. • The CMA GSA can also coordinate with agricultural groundwater users to investigate the potential for, and feasibility of, additional water conservation in irrigation practices.	GWL, GWS	In progress	2026-Ongoing	In conjunction with metering and water conservation, demand is expected to be reduced by 10% to 30% from the current groundwater production. Based on 2018 total groundwater pumping for the Buellton Aquifer (3,000 AFY), the potential yield from water conservation is expected to be 300 to 900 AFY.
Implement Groundwater Management Fee with Mandatory Well Metering and Update Well Registration (PMA 2)	• The Central Management Area Sustainable Groundwater Management Fee Study (referred to as the "Rate Study") established a basis for the Groundwater Management Fee. • The Rate Study included a workshop, press release, and various resolutions. • The CMA GSA Board adopted the Groundwater Management Fee which includes an extraction charge and acreage charge on June 23rd, 2025. • For the first year, the extraction charge is \$63.32 per acre-feet and the acreage charge is \$2.08 per acre. See the GSA Authorities and Enforcement Section for more details. • Updated well registration is in coordination with the SYRWCD and will continue.	GWL, GWS	In progress	Completed	Management action benefits are anticipated to be the same for groundwater management fee and water conservation, including improved and rising groundwater levels due to a reduction in groundwater pumping.
Supplemental Imported Water Program	• The City of Buellton currently imports State Water Project from the CCWA, ranging from 165 AF in 2018 to 345 AF in 2020.	GWL, GWS	In progress	2026-Ongoing	The purchase of supplemental State Water Project water would decrease the local

Project or Management Action Name	Project or Management Action Description	Targeted Sustainability Indicator	Project Status	Expected Schedule	Anticipated Benefits
(PMA 3)	The lack of availability of SWP and other external water supplies may be addressed through water banking. The CMA GSA may store wet-year deliveries of its purchased water supplies in a groundwater banking program and arrange for the stored deliveries to be withdrawn or exchanged for use in the CMA.				groundwater pumping demand from the Buellton Aquifer. The reduced groundwater pumping would benefit the local groundwater levels and storage. Even a small purchase of 50 AFY on average would help meet the goal of achieving an additional 200 to 600 AFY needed to bring the water budget for the CMA into balance currently and in the future.
Increase Stormwater Recharge (PMA 4)	As part of the implementation of this GSP, the CMA GSA will partner with the Santa Barbara County Water Agency and the City of Buellton to fund the next steps in implementing three stormwater capture and infiltration projects. - City of Buellton Avenue of the Flags Bioretention with Underdrains. - City of Buellton Agricultural Runoff Detention Basin. - New Bioretention Bioswale Project in the Buellton Upland.	GWL, GWS, WQ	In progress	2026	The Avenue of the Flags Bioretention Project was estimated to provide about 20 AFY of recharge on average and provide water quality benefits including reducing the nitrogen loading by 300 lbs/year. A bioswale project in the Buellton Upland would be expected to provide similar benefits. With the increased precipitation intensity predicted under climate change, the benefits of slowing urban runoff and increasing infiltration into the groundwater table would be greater than current conditions. Projects that increase stormwater recharge will also be designed as multiple-benefit projects including water supply, water quality and elements to support wildlife and aquatic species.

4.4 PMA Group 2: Early Warning

Group 2 PMAs are projects and actions to undertake if conditions are nearing undesirable. The early warning trigger was established by the CMA GSA to act as an advisory indicator that conditions in the Basin are approaching Minimum Thresholds. Group 2 PMAs are implemented when the early warning trigger is reached, and at the latest if a Minimum Threshold has been reached. Implementation of Group 2 PMAs also initiates planning for potential Group 3 PMAs to ensure timely project start-up if they are needed.

The CMA GSP includes two projects under the Early Warning group; see Table 4-4. As conditions in the basin have not degraded to the point of meeting this advisory threshold, the CMA GSA has not begun implementation of any of the Group 2 projects.

The DWR discussed the Group 2 PMA, the Water Right Release Request, in their broader evaluation and as part of RCA #3. In particular, the discussion notes:

“Department staff are concerned that releases under this water right may only generate temporary relief from exceedances of early warning triggers rather than mitigate any potential overdraft. The Plan does not explain how the GSAs and Santa Ynez Water Conservation District intend to manage water under this water right to ensure there will be water available for releases when early warning triggers are exceeded again.”¹

As explained in the GSP, the three Basin GSAs do not manage this water directly but could advocate to SYRWCD, a member agency of all three GSAs, for additional releases to the extent consistent with WR 2019-0148's criteria for downstream releases. This potentially temporary and short-term solution would not fix overdraft alone but would be part of the three GSA's work to ensure that undesirable results do not occur for water users in the Basin if the three GSA deem this PMA would be appropriate to implement. As with all PMAs beyond Group 1, the three GSAs would implement the PMAs strategically depending on the cause of the undesirable result and/or observed Basin

¹ DWR Letter of Approval, page 70 of 76.

condition. See Appendix 5-C for further discussion of Lake Cachuma Releases and broader management discussion around Santa Ynez River surface water.

4.5 PMA Group 3: Minimum Threshold

Group 3 PMAs are implemented if conditions in the Basin do not meet the Minimum Threshold for one or more of the six Sustainability Indicators.

The CMA GSP includes a single project under the Minimum Threshold group; see **Table 4-5**. As conditions in the Basin have not degraded to the point of meeting this advisory threshold, the CMA GSA has not begun implementation of any of the Group 3 projects.

Table 4-5:
Group 2 and 3 Projects and Management Actions Summary Table

Project or Management Action Name	Project or Management Action Description (Per the GSP)	Targeted Sustainability Indicator	Project Status	Expected Schedule	Anticipated Benefits
Water Rights Release Request (PMA 5-Group 2)	The CMA GSA can make a request to the SYRWCD, a CMA member agency, for a water rights releases from upstream Cachuma Reservoir. For the CMA, the only type of water rights releases that would provide recharge benefit is referred to as an "Above Narrows Account" (ANA) releases. This CMA GSA action can only be a request to the SYRWCD because the SWRCB Order 2019-0148 gives the SYRWCD the authority to request ANA releases subject to and in accordance with the requirements of WR 2019-0148. The ANA releases would be subject to availability of ANA credits in storage in Cachuma Reservoir.	GWL, GWS	Not started	-	ANA releases have averaged about 4,300 AFY since 1990, and this has become a valuable source of water during periods of drought.
Supplemental Conditions on New Wells (PMA 6-Group 2)	The CMA GSA can require supplemental conditions that would apply to new wells. The CMA GSA could create an ordinance limiting uses for new wells during times of extraordinary droughts and low groundwater levels.	GWL, GWS	Not started	-	The benefits would be an increase in groundwater storage as compared to baseline conditions due to a reduction in groundwater pumping.
Implement Annual Pumping Allocation Plan, Transient Pool And Fallowing Program (If Necessary) (PMA 7-Group 3)	The establishment of annual groundwater pumping allocations (Annual Pumping Allocations) based on the sustainable yield of the CMA GSA. These Annual Pumping Allocations could be used for the purpose of assigning pumping fees (Augmentation Fees). The Augmentation Fees would in turn provide the funding for the development of supplemental water supplies and other projects and management actions to achieve sustainability. Accordingly, these Annual Pumping Allocations are not a determination of water rights in that they do not prohibit the pumping of groundwater. Rather, all groundwater pumpers continue to possess the right to produce groundwater provided they pay the Augmentation Fee. Groundwater production in excess of Annual Pumping Allocations would be subject to an Augmentation Fee in an amount that is determined to be sufficient for the acquisition of supplemental water supplies pursuant to this pumping allocation plan.	GWL, GWS	Not started	-	The beneficial uses of groundwater will subsequently be evaluated based on water rights priorities. Accordingly, all groundwater users and users will be equitably considered and prioritized, as required by SGMA. Transient Pool Allocations from groundwater pumpers electing to enroll in the Fallow Program estimated to be up to \$300,000.

4.6 PMA Group 4: Other

Group 4 PMAs are additional fallback projects and management actions to improve Basin conditions. Group 4 PMAs have been identified for use if the Groups 1, 2, and 3 PMAs are insufficient to maintain the sustainability goal for the Basin. In the future, additional PMAs may be identified and added to this list of PMAs as part of future GSP evaluations and updates. Additionally, the CMA GSA may elect to implement one or more projects in Group 4 PMAs at any time to achieve the sustainability goal for the Basin.

The current Group 4 PMAs include the following supply-related PMAs:

- Recycled Water Project;
- Regional Seawater Desalination Plant; and
- Zaca Creek/ Santa Rosa Creek Recharge Pond Project.

The current Group 4 PMAs include the following demand-related PMAs:

- Non-native Vegetation Removal
- Agricultural Land Retirement/ Pumping Allowance
- Drought Mitigation by Pumping Optimization and Deepen Existing Wells

Due to the groundwater conditions and partial implementation of Group 1 PMAs, Group 4 PMAs have not been implemented to help meet sustainability goals. The CMA GSA will continue to prioritize implementation of Group 1 PMAs. If the groundwater conditions worsen or if the implemented PMAs are deemed ineffective, the CMA GSA will consider Group 4 PMAs more closely in addition to Group 2 and Group 3 PMAs.

4.7 Summary and Evaluation

The CMA GSA has not achieved completion of some of the implementation projects and PMAs planned in the original GSP. The uncompleted projects and actions are anticipated to be completed

by the next Periodic Evaluation and will be more fully evaluated at that time. Although somewhat behind schedule in said implementation, the CMA GSA is currently meeting its sustainability goals and has taken steps to address the gaps identified in the GSP.

Certain conditions that the CMA GSA GSP can better plan for in the future include funding sources for the various projects, coordination with the other Basin GSAs, and allocating time to collaborate with the SWRCB and DWR. The CMA GSA qualifies as and is a member of a Small GSA coalition that may be able to receive Proposition 4 grant funding for various projects. The CMA GSA is adaptive towards inflation and changes in inflation rates in future budgeting decisions. The CMA GSA is aware that current federal policies are likely to increase inflation going forward.

The CMA GSA evaluated whether Projects and Management Actions are contributing to sustainable groundwater management. During this evaluation period, most projects focused on data collection, monitoring improvements, and administrative programs. Due to limited need, few projects have been implemented to directly affect groundwater conditions.

Groundwater conditions during this period were influenced by hydrologic conditions, including recent wet years. The CMA GSA finds that:

- The CMA GSA is addressing the implementation and general management Projects and Management Actions;
- Existing Projects and Management Actions are appropriate for current conditions;
- Conditions have not deteriorated to triggering the adaptive Projects and Management Actions in Group 2 and 3;
- Additional management actions are not required at this time to avoid undesirable results; and
- Future actions may be needed if conditions materially change, particularly during drought periods.

The CMA GSA will continue to evaluate the effectiveness of Projects and Management Actions as additional data becomes available

SECTION 5: Basin Setting

This section evaluates “the basin setting based in light of significant new information or changes in basin water use”¹ within the CMA since the 2022 GSP. The CMA GSA has worked to improve the understanding of the basin setting and water use conditions. This work has resulted in improvements in understanding of the Basin setting. New reports and updates from ongoing monitoring help the GSA better understand the Basin and its environment. Yet, so far, updates have not resulted in significant changes to the general description or understanding of the Basin setting in the GSP.

The Basin Setting is Chapter 2 of the CMA GSP. This chapter of the GSP consisted of three sections: Hydrogeologic Conceptual Model (“HCM”), Groundwater Conditions (“GC”), and Water Budget (“WB”). In general, the physical basin framework is described in HCM. The GC described the history and current basin conditions. Descriptions of how and how much water flows through the system are in the WB. This periodic evaluation also includes a discussion of the related Plan Area (“PA”) section, which was part of the GSP Chapter 1.

Since the publication of the 2022 GSP, the CMA GSA has published materials to clarify items raised in public comments. The term “groundwater” as used by the CMA GSA follows the definition used in the SGMA law.² Specifically, this “does not include water that flows in known and definite channels,” including Santa Ynez River underflow above the Lompoc Narrows that is within the CMA. The 2022 GSP addressed this issue in Appendix 1d-B. In 2023, the three GSAs published a more detailed analysis in response to comments from the SWRCB (included here as **Appendix 5-A**). on the DWR SGMA Portal. The report, titled *Santa Ynez River Alluvium Underflow and Subterranean Stream Report*, provides a step-by-step, comprehensive evaluation of the alluvial system. The

¹ DWR (2023) Groundwater Sustainability Plan Implementation: A Guide to Annual Reports, Periodic Evaluations, and Plan Amendments. Page 23.

² CWC Section 10721.(g): “Groundwater’ means water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water, but does not include water that flows in known and definite channels.”

analysis identified that studies dating back to 1958 have similarly characterized the river's underflow as part of the Santa Ynez surface water system.

5.1 Plan Area

The Plan Area ("PA") section of the CMA GSP explains the geographic areas the plan covers. It includes information about administrative rules, laws, and policies that affect groundwater management. It explains how and why the Basin is divided into three management areas, and the location and subareas of the CMA. The section lists the land use jurisdictions and water agencies in the CMA. It includes details about how many wells are in the area and other plans for monitoring and managing water resources. Finally, the section covers other regulations that apply outside of SGMA, along with land use plans, population estimates, and general planning efforts.

The PA section is closely related to Basin Setting and is reviewed here. The Plan Area section of the 2022 CMA GSP remains mostly current with minor updates. Updates and important information include:

- The CMA GSA reorganized under a Joint Exercise of Powers Agreement ("JPA"), replacing the 2017 MOU structure. Member agencies and voting weights were not changed.
- The adjacent San Antonio Creek Valley Groundwater Basin developed a GSP and is now under SGMA management.
- The CMA GSP Plan Area identified that "[t]he water flowing through the alluvium, in known and definite channels,¹ is not considered groundwater as defined by SGMA." This included "[CMA GSP] Appendix 1d-B describes the extents of the Santa Ynez River underflow and summarizes the history of management by SWRCB as part of the Santa Ynez River." In response to comments on the GSP, a more extensive review of the same topics was put together. This longer review is included as Appendix 5-A.

¹ CWC Section 10721 (g) "Groundwater" means water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water, **but does not include water that flows in known and definite channels.** (emphasis added)

- The same water agencies are relevant to the GSP, with small updates to their water systems, such as the decommissioning of old wells and the drilling of new ones.
- The Santa Barbara Local Agency Formation Commission (“LAFCO”) manages the boundaries of special districts and cities. In the CMA, these include the three CMA GSA member agencies. The other eight special districts provide services including fire protection and health care. The CMA GSA reviewed LAFCO Resolutions from 2021 to August 2025, the most applicable is LAFCO Resolution 23-12. This resolution approved a *2022 Countywide Municipal Service Review and Spheres of Influence for Water, Wastewater, Recycled Water, and Stormwater Service Agencies*. This document described updates on infrastructure needs, finance, and related matters. The LAFCO review indicates conditions have not substantially changed since the GSP.
- Additional wells have been drilled since the publication of the CMA GSP in 2022. Based on data reported to the Santa Ynez River Water Conservation District (“SYRWCD”), the following table, **Table 5-1**, summarizes the wells that have been drilled since the GSP. The CMA GSA is collaborating with the SYRWCD to update the well registration data.

Table 5-1:
Annual Change of Wells Registered to the SYRWCD in the CMA GSA, for Recent Years (2020-2026)

SYRWCD Annual Report		Annual Change		
Report Number	Data Date	Total Wells	Inactive Wells	Active Wells
43	4/3/2021	3	1	2
44	4/1/2022	6	1	5
45	2/6/2023	0	1	-1
46	2/3/2024	1	0	1
47	2/7/2025	6	0	6
48	2/16/2026	1	0	1

Source: Engineering and Survey Reports on Water Supply Conditions of the Santa Ynez River Water Conservation District. CMA GSA includes the total of wells in SYRWCD Zone D. Changes are calculated from the last reporting date, and new registrations may be a result of correcting missing registrations of existing wells.

- The US Census Bureau released new population data from the 2020 census. These are summarized in Section 2.2.1. These updates include updates on population size and distribution. These changes are minor, with the population mostly the same as what was already described in the GSP. As with the earlier data, no identified disadvantaged community (“DAC”)¹ and identified severely disadvantaged communities (“SDAC”)² were identified using the 2020 census data.
- Land use, including parcel use and ownership, are also updated over time. Section 2.2.2 described land use updates when comparing a new 2023 LandIQ dataset to the 2016 LandIQ dataset. In general, conditions in 2025 are not significantly different to what the GSP described.

5.1.1 Plan Area RCA: Non-SGMA/Surface Water

The Plan Area includes a discussion of limitations to the CMA GSA's powers and authorities under SGMA. In part, it identifies the roles of other agencies for issues outside of the SGMA scope, including with regard to the regulation and management of surface water.

The *Action Plan for Management of All Well Production Along the Lower Santa Ynez River, Above the Lompoc Narrows* (“Action Plan”) was the result of conversations with the DWR and SWRCB. The Action Plan is a way for the CMA GSA to provide material support using its unique resources to advance both SGMA (groundwater) management by the GSAs and non-SGMA (surface) water management and regulation by other appropriate agencies. Incorporation and implementation of this Action Plan specifically address DWR’s RCA No. 1:

Department staff recommend incorporating the action plan (as described in the GSAs’ January 5, 2024, letter) into the Plan for the Basin and document the implementation of the action plan in future periodic evaluations of the Plan.

¹ 80% of the statewide annual median household income

² Less than 60% of the statewide annual median household income

This Action Plan was implemented in 2025 (see previous Section 4 Projects and Management Actions to ensure all diversions/extractions of water (surface and groundwater systems) are accounted for in the Basin.

5.2 Hydrogeologic Conceptual Model

There are no significant changes to the HCM as described in the 2022 CMA GSP. As introduced in Section 2 (New Information Collected), additional information improves understanding of the Basin. This includes the Airborne Electromagnetic (“AEM”) survey data and the resulting analyses. In addition, new drillers' well logs provide additional information on the HCM.

Other changes to the Basin reflect the passage of time. This includes a longer period of monitoring data, such as surface water, precipitation, stream gages, and pumping. Other updates are snapshots of conditions as of a certain date, such as land use and precipitation isohyets.

The CMA GSP HCM identified data gaps on several issues. Additional wells are needed in the Buellton Upland to better characterize flow and conditions. More analysis is needed between the Buellton Upland area and the WMA to the west. Finally, a stream gage at the WMA-CMA boundary is needed to quantify river flows. Many of these data gaps received funding. While the projects have not yet been completed as of this periodic evaluation (June 2026), they are in progress.

The following subsections summarize updates to each component of the 2022 GSP HCM:

5.2.1 Central Management Area and Adjacent Geology

The general geology description in the GSP has not significantly changed. As described in Section 2.1 the USGS published a new geological map,¹ and a new AEM survey provided new geophysical observations. This was used to update the 3D Geologic Model, which focuses on subsurface geology. Updates have been made to all seven geological layers based on the latest USGS map and

¹ This was published in August 2021 and was partially incorporated into the GSP.

AEM survey. These changes are most important in the area of buried groundwater aquifer formations under the alluvium of the Santa Ynez River near the city of Buellton.

The AEM study notes the “complex, folded and faulted structure of the geologic units within the survey area.” Ramboll, the AEM authors, concluded that in many cases, the data lined up closely with the existing HCM (Ramboll, pg. 29): “In many cases, the resistivity estimates generated from the AEM data allowed mapping of geologic units that lined up closely with the existing hydrogeologic conceptual model (HCM).”

One area where there were differences was in the Careaga Formation. The AEM study found a distinction between two of the geological member units, which is between the Graciosa Member (upper, coarse sand) and the Cebada Member (lower, fine sand). These changes do not alter the conceptual understanding of groundwater or surface water system conditions or management as described and characterized in the GSP.

Updates made to the 3D Geologic Model were carried over to the groundwater flow model. Groundwater modeling updates are discussed in Section 5.5.

5.2.2 Principal Aquifers and Aquitards

The Buellton aquifer is the principal groundwater aquifer of the CMA GSA. It is comprised of the Paso Robles and Careaga Formations. It extends into the Buellton Upland and, along the river, is buried by and under the river alluvium of the Santa Ynez River. Water flowing through the river alluvium is in a known and definite channel, and therefore not an SGMA groundwater aquifer. The water flowing through the river alluvium is considered part of the surface water system of the Santa Ynez River, which is administered and regulated in accordance with SWRCB WR 2019-0148.

Since the 2022 GSP, the new AEM data confirms and improves the extent and understanding of the aquifer. Reviewing this new data was part of the actions included in the LSYS Action Plan (see Section 4.2). The AEM report provides data further constraining transmissivity and storage capacity throughout. This did not significantly alter the description in the 2022 GSP.

A primary purpose of the AEM study was to investigate the upland boundary between the CMA GSA and WMA GSA. The results were inconclusive about the potential buried impediment in this area. The nature of the impediment remains uncertain and will be further investigated. A new observation well is being drilled by the WMA GSA along this boundary in 2026, which is expected to provide additional information about differences in groundwater levels on each side of the boundary.

5.2.3 Hydrologic Characteristics

The topography, soil characteristics, watershed extent, surface hydrology, and anthropogenic activity are key factors affecting the groundwater hydrology as described in the GSP and the Annual Reports. These factors remain largely unchanged. There is no new significant or relevant information on topography, soil, or the watershed boundary within the CMA.

5.2.4 Uses and Users of Groundwater in the Central Management Area

The beneficial uses of groundwater in the GSP include municipal and domestic supply (MUN), agricultural supply (AGR), industrial process supply (PROC), and industrial service supply (IND) per the 2019 Central Coast Basin Plan.¹ These uses remain unchanged in the 2024 Basin Plan² (see Section 2.1.3). The main uses, municipal and agricultural uses, are accounted for explicitly in the water budget. The groundwater users have also not changed.

5.2.5 Data Gaps and Uncertainty

The following data gaps are identified in the GSP:

- Geologic model of the Buellton Aquifer in Santa Ynez River subarea (to be verified with AEM data)

¹ For surface water, the 2019 Central Coast Basin Plan has identified an additional 14 beneficial uses in the SYRVGB below the Cachuma Reservoir (see 2022 GSP, p.2b-38).

² Central Coast Regional Water Quality Control Board. July 2026. Water Quality Control Plan for the Central Coastal Basin, June 2024 (Incorporating amendments approved by the California Office of Administrative Law through February 25, 2026). California Environmental Protection Agency. SYWATER 583.

- Water level data in the Buellton Upland subarea (to better understand Santa Rita Upland and Buellton Upland connection).

As noted earlier in the section, the AEM data did not provide information that fully resolves these data gap items. Uncertainties about the geologic model and water level data in the Buellton Upland subarea will be addressed through a combination of new information, such as new wells and surface gages, and improved well registration. The new wells and surface water gage are discussed in the monitoring networks section.

5.3 Groundwater Conditions

The previous section on Groundwater Conditions (Section 3) focuses on Basin sustainability and current conditions for each indicator based on the SMCs developed in the 2022 CMA GSP. This section evaluates how the CMA GSA's understanding of the Basin setting has changed in light of new information on groundwater conditions.

The Groundwater Conditions ("GC") in the CMA GSA are substantially the same as described in the 2022 GSP. In Section 2B the CMA GSP assessed the then-current and historical CMA GSA groundwater conditions. The CMA GSP's historical period for GC covered all available data from 1924 through 2020, with the current GC represented by WYs 2015-2020. The CMA GSA's Annual Reports (WY 2021 through WY 2024) and Section 3 of this periodic evaluation have provided updates on the GC through WY 2024, including some limited additional information on WY2025. These updates show that groundwater conditions have not significantly changed since the GSP and remain sustainable (Section 3 Groundwater Conditions).

Increased and new data collection is improving the understanding of the groundwater conditions. Before SGMA, water level monitoring for many wells was only during the seasonal low in the spring. As described in Section 7, the CMA GSA intends to change the groundwater elevation related SMC to rely on seasonal low data once a sufficient period of record (expected to be ten years) of data are available. This will address DWR's RCA No. 4 and will demonstrate progress towards a more

complete seasonal understanding of groundwater levels. As of this evaluation, the period of record for seasonal low groundwater levels is still short (i.e., does not include at least one El Niño–Southern Oscillation [“ENSO”] cycle).

Other new tools such as California Groundwater Live¹ have not significantly changed the understanding of groundwater conditions. The Reported Dry Wells system indicates that there were no reported dry wells from 2014 to 2024,² including the 2015 and 2016 drought years (see Section 3.1 for CMA GSA drought definition). The lack of any dry well reports indicates certain beneficial uses have not been adversely affected by climate issues or changes in water use. The CMA GSA will continue to use this tool to check for any impacts to beneficial users.

The Central Coast Water Quality Control Basin Plan considered in 2022 CMA GSP was the 2019 Basin Plan. This has since been updated to the 2024 Basin Plan which is now in effect (see Section 2.1.3.) In the 2024 Basin Plan, the beneficial uses and users of water were also the same as the 2019 Basin Plan. In general, the updated 2024 Basin Plan maintained the same water quality standards. The difference is new limits to surface water nitrogen compounds. The GC section of the 2022 GSP relied on the Basin Plan primarily for designations of beneficial uses, and those did not change.

The CMA GSA has not specifically identified new constituents of concern or emerging contaminants. In 2021, the U.S. Environmental Protection Agency (“EPA”) identified the class of per- and polyfluoroalkyl substances (“PFAS”) as general emerging contaminants of concern. There are concerns due to persistence in the environment and potential health risks. Currently, the CMA GSA does not have specific indicators of PFAS presence. The understanding of the Basin setting would be improved by a sampling study to characterize PFAS throughout the CMA GSA.

New information regarding the GC related to interconnected surface water is now available following the 2023 and 2024 spills from Cachuma Reservoir. WY 2023 was the first time Cachuma Reservoir

¹ California Department of Water Resources. California's Groundwater Live. <https://sgma.water.ca.gov/CalGWLlive/> Accessed 2025-10-29.

² California Department of Water Resources. Dry Well Reporting System. <https://mydrywell.water.ca.gov/> Accessed 2025-10-30.

spilled since 2011. The totals spilled from Cachuma were 344,900 and 206,170 acre-feet for WYs 2023 and 2024, respectively. The above normal/wet hydrologic conditions in WYs 2023 and 2024 also triggered higher year-round releases from Cachuma Reservoir to support endangered steelhead per WR 2019-0148. These higher releases, referred to as Table 2 flow targets in WR 2019-0148, occurred for the first time since the issuance of the new SWRCB WR 2019-0148. WR 2019-0148 was covered in the 2022 GSP. However, the increased year-round releases from Cachuma Reservoir were not implemented until 2023 and 2024. These historic spills and releases from Cachuma Reservoir under SWRCB WR 2019-0148 and two consecutive wet years have resulted in perennial surface flow from the reservoir to the Pacific Ocean, unprecedented since the reservoir was completed in 1952. As discussed in the 2022 GSP, the above-ground surface flows are typically minimal for significant periods during most years throughout the Santa Ynez River in the CMA.

New information has improved and will continue to improve the understanding of groundwater-dependent ecosystems (“GDEs”). Field verification of potential GDEs was conducted in WY 2025. A report summarizing the field assessment will be available in WY 2026.

5.4 Water Budget

The CMA GSA Water Budget (“WB”) is substantially the same as described in the 2022 CMA GSP Section 2C. As of this evaluation, the understanding of the basin setting has not changed due to the WB. However, there is new, additive information about this evaluation period that results from the passage of time since the publication of the 2022 GSP. The two key differences in the water budget parameters compared to the 2022 GSP are that groundwater pumping has been reduced, and that WY 2023 and WY 2024 were wet, causing Cachuma Reservoir to spill for the first time since 2011 (see Section 3.1).

In addition, this section addresses DWR’s RCA No. 3, which is summarized as “3. Evaluating methodologies and terminology in the water budgets for better consistency across the three management areas.” (DWR, p. 2, 2024)

5.4.1 Water Budget RCA – Water Budget Coordination and Consistency

As previously mentioned, the CMA is one of three management areas of the DWR defined Santa Ynez River Valley Groundwater Basin (see Section 1.1). In the 2022 GSPs, each GSA reported a water budget limited to their respective management area boundaries. In RCA No.3, DWR asked the three GSAs to jointly prepare a basin-wide document about the water budget for the Basin. **Appendix 5-B** presents the requested joint information and analysis in detail, and a summary is provided here.

The three GSAs coordinated and collaborated in developing their water budgets. This coordination was an extensive effort, as mentioned in the GSPs, although the 2022 GSPs did not document it in detail. The three GSAs used the same time period, methods, terminology, and definitions. **Table 5-2** shows consistency with using the same 1982-2018 period for sustainable yield calculations.

*Table 5-2:
Water Budget Analysis Periods Used by the WMA GSA, CMA GSA, and EMA GSA in the WMA GSP, CMA GSP, and EMA GSP*

Management Area	Analysis Period	Sustainable Yield	Page Location in GSP
EMA	1982-2018	12,870 AFY	3-146 of the EMA GSP
CMA	1982-2018	2,800 AFY	2c-55 of the CMA GSP
WMA	1982-2018	26,400 AFY	ES-7 of the WMA GSP

Note: EMA GSP rounded to nearest 10 acre-feet per year, CMA GSP rounded to nearest 100 afy, and WMA GSP rounded to nearest 500 afy. The WMA GSP pg. 2c-58 states, "This water budget analysis indicates that the perennial yield of the basin is approximately 26,000 to 27,000 AFY."

The DWR 2024 GSP Assessment Staff Report states that, "Additionally, Department staff note that the WMA [GSP] used the years 2002-2011 to calculate its sustainable yield while CMA [GSP] and EMA [GSP] used 1982-2018. This demonstrates a lack of coordination and consistency in preparing water budgets and sustainable yield estimates for the Basin." However, this is not an accurate assessment, as the same period - 1982-2018 - was used by all three GSPs. To clarify, the period 2002-2011 in the WMA GSP was only used as an additional verification analysis. The WMA GSA Periodic Evaluation discusses this point in greater detail.

Each of the three GSPs also used the same methodology to estimate sustainable yield,¹ namely, determining the amount of groundwater pumping that would result in zero change in groundwater in storage over a long-term period. This was a conservative assumption because SGMA does not require zero storage loss, only an avoidance of undesirable (significant and unreasonable) results for the sustainability indicators. Because the groundwater conditions for the sustainability indicators in the 2022 GSPs indicate no undesirable results under current conditions with groundwater pumping exceeding the perennial yields, an argument could have been made in the GSPs that the sustainable yield for each GSA is higher than the perennial yield analysis presented there. However, due to data gaps and potential unknown effects of declining water levels in the principal aquifer beyond current conditions, the sustainable yield was conservatively estimated assuming no long-term change in storage.

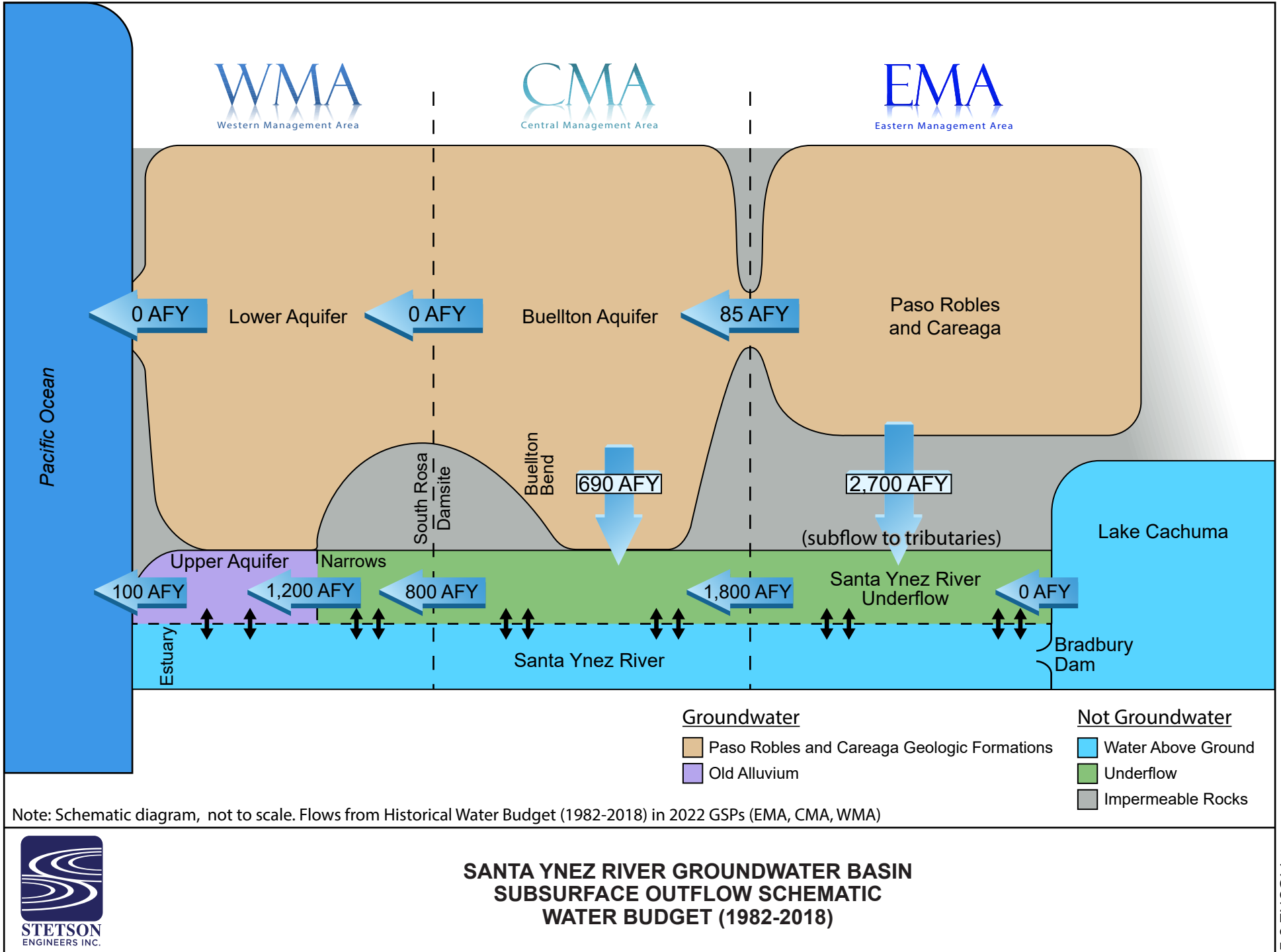
Each GSP also estimated the same components of the water budget for each management area, which included:

- Santa Ynez River and tributaries
- State Water Project imports
- Wastewater Treatment Plant return flows
- Recharge from precipitation
- Percolation of streamflow
- Groundwater pumping (agriculture, municipal, and domestic)
- Riparian vegetation evapotranspiration
- Return flows from irrigation
- Return flows for septic tanks
- Subsurface inflows and outflows
- Change in storage.

¹ CWC Section 10721(w): “Sustainable yield’ means the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus, that can be withdrawn annually from a groundwater supply without causing an undesirable result.”

The three GSAs coordinated inflows and outflows between the three management areas. Outflows from one management area become inflows to the next. The connection between these areas is that the EMA flows to the CMA, and the CMA flows to the WMA. For example, tracking the surface water flows for the period 1982 through 2018: the EMA GSP states the surface water outflow from the EMA to the CMA is 85,700 afy (EMA GSP pg. 3-137); the CMA GSP states that the surface water inflow from the EMA to the CMA is 85,720 afy (CMA GSP pg. 2c-33) and the surface water outflow from the CMA to the WMA is 91,320 afy (CMA GSP pg. 2c-34); and the WMA GSP states that the surface water inflow from the CMA to the WMA is 91,320 afy (WMA GSP pg. 2c-34) and the surface water outflow to the Pacific Ocean is 89,190 afy (WMA GSP pg. 2c-34). The DWR review of the 2022 GSP states, “When comparing surface water outflows from the EMA with inflows to WMA, Department staff noted that surface water increased by approximately 6,000 AFY.” However, this assessment appears to have missed the CMA GSP and the CMA water budget.

Similar to the surface water flows, the Basin GSAs coordinated the subsurface outflows between each management area. **Figure 5-1** is a conceptual diagram showing subsurface outflows in the EMA, CMA, and WMA, with the water budget numbers from the 2022 GSPs. Note that the surface water system includes a subsurface component in the underflow of the Santa Ynez River alluvium between Cachuma Reservoir and the Lompoc Narrows (see Appendix 5-A and Section 5.1.1).



5.4.2 Water Budget Assessment of the Evaluation Cycle (WY 2015 - WY 2024)

This section evaluates changes in the CMA's groundwater flows and storage from 2015 to 2024, including the six years after the 2022 GSP (2019-2024). It compares recent water conditions to historical, current, and future estimates from the 2022 GSP.

The amount of water that comes into the Basin through precipitation is critical to the flow of water. Crop and land use decisions are, in part, driven by water availability. The Groundwater Conditions section (see Section 3.2) evaluated conditions through 2024. This found that WY 2024 and WY 2023 are some of the wettest years on record in the CMA. Consequently, the water budget for this evaluation period may include greater than average inflows. The surface water supply for the CMA has also become more reliable under SWRCB 2019-0148 because Cachuma Reservoir has had to make larger year-round releases starting in 2023 for fishery (steelhead) purposes. Wet years also typically mean less groundwater demand, as precipitation meets more of the crop's irrigation needs.

Table 5-3 compares the average annual flows of Salsipuedes Creek for four periods in the CMA GSP (GSP historical 1982-2018; GSP current 2011-2018; post-SGMA 2015-2024; and post-2022 GSP 2019-2024). The GSP Historical and Post-SGMA periods are relatively similar to the expected long-term averages. While the GSP Current period and Post-2022 GSP periods are dramatically dry and wet, respectively, neither are representative of long-term hydrologic conditions.

Table 5-3:
Average Annual Salsipuedes Creek Flow (USGS ID 11132500)

	GSP Historical 1982-2018	GSP Current 2011-2018	Post-SGMA Current 2015-2024	Post-2022 GSP 2019-2024
Total	8,700	3,400	8,400	12,300

Note: Values in Acre-feet per Year

The primary human use of water in CMA GSA is for agriculture. Land use and cropping patterns are constantly changing. Snapshot crop and land use updates based on LandIQ data are described in Section 2.2. The land use has not changed much from 2016 to 2023. There has been a slight drop in the amount of land being watered for agriculture: from 3,100 acres in 2018 to 3,080 acres in 2023. This decline reduces outflows from the Basin as less water is pumped and, to a lesser extent, reduces inflows in the form of return flows, since less applied irrigation water percolates back into the aquifer.

A secondary human use of water in the CMA GSA is municipal and domestic use for the population. As described in Section 2.2, the populations served by the major water suppliers have grown. The largest municipal water supplier, the City of Buellton, had a population growth of 6.8% over the decade between 2010 and 2020.

Each water use contributes to the volume of groundwater production. Pursuant to the Water Conservation District Law of 1931, all water producers within SYRWCD are required to report their production of groundwater (defined by said Law to include both production of groundwater, as defined by SGMA, and production of water from the river alluvium) to SYRWCD. SYRWCD is a CMA GSA member agency and shares this production information with the CMA GSA for the SGMA annual reports and for CMA GSA Groundwater Management Fee calculations. **Table 5-4** compares actual groundwater production WY 2015 – WY 2024 with historical and projected demands. This shows that groundwater production relatively stable, similar to the historical period, but below the future projections in the 2022 GSP.

*Table 5-4:
Average Annual Groundwater Pumping in the CMA for Selected Periods*

	Historical 1982-2018	Current 2015-2024	Projected Demand 2042	Projected Demand 2072
Total	2,760	2,800	3,198	3,328

Note: Values in Acre-feet per Year

Table 5-5 summarizes the key water budget information presented in the annual reports regarding groundwater pumping and change in storage for the period 2015-2024. The average groundwater pumping for this period was about 2,800 AFY, which is about 800 AFY less than the 3,600 AFY average pumping identified as the “current” pumping in the 2022 GSP based on 2011-2018. This reduced pumping, combined with the historical wet years of 2023 and 2024, has produced a net gain in annual storage change of +560 AFY, compared with -1,380 AFY in the 2022 GSP.

There is a difference between how the change of groundwater in storage has been estimated in the annual reports and how the water budget was estimated in the 2022 GSP. The difference relates to the distinct statutory/legal requirements for the annual report and the GSP and the availability of a nodal monitoring network. For the annual reports, the method for estimating change of groundwater in storage needs to be presented on a map¹ and show annual and cumulative changes in storage since 2015². The Thiessen Polygon Method (Dunne and Leopold, 1978) was chosen to estimate annual changes in groundwater storage within the CMA for the CMA GSA’s Annual Reports. The Thiessen Polygon method provides a weighted average of changes in groundwater storage based on observed groundwater levels. The water budget method was chosen in the 2022 GSP to estimate historical changes in storage to meet the statutory requirements listed in § 354.18. Water Budget.

Table 5-6 summarizes these two approaches along with other methodologies. All of the methods differ somewhat in the estimates of changes of groundwater in storage. For example, the SYRWCD Annual Report method uses boundaries that do not coincide with the principal aquifer boundaries developed in the GSP, which is why DWR staff noted differences in groundwater storage change between the CMA GSP’s groundwater conditions section (2b.2) and the CMA GSP’s water budget section (2c). The advantage of the Thiessen Polygon Method for estimating changes in groundwater storage is that it is based on actual observed water-level measurements, coincides exactly with the principal aquifer boundary, relies less on assumptions than other methodologies, and can be more consistently employed.

¹ 23 CCR § 356.2(b)(5)(A) Change in groundwater in storage maps for each principal aquifer in the basin.

² 23 CCR § 356.2(b)(5)(B) A graph depicting water year type, groundwater use, the annual change in groundwater in storage, and the cumulative change in groundwater in storage for the basin based on historical data to the greatest extent available, including from January 1, 2015, to the current reporting year.

Table 5-5:
Water Use and Change in Storage for CMA from CMA GSA Annual Reports (2015-2024)

Water Year	Total Groundwater Pumping	Total Surface Water Pumping (River Well Pumping)	Total Imports	Total Water Use	Total Change in Groundwater Storage	
					Annual	Cumulative
	Acre-Feet per Year	Acre-Feet per Year	Acre-Feet per Year	Acre-Feet per Year	Acre-Feet per Year	Acre-feet
2015	4,310	4,420	0	8,730	-300	0
2016	3,740	4,460	80	8,280	1,200	1,200
2017	3,410	4,900	290	8,600	-400	800
2018	2,720	5,230	220	8,170	2,400	3,200
2019	2,940	4,940	270	8,150	1,500	4,700
2020	1,850	5,040	360	7,250	1,300	6,000
2021	1,710	4,460	200	6,370	-200	5,800
2022	2,340	4,520	80	6,940	-1,100	4,700
2023	2,350	3,990	180	6,520	200	4,900
2024	2,550	4,360	280	7,190	1,000	5,900
GSP Historical Average (1982 to 2018)	2,760	3,415	230	6,405	0	-
GSP 2022 Current Average (2011 to 2018)	3,560	3,810	230	7,600	-1,380	-
Post SGMA Average (2015 to 2024)	2,790	4,630	200	7,620	560	-
Post GSP Average (2019 to 2024)	2,290	4,550	230	7,070	450	-

Years are color-coded based on water year type analysis from WY 2024 Annual Report.

Table 5-6:
Alternative Methods of Calculating Change of Groundwater in Storage

Method Description	GSP Location	Required Inputs	Advantages	Issues for Use in SGMA Annual Report
SYRWCD Annual Report Method	Hydrogeologic Conceptual Model, Groundwater Conditions (Section 2b.2)	Change In Groundwater Levels, USBR Storage Calculations	Rapid: March and April data, April Report Simple inputs Long term consistency	Cannot generate map easily.
Water Budget	Water Budget (Section 2c)	Inflow and Outflow Components	Integrates many data sets, making it less likely that one measurement will adversely affect the results.	Cannot generate map. Inputs not available quickly More Complex. Many fluxes not measured.
Calibrated MODFLOW Model	Appendix 2c-1	Inflow and Outflow Components, Spatially Distributed	Integrates many data sets, making it less likely that one measurement will adversely affect the results.	Inputs not available quickly Most Complex. Many fluxes not measured.
Change in Groundwater Contours	Not in GSP	Groundwater Contours	Contours already being developed for the annual report	Contours include more complex considerations. Requires GIS calculations every year. Potential errors linked to assumptions in drawing contours.
Thiessen Polygon Method	Not in GSP	Representative Well Nodal Map	Rapid and Simple inputs Long-term consistency	This method chosen for annual reports. Potential errors linked to errors in groundwater level measurements and are currently based on spring water levels.

The potential drawback of using the Thiessen polygon method is that an inaccurate water-level reading can skew the estimate for that year. However, incorrect water level readings are typically self-correcting over time. Also, as described in more detail in Section 7 on SMCs, the plan is for the entire Basin to switch SMCs based on seasonal low-flow data after 10 years of data collection, and at that time, the change in storage will be based on fall water levels, including annual changes of fall storage since 2015.

The perennial yield is an estimate of the annual amount of groundwater that can be used without causing long-term depletion. This is the simple long-term annual average of pumping plus change of

storage. Based on the storage reported in the CMA GSA Annual Reports, the average change of storage is an increase of 560 AFY (see Table 5-5). Including the pumping over the period estimates perennial yield of 3,360 AFY and 2,760 AFY for the historical and post-SGMA period, respectively (see **Table 5-7**). Both periods are similar hydrologically (see Table 5-3; post-SGMA slightly less than the historical period's hydrologic condition) and are similar to long-term averages. Both estimates indicate perennial yields that differ by approximately 20%. The period 2015-2024 indicates that recharge and associated yield might be slightly higher than what was presented in the 2022 GSP.

Table 5-7:
Average Annual Perennial Yield in the CMA

	Historical 1982-2018	Current 2015-2024
Total	2,760	3,360

Note: Values in Acre-feet per Year

The sustainable yield is the maximum quantity of water that can be withdrawn annually over a long-term period without causing undesirable results. The CMA GSA portion of the Basin is currently sustainable (see Groundwater Conditions, Section 3), which means that the sustainable yield could exceed the perennial yield. However, given that important data gaps, such as surface water outflow measurements and additional groundwater level monitoring wells, are still being addressed, it is recommended to continue using the perennial estimate of 2,800 AFY for the CMA GSA as the sustainable yield.

As a whole, the CMA GSA is not currently experiencing conditions of overdraft. Many of the projects and management actions outlined in Section 4 (Projects and Management Actions) are designed to respond to potential overdraft conditions. These measures are intended to ensure long-term sustainability through adaptive management.

5.4.3 Water Budget RCA – Releases from Lake Cachuma and Additional Water Budget Questions from DWR

Part of DWR’s RCA No. 3 is a request for information about surface water upstream of the groundwater Basin that “explain[s] how releases from Lake Cachuma are managed to effectively regulate the surface water and groundwater system through each of the three management areas” (DWR, 2024, p. 74). **Appendix 5-C** presents the requested joint information and analysis regarding surface water.

This watershed review shows that most of the precipitation occurs above Lake Cachuma. Upstream diversion operations, including Lake Cachuma, result in a loss of about a third of the Santa Ynez River flows. The total river flows are significantly reduced due to these reservoirs and upstream diversions. To avoid impacts to downstream water rights and underground water supplies including groundwater and surface water in the alluvial aquifer, downstream releases from Cachuma Reservoir are required and currently governed by SWRCB WR Order 2019-0148. Releases are administered for the protection of downstream water rights and supplies and endangered steelhead (*O. mykiss*).

Decreased surface water supply reliability due to reduced releases relative to SWRCB WR Order 2019-0148 would likely lead to greater use of groundwater in the Buellton Aquifer and the potential for overdraft. It is important to note that the operations of the SWRCB WR 2019-0148 occur independently of the GSAs actions and authorities. While Appendix 5-B and Appendix 5-C discuss the surface water-groundwater connection in further detail, **Table 5-8** and **Figure 5-2** summarize the factors affecting streamflow in the SYRVGB.

Table 5-8:
Example of Water Budget Factors that Affect Streamflow in SYRVGB

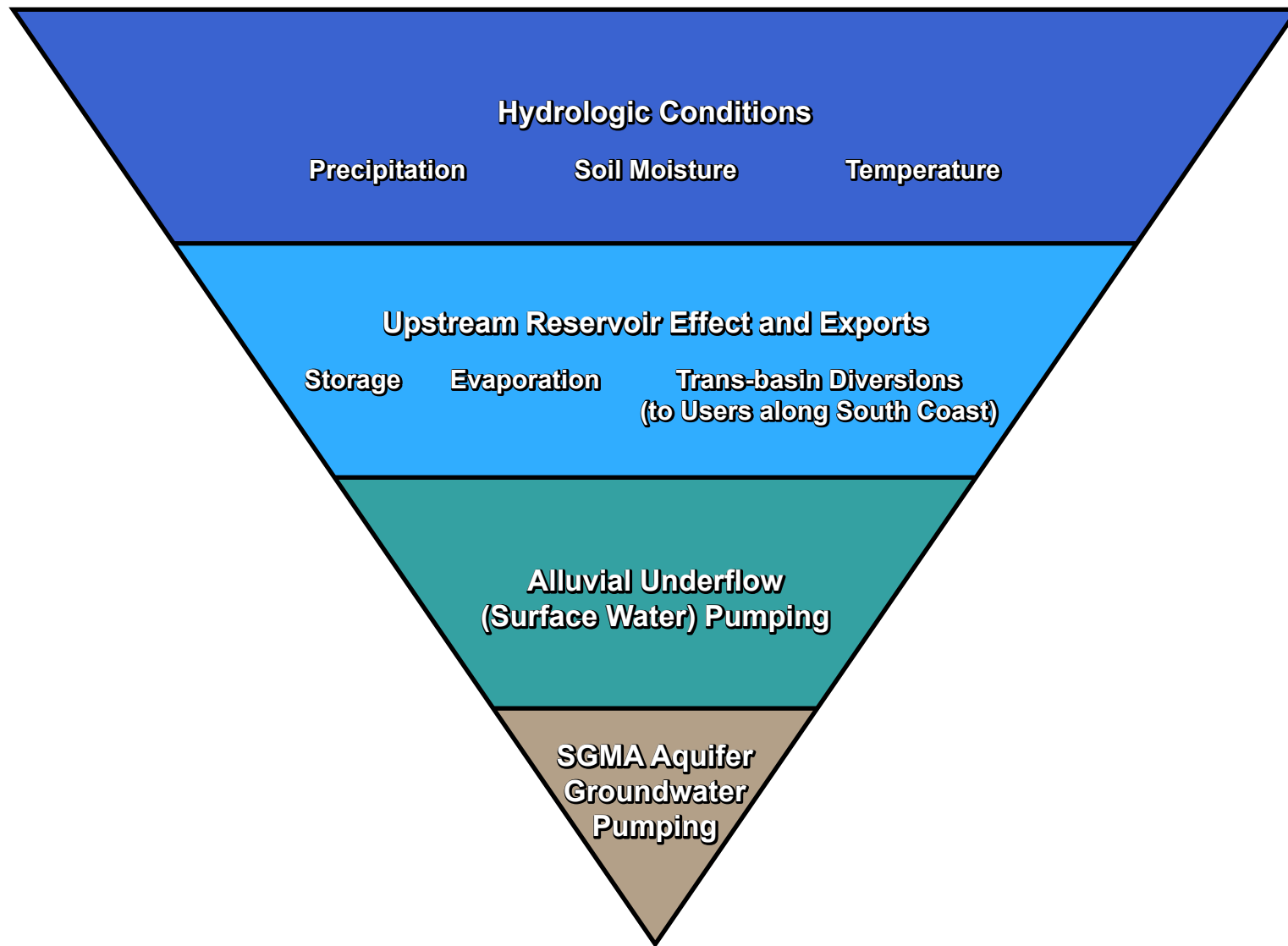
Factor	Reservoir	Amount (acre-feet/year)
Upstream Reservoir Effect: Storage Maximum	Jameson	4,587
	Gibraltar	4,490
	Cachuma	192,978
Upstream Reservoir Effect: Lake Evaporation	Jameson	1,000
	Gibraltar	1,700
	Cachuma	11,000
Upstream Reservoir Effect: Trans-basin Diversions	Jameson	2,000
	Gibraltar	4,580
	Cachuma	25,714
Alluvial Underflow (Surface Water) Pumping		13,000
TOTAL UPSTREAM EFFECT ON SURFACE FLOW (not including storage)		58,994
Estimated Effect on Surface Flows from Groundwater Pumping in CMA GSA		150
Percentage of Total Upstream Effect		0.3%

Notes:

Blue fill indicates upstream reservoir effect.

Blue-green indicates alluvial underflow (surface water) pumping.

Brown fill indicates the estimated CMA GSA groundwater pumping effect on surface flows.



5.5 Model Updates

This section describes recent updates to the Groundwater Flow Model since the 2022 GSP and the plan to complete the model by the next periodic evaluation (no later than year 2032). One of the primary uses of the groundwater model will be to estimate whether there is any depletion of interdependent surface waters from pumping of groundwater. The data gap of measured surface water outflows is currently being addressed by the establishment of a new surface water gage (Section 6.6). Because this important issue of streamflow depletions is best addressed by a groundwater model calibrated to the data currently being collected, only a qualitative description of the model updates will be provided in this periodic evaluation. A more detailed and quantitative description of the model updates will be provided after the model is calibrated to the new stream outflow data and used to establish new SMCs for surface water depletions (see Section 7, Table 7-4). In addition to the new streamflow data, a new online groundwater production reporting and well registration system by the SYRWCD and a groundwater meter policy by the GSAs are expected to improve groundwater production data, which will also be incorporated into the updated groundwater model.

A significant step forward in model development came from incorporating new data collected during the airborne electromagnetic (“AEM”) survey conducted by the Ramboll Group under the direction of the WMA GSA, CMA GSA, and the Santa Barbara County Water Agency, an EMA GSA Member Agency, for the EMA GSA. This survey, completed in May 2022, provided detailed information on the subsurface resistivity structure within the top 1,000 feet. Using these results, Geosyntec Consultants refined the Basin’s geological model, and Stetson Engineers updated the elevations of several layers (Layers 6, 7, and 8) within the unstructured-grid MODFLOW model. These updates improved the model’s representation of groundwater and surface water movement across the WMA and CMA. Stetson also worked on updating the model to reduce the MODFLOW budget discrepancy percentage errors, developed a zone budget analysis, and fine-tuned hydraulic conductivities, storage coefficients, and streambed elevations throughout the model.

The integration of AEM data and other new information demonstrates clear progress in the technical foundation of the basin model. Each update represents meaningful progress toward developing a more accurate and reliable tool for managing groundwater resources. These refinements enhance the model's accuracy, improve the reliability of water budget estimates, and will assist in planning for additional projections and management actions. Together, these efforts reflect ongoing progress in achieving the GSA's long-term groundwater sustainability goals. Model calibration will be finalized by incorporating the new streamflow monitoring and well production data. The model updates will then be presented in the next periodic evaluation, once finalized for estimating streamflow depletion.

5.6 Status of Data Gaps

Throughout the GSP, the CMA GSA identified data gaps that existed. The CMA GSA has worked to address the following data gaps between January 2022 and June 2026: review and incorporate data from AEM survey to improve HCM, update 2022 GSP monitoring network as needed, secure locations, and drill a new groundwater level observation well, review different groundwater use and well registration reporting methodologies, perform a field verification study of GDEs, and locate and develop a new streamflow station measuring outflows from the CMA GSA. A summary of the status of data gaps is provided in **Table 5-9**.

The 2022 CMA GSP identifies the need for video logging and sounding, and for additional surveying of representative wells with unknown depths, screens, or precise location. These surveys are planned to be completed by EKI Environment & Water and the CMA GSA.

One of the main data gaps identified is related to the hydrogeologic information in the Buellton Upland Area and the Buellton Aquifer. Lack of well and water level data in the Buellton Upland somewhat limited the ability to characterize the groundwater level and water movement in the 2022 CMA GSP. The primary way to address this data gap is through more groundwater level data. This additional data stems from the registration of existing wells and related drilling information, as well as from new wells. New wells have been added as indicated in Section 2.2.1, and new monitoring

locations have been added as indicated in Section 2.1.2. The well registration program is currently active, recently expanded online by the SYRWCD,¹ and continues to register existing and new wells.

Another aspect of the Buellton Aquifer with a data gap is the connection between the aquifer and the Santa Ynez River Alluvium. The GSP identifies that the extent of any connection and the number of wells pumping from which aquifer are data gaps. The extent of any connection is addressed through the installation of a piezometer and through the evaluation of the AEM survey. The AEM survey and evaluation of the results are complete. The results were incorporated into the groundwater model to estimate the extent of any connection through an estimate of Interconnected Surface Water (“ISW”) depletions, as the DWR guidance document suggests. The CMA GSA has not installed, but is in the process of installing, a piezometer for the purpose of characterizing the Buellton Aquifer and Santa Ynez River Alluvium connection.

The lack of a well or a stream gage near the distal end of Santa Rosa Creek limited the ability to characterize any groundwater-surface water connection and the GDEs. The recommended correction is to install a piezometer. The CMA GSA is currently working with Geosyntec Consultants to plan and install the piezometer by January 2027.

Another data gap is the surface water outflow of the CMA. The CMA GSA has acquired access rights and is working with EKI Environment & Water to install a stream gage at the border of the WMA and CMA on the Santa Ynez River.

For water quality, the GSP recognizes two data gaps: a lack of information and historical trends of some water quality parameters in the monitoring network and the relationship between pumping and water quality. To correct the data gap of historical records, the plan suggests gathering well construction reports.

¹ SYRWCD Groundwater Production Reporting and Well Registration Website <https://syrwcd-report.com/> (Accessed 2026-08-17) Went live to the public on July 1, 2026, with the first reporting period using this portal due on July 31, 2026.

A data gap identified in both the WMA GSA and CMA GSA GSPs concerns the extent and nature of a potential barrier between the Santa Rita Upland and the Buellton Upland. Based on groundwater levels available at the GSP, the difference indicated a potential barrier that warrants confirmation by the AEM survey and additional hydrogeologic data. AEM data was suggested for use to address this data gap. However, the AEM data did not provide conclusive information relevant to this barrier. It is recommended that the CMA GSA collect additional water-level data in this area to more precisely determine the barrier location and to conduct aquifer tests to assess the barrier to water flow.

Table 5-9:
Summary of Data Gaps noted in Original GSP and Status of Data Gap

Relevant Section	General Data Gap	Specific Data Gap	Location of Data Gap in GSP	Suggested Correction per GSP	Status of Data Gap
Hydrogeologic Conceptual Model	Hydrogeologic Information of the Buellton Upland area/Buellton Aquifer	The lack of well and water level information over time has led to a data gap about details and changes in groundwater movement in the Buellton Upland, especially in the Careaga and Paso Robles formations.	2a.2-2 Buellton Aquifer in the Buellton Upland Subarea	More groundwater level data. More wells near Buellton Upland.	In progress
		Not enough groundwater level data for the Buellton Aquifer to create contour maps, so groundwater level data is identified as a data gap in the HCM for the CMA GSA	2b.1-2 Groundwater Elevation Contour Maps		
		An exact mapping of these discontinuous lenses and the boundary between the coarser Careaga Graciosa Member (upper unit) and less permeable Careaga Cebada Member is identified as a potential data gap.	2a.5-1 Geologic Model of Buellton Aquifer in the Buellton Upland Subarea	AEM Survey, more wells.	
Water Budget	Connection of Buellton Aquifer and Santa Ynez River Alluvium	The extent of the Buellton Aquifer underneath the underflow deposits east of the Buellton Bend, and the quantity and timing of water flowing from the Buellton Aquifer to the underflow deposits of the Santa Ynez River and indirectly to the surface flow is a data gap.	2b.6-2 Interconnected Surface Water for the Santa Ynez River	Install piezometer.	In progress
Hydrogeologic Conceptual Model		The extent of the Buellton Aquifer underlying Santa Ynez River Alluvium, and exact number of wells pumping from which aquifer, in the Santa Ynez River Alluvium subarea is also a data gap.	3b.1-2 Buellton Aquifer Data Gaps	Identify criteria to determine which aquifer is being pumped based on the current aerial geophysical study recently surveyed in November 2020 and aquifer properties described in the HCM.	Concluded

Relevant Section	General Data Gap	Specific Data Gap	Location of Data Gap in GSP	Suggested Correction per GSP	Status of Data Gap
Interconnected Surface Water	-	The lack of well data or a stream gage at this location (distal end of Santa Rosa Creek) limits the GSA ability to evaluate current conditions related to the groundwater-surface water connection and the associated GDEs in this area.	2b.6-4 Groundwater Dependent Ecosystems in the CMA	Install piezometer.	In progress
Interconnected Surface Water		Surface water outflow [of the CMA].	3a.2-6 Surface Water Monitoring	New stream gage.	In progress
Monitoring Network	-	Data gaps exist on the well construction information for the representative monitoring wells.	3a.3-1-2 Groundwater Levels Data Gaps	Video logs and sounding of representative wells.	In progress
Water Quality	-	Information and historical trends of some [water] constituents.	3b Sustainability Goal	Gather well construction reports.	In progress
Water Quality	-	The relationship between pumping and water quality is a data gap.	3b.2-4 Degradation of Water Quality – Undesirable Results	N/A	N/A
Hydrogeologic Conceptual Model	Potential Barrier to Groundwater Flow	A difference in groundwater levels indicates a potential hydrogeologic barrier to groundwater movement between the Santa Rita Upland and Buellton Upland. The extent and nature of this barrier is a data gap.	3b.6 Effects of Sustainable Management Criteria on Neighboring Basins	AEM Survey	Complete, inconclusive

5.6.1 Data Gaps and Uncertainty

The CMA GSA evaluated whether identified data gaps and uncertainties materially affect the determination of groundwater sustainability.

Key uncertainties include:

- Limited period of record for monitoring data, especially the period of record for fall water level data.
- Incomplete groundwater quality constituent coverage.
- Some uncertainty in groundwater–surface water interaction.
- Lack of direct measurement of surface water outflows.
- Limited well construction information, especially with older wells.

These uncertainties could affect the precision of certain evaluations. These limitations mean that evaluations that would rely on these data would be less certain than if these data gaps did not exist. However, the CMA GSA finds that available data are sufficient to detect significant and unreasonable impacts;

- No qualitative or quantitative evidence indicates that undesirable results are occurring; and
- Conservative assumptions used in the GSP provide a margin of operational flexibility.

Therefore, data gaps do not materially affect the CMA GSA's current determination that the Basin is sustainable at this time. Efforts are ongoing to reduce these uncertainties.

SECTION 6: Monitoring Networks

This section includes a “*description of the monitoring network[s] within the basin*”¹ for the CMA GSA, and an evaluation and assessment for improvement of the monitoring networks.² This section includes whether wells are still “viable”. Viable indicates whether the well should be a part of the representative monitoring network moving forward. This section also identifies data gaps and outlines future actions to improve the monitoring network.

Table 6-1 summarizes the evaluation of the monitoring networks.

¹ 23 CCR § 356.4 (e) A description of the monitoring network within the basin, including whether data gaps exist, or any areas within the basin are represented by data that does not satisfy the requirements [...].

² 23 CCR § 354.38. Assessment and Improvement of Monitoring Network

Table 6-1:
Summary of Evaluation of Monitoring Networks

Groundwater Sustainability Indicator	Monitoring Network at 2022 GSP Adoption	Monitoring Network Changes	Data Gaps	Potential Improvements
 Groundwater Level Monitoring	4 RMWs	3 New Wells Added (two to be drilled and one existing).	Survey and well logs.	Finish integrating three new wells. Add additional existing wells.
 Groundwater Storage	4 RMWs (Thiessen Polygon Storage Method)	3 New Wells Added. (same as above).	Survey and well logs.	Finish integrating three new wells. Add additional existing wells.
 Seawater Intrusion	Not Applicable / Inland Management Area	No Changes / Not Applicable	No Gaps / Not Applicable	No Improvements / Not Applicable
 Groundwater Quality Monitoring	7 Monitoring sites.	4 wells no longer viable. 6 new wells added.	Survey and well logs. Relationship between groundwater pumping and groundwater quality.	Add additional wells from outside programs as needed.
		Operation of ILRP.		
 Land Subsidence	InSAR and CGPS	None	-	-
 Interconnected Surface Water	3 RMW and USGS gage	New Stream Gage. New study on assessment of groundwater dependent ecosystems.	Streamflow outflow. Groundwater-surface-water tributary flow connection. Well surveys.	Finish integrating new stream gage and piezometer.
		2 wells no longer viable. 2 new wells added.		Finish integrating two new wells.
		New Shallow Well Piezometer added on Santa Rosa Creek.		Complete calibration of groundwater model to estimate effect of pumping on streamflow.

Note: RMW = Representative Monitoring Well, ILRP = Irrigated Lands Regulatory Program, WQ = Water quality, InSAR = Interferometric Synthetic Aperture Radar, CGPS= continuous global positioning system, USGS = United States Geological Survey

6.1 Groundwater Levels



Groundwater level monitoring is relatively straightforward measurements of water levels in particular wells. The wells need to be selected and spaced such that they characterize the groundwater aquifer, and sufficient information needs to be collected about each well to ensure that the data collection is repeatable and meets the data collection standards. The SGMA regulations identify that the groundwater level monitoring network shall have the following properties:

“Demonstrate groundwater occurrence, flow directions, and hydraulic gradients between principal aquifers and surface water features by the following methods:

- (A) A sufficient density of monitoring wells to collect representative measurements through depth-discrete perforated intervals to characterize the groundwater table or potentiometric surface for each principal aquifer.
- (B) Static groundwater elevation measurements shall be collected at least two times per year, to represent seasonal low and seasonal high groundwater conditions”¹

DWR guidance additionally requests that the Periodic Evaluation “[a]ssess the functionality of the water level monitoring network and whether any existing GSP monitoring network locations are no longer viable.”² A viable well for monitoring groundwater levels is a well where consistent semi-annual measurements in both the seasonal high in the spring and seasonal low in the fall can be collected.

The 2022 GSP identified four RMWs for groundwater levels. As discussed in Section 4, the CMA GSA also worked extensively to keep an existing well in the representative monitoring network for water levels, Well 6N/31W - 7F1 (the Polo well), after it was designated for destruction for a new housing project. All of these RMWs are being used to collect data consistent with SGMA requirements. However, all these wells needed improved location accuracy or video logging to identify the

¹ 23 CCR § 354.34(c)(1) Chronic Lowering of Groundwater Levels.

² DWR (2023). Groundwater Sustainability Plan Implementation: A Guide to Annual Reports, Periodic Evaluations, & Plan Amendments. Page 25

perforation intervals (**Table 6-2**). Conducting the surveying and video logging was identified as a data gap and a GSP implementation project. Some of the survey and video logging was completed as expected but is in progress; see Section 4.1 for a discussion of project progress.

In terms of monitoring network coverage, the 2022 GSP identified that while these wells meet the density requirement, data would be improved with additional wells. The CMA GSA conducted outreach to landowners and has begun the process of drilling two new monitoring wells. See Section 4 (Projects and Management Actions) for a discussion of the implementation project progress. As of July 2026, the Hager Well (ID 2106), an existing well identified in the GSP and completed in the Buellton Aquifer, is recommended for inclusion as a new Representative Monitoring Well (RMW) for the Buellton Aquifer, and is now part of the county-wide biannual water level monitoring program. In addition, two new wells, one deep well and one shallow well (piezometer), have been designed for the western portion of the Buellton Aquifer for water level monitoring by the CMA GSA and put out for bid (with construction scheduled to be completed in the first quarter of 2027).

Through fall 2024, water levels have been collected at all RMW for every period. Thus, all of the RMW originally identified in the GSP are still viable for use in monitoring groundwater levels. **Table 6-2** includes whether the RMW identified in the GSP is viable.

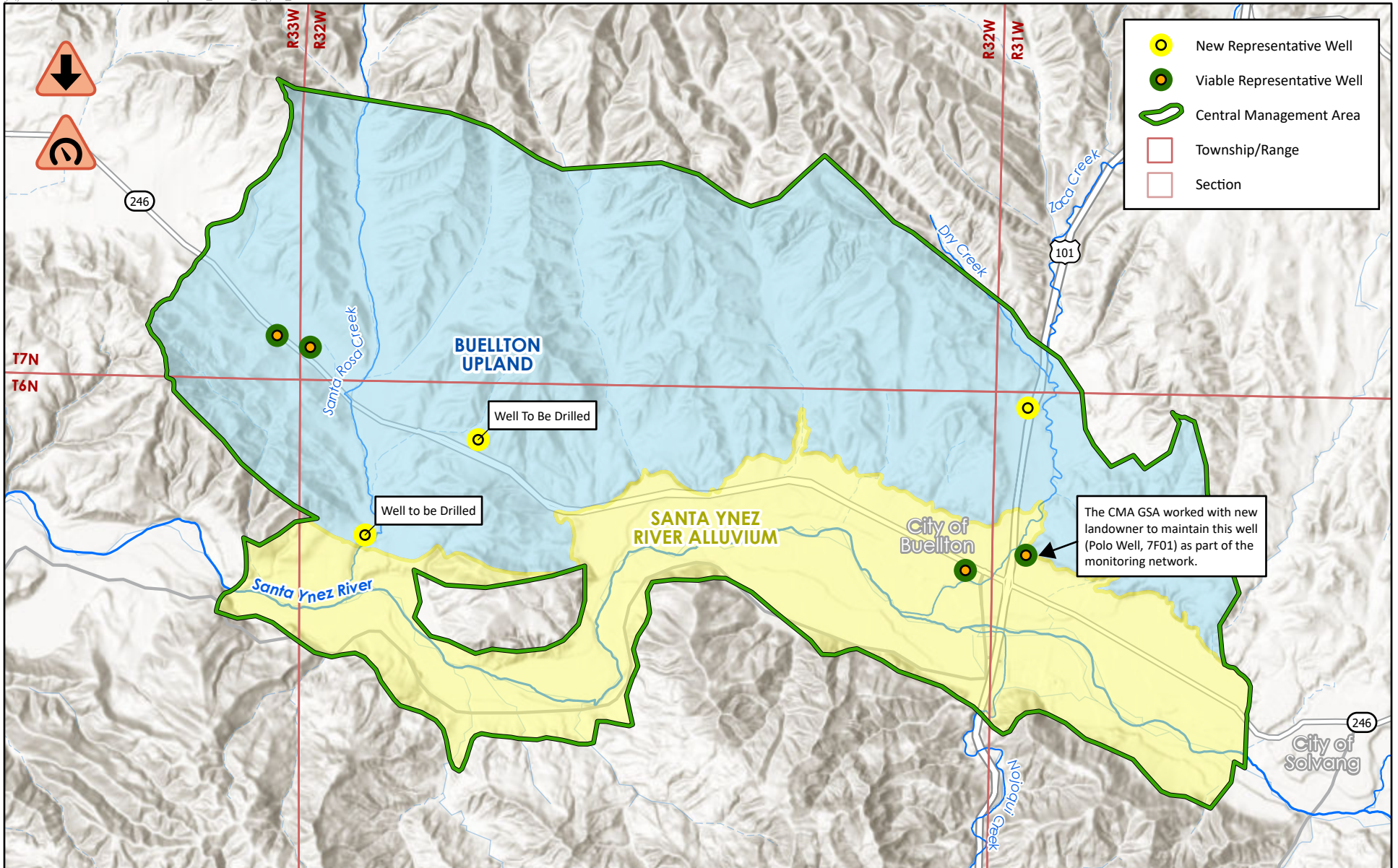
*Table 6-2:
Status of Representative Monitoring Wells for Groundwater Levels and Groundwater Storage Presented in 2022 GSP*

ID	Name	Survey Needed?	Complete?	Video Log Needed?	Complete?	Viable RMW?
82	7N/33W-36J1	No	-	Yes	No	Yes
75	7N/32W-31M1	Yes	No	Yes	No	Yes
909	6N/32W-12K1, 12K2	Yes (K2)	No	No	-	Yes
90	6N/31W-7F1	No	-	Yes	No	Yes, see text discussion.

The CMA GSA conducted substantial work to ensure well 6N/31W-7F1 remained a viable monitoring well. The well has a long history of groundwater level measurement which is valuable in monitoring

efforts. The property that the well is located on was sold, and the developer was going to abandon and destroy the well before CMA GSA intervention. The CMA GSA through a well access agreement and related work secured rights to use well 6N/31W-7F1 as a monitoring well.

In terms of evaluating monitoring network coverage, the CMA GSA believes that the addition of new wells to the monitoring network coverage from the 2022 GSP will improve the network. The new wells being added to the program will improve the monitoring density and the reliability in characterizing the aquifer. The new wells will need to be surveyed and video logged. The new RMWs are expected to have groundwater levels incorporated into the WY 2026 Annual Report. **Figure 6-1** is a map showing the updated groundwater monitoring for the CMA GSA.



UPDATED CMA MONITORING AND REPRESENTATIVE MONITORING WELLS FOR GROUNDWATER LEVELS AND GROUNDWATER STORAGE

0 0.5 1
Miles



6.2 Groundwater Storage



Change in groundwater in storage is the change in volume of water that is stored in the groundwater aquifer. Unlike water levels in a particular well, the storage over an area cannot directly be measured. The SGMA regulations provide limited requirements on the method of storage calculation, other than it should be done for each year.¹ There are multiple approaches for calculating the change in groundwater in storage. The following equations all represent the change in storage, and address it either in terms of water flow, cumulative storage change, or overall volume change:

$$\Delta \text{Storage} = \sum_{k=0}^n (\Delta \text{Time}_n \times \text{Flow}_n) = \text{Volume}_n - \text{Volume}_0 = \sum_{k=0}^n ([\text{End } WL_n - \text{Start } WL_n] \times Sy_n \times \text{Area}_n)$$

The first SGMA Annual Report identified that the specific method for SGMA annual reporting had not been identified in the CMA GSP. That report reviewed different methods used in the basin and in the GSP (analysis table reproduced as **Table 6-3**) for suitability for annual SGMA reporting.

Table 6-3:
Alternative Methods of Calculating Change of Groundwater in Storage Considered

Method Description	GSP Location	Required Inputs	Advantages	Issues for Use in SGMA Annual Report
District Annual Report Method	Hydrogeologic Conceptual Model, Groundwater Conditions (Section 2b.2)	Change In Groundwater Levels, USBR Storage Calculations	Rapid: March and April data, April Report Simple inputs Long term consistency	Cannot generate map easily.
Water Budget	Water Budget (Section 2c)	Inflow and Outflow Components	Integrates many data sets, less likely for one measurement to adversely affect results.	Cannot generate map. Inputs not available quickly More Complex

¹ 23 CCR § 356.34(c)(2) Reduction of Groundwater Storage. Provide an estimate of the change in annual groundwater in storage.

Method Description	GSP Location	Required Inputs	Advantages	Issues for Use in SGMA Annual Report
Calibrated MODFLOW Model	Appendix 2c-1	Inflow and Outflow Components, Spatially Distributed	Integrates many data sets, less likely for one measurement to adversely affect results.	Inputs not available quickly Most Complex
Change in Groundwater Contours	Not in GSP	Groundwater Contours	Contours already developed for Annual Report	Contours include more complex considerations. Requires GIS calculations every year.

Note: Table adopted from First SGMA Annual Report.

As described in the first Annual Report, the method for estimating change in groundwater storage needs to be presented on a map¹ and show annual and cumulative storage changes since 2015.² The Thiessen Polygon Method (Dunne and Leopold, 1978) was used to estimate annual groundwater storage change within the CMA based on observed change in seasonal high groundwater levels at representative well locations. The Thiessen Polygon method provides a weighted average of changes in groundwater storage based on annual observed groundwater levels. Each well is assigned to represent the area that is physically closest to it.

This selected method has the advantage of being simple to calculate and explain how the results are directly derived from specific measurements, and it can be used to produce the required map. However, there can be complications when wells are added or removed from the network. This approach for assessing storage ties the actual measurements made to inform change in storage to the representative monitoring wells used as part of the water level monitoring network.

The annual change in storage was selected as seasonal high to seasonal high. This period was selected in coordination with other GSAs in the SYRVGB. This is due to the period of record, which allows for the GSA to compare and evaluate the results against other methods for estimating change in storage. A potential change to this monitoring that has been considered is moving to using the

¹ 23 CCR § 356.2(b)(5)(A) Change in groundwater in storage maps for each principal aquifer in the basin.

² 23 CCR § 356.2(b)(5)(B) A graph depicting water year type, groundwater use, the annual change in groundwater in storage, and the cumulative change in groundwater in storage for the basin based on historical data to the greatest extent available, including from January 1, 2015, to the current reporting year.

change in seasonal low water levels rather than the change in the seasonal high. A change to the assessment period used for annual change in storage would require additional effort in coordination with the other GSAs in the SYRVGB.

Until the new wells have long enough historical periods, they will not be integrated into the groundwater storage monitoring. When the wells used in the storage calculations are changed, for efficiency and clarity, it is recommended that they be added and removed in groups and as infrequently as possible.

6.3 Seawater Intrusion



The CMA GSA is an inland management area of the Basin and is greater than 20 river miles¹ above the Pacific Ocean. Therefore, seawater intrusion is not an applicable sustainability indicator for the sustainable management of the CMA GSA, and the CMA GSP did not set specific targets within the CMA. For the SYRVGB, the WMA GSA addresses the seawater intrusion sustainability indicator, which includes a portion of the coast. As the CMA GSA continues to be an inland area, the CMA GSA continues to not set a monitoring network for seawater intrusion within the CMA.

6.4 Degraded Groundwater Quality



The SGMA regulations identify that water quality monitoring should be set up to characterize specific water quality indicators:

“Collect sufficient spatial and temporal data from each applicable principal aquifer to determine groundwater quality trends for water quality indicators, as determined by the Agency, to address known water quality issues.”²

¹ River miles are distance that water flows along the river which accounts for the bends and meanders of the river.

² 23 CCR § 354.34(c)(4) Degraded Water Quality

The CMA GSP identified the following five water quality constituents as indicator constituents for water quality:

- Salinity – Total Dissolved Solids (TDS)
- Chloride
- Sulfate
- Sodium
- Nitrate

The CMA GSP identifies that groundwater quality data is collected as part of the Public Water System Reporting (“PWSR”) in the Safe Drinking Water Information System (“SDWIS”) and as part of the California Irrigated Lands Regulatory Program (“ILRP”). There are seven groundwater quality RMWs from these two programs. The ILRP wells comprise six out of the seven wells (see **Table 6-4**). The RMWs are used to evaluate how the groundwater quality conditions compare to the groundwater quality SMCs for five constituents of concern (salinity as TDS, chloride, sulfate, sodium, and nitrate as N). However, due to the ILRP’s deviation from the expected operation, the CMA GSA recommends the following revision to the RMW network and inclusion of wells identified as monitoring wells but not originally RMWs.

The ILRP operations have deviated from the expectations set in the GSP in two ways that affect the ability for the wells to continue being RMWs. The CMA GSP noted that the ILRP would report annually or biannually for the wells identified.¹ However, since the GSP submittal in 2022, only two out of the six ILRP RMWs reported annual data. Furthermore, in email communication about groundwater quality with the ILRP, it was noted that:

“Sampling for [the Irrigated Lands Regulatory] program only covers the following parameters: Nitrate-Nitrite, TDS, pH, Specific Conductance, 1, 2, 3-TCP (For some wells) and Temperature.”

¹ Table 3a.2-3 Summary of Existing CMA Groundwater Quality Monitoring Networks Spring 2015 through Spring 2021. (CMA GSP page 3a.-15)

Table 6-4:
Status of Representative Monitoring Wells for Water Quality Presented in 2022 GSP

ID	Well Name	State ID	Program	Years with Data (since 2022)	Parameters measured	Viable?
909	Buellton Well 09	6N/32W-12K1, 12K2	City of Buellton (PWSR/SDWIS)	2023,2024,2025	TDS, CL-, SO ₄ ,Na, N	Yes
3337	AGL020014946	7N/32W-35	ILRP	-	TDS, N-N	No
3220	AGL020036041	6N/32W - 7	ILRP	-	TDS, N-N	No
3173	AGL020021622	7N/33W-36	ILRP	2022,2023,2024	TDS, N-N	Yes
3137	AGL020001355	7N/32W-31	ILRP	2022,2023,2024	TDS, N-N	Yes
3076	AGL020008330	6N/32W-3	ILRP	-	TDS, N-N	No
3139	AGL020028450	6N/31W-8	ILRP	-	TDS, N-N	No

Notes:

For the ILRP, the years with data were determined by reviewing data provided by the Irrigated Lands Program in an August 19th, 2025, Public Records Act (PRA) request.

For the PWSR, the years with data were determined by reviewing the DMS. ILRP = California Irrigated Lands Reporting Program, MWC = Mutual Water Company, MH CSD= Mission Hills Community Services District, CSD= Community Services District

TDS = Total Dissolved Solids, CL- = Chloride, SO₄= Sulfate, Na = Sodium, N = Nitrate as N, N-N = Nitrate-Nitrite.

Grey highlight indicates well is no longer viable.

Thus, only two out of the five constituents with measurable objectives are measured by the ILRP (TDS and Nitrogen levels). While consistent data for the six RMWs from the ILRP originally met the need to evaluate the measurable objectives, the data monitoring frequency and measured constituents can no longer serve as the foundation of the CMA GSA's groundwater quality RMWs. The RMWs' status is summarized in Table 6-4. Viable indicates that the well has consistent annual data for multiple groundwater constituents.

Since the GSP, the annual reports and understanding of groundwater conditions have relied on the limited new ILRP data, the other RMW data, and the average groundwater conditions from 2015-2018 for the ILRP RMWs.¹ The other RMW, City of Buellton Well No. 9 (6N/32W-12K2, preceded by 6N/32W-12K1), provides consistent annual data for all groundwater quality constituents. The well will continue to be a key RMW for the CMA GSA. **Appendix 3-B** provides recent water quality data for the RMWs identified in Table 6-4.

In addition to the wells identified as RMWs, the GSP notes that the current water quality monitoring programs include other ILRP and PWSR wells. It is common for SGMA groundwater basins with GSPs to primarily rely on ILRP well data and SDWIS/PWSR records for their analyses. However, as indicated above, some ILRP wells are no longer viable for the CMA's monitoring network of groundwater quality. **Table 6-5** presents other PWSR and ILRP wells identified as part of the CMA GSA monitoring network that should be added as RMWs. The table also includes additional PWSR wells. **Figure 6-2** is a map showing the updated groundwater monitoring for water quality for the CMA GSA.

¹ Table 3b.2-1 Median Groundwater Quality Objectives (mg/L) and Average 2015-2018 Salt and Nutrient Concentrations (mg/L) in the Buellton Aquifer CMA (CMA GSP 3b.-21)

Table 6-5:

New RMWs Identified as part of the Public Water System Reporting Wells and Irrigated Lands Regulatory Program

ID	Identified in the GSP?	Depth Known?	Name	Parameters measured	Years with Data (since 2022)	Monitoring Frequency	Replacing
3179	Yes	No	AGL020023902	TDS, N	2023, 2024	Annually	AGL020014946
3006	Yes	No	AGL020003347	TDS, N	2023, 2024	Annually	AGL020036041
3252	Yes	No	AGL020003230	TDS, N	2022	Annually	AGL020028450
-	No	No	Brick Barn Estate Winery Well #2 (CA4200970_002_002)	TDS, Cl, SO ₄ , Na, N	2024	Annually	AGL020008330
1401	Yes	No	Bobcat Springs Mutual Partner Well	TDS, Cl, SO ₄ , Na, N	2024*, 2025	Annually	-
1405	Yes	No	Bobcat Springs Mutual Well #5	TDS, Cl, SO ₄ , Na, N	2024*, 2025	Annually	-

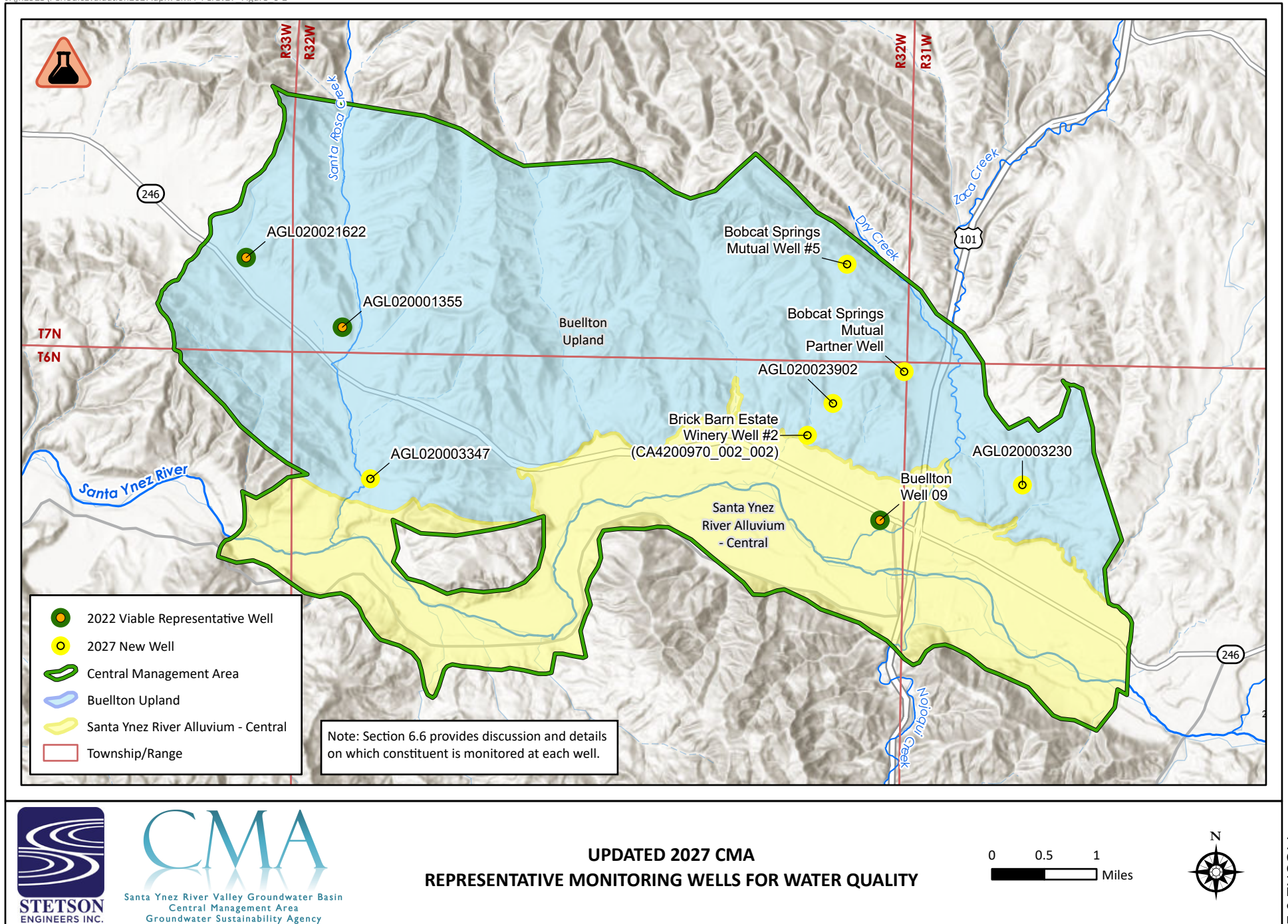


FIGURE 6-2

The monitoring network for water quality set forth in this section is sufficient to characterize trends, evaluate GSP implementation, and assess progress toward achieving sustainability objectives. Please refer to the Existing Monitoring Networks section in the 2022 GSP for other water quality programs. Additional wells will be added from the existing monitoring network to the CMA water quality representative monitoring network as needed. There is the possibility of using the newly drilled well and newly integrated wells into the water quality monitoring network administered by the Santa Barbara County.

6.5 Land Subsidence (Aquifer Compaction)



Land subsidence (aquifer compaction) is the vertical decrease in aquifer-system thickness.¹ Of primary concern for SGMA is aquifer compaction due to the groundwater withdrawals.² The GSP evaluated the geology of the CMA aquifer and the historical range of groundwater levels to determine that aquifer compaction was not occurring or likely to occur in the future, and that groundwater withdrawal being a causal factor was unlikely in the CMA.

Aquifer compaction typically will result in changes to the land surface elevation. However, land surface elevation changes may be caused by other mechanisms including surface erosion, tectonic movement, and agricultural practices. In the CMA there are two monitoring networks that evaluate land surface elevation: remote sensing area data from Interferometric Synthetic Aperture Radar (“InSAR”) and point data from continuous global positioning system (“CGPS”).

Since there is ongoing land surface elevation monitoring, and aquifer compaction was unlikely to occur, the CMA GSA determined that direct measurement of land subsidence through borehole extensometers was unnecessary. Both methods of monitoring the land surface elevation have continued operating during this evaluation period.

The InSAR maps show the elevation change of the ground over a wide area between two points in time. Land subsidence monitoring has been conducted recently (since 2015) for the CMA using remote sensing InSAR data which tracks vertical elevation changes to an accuracy of approximately 0.71 inches³ (Towill 2023). TRE ALTAMIRA Inc. under contract with the DWR produces this data. They use satellite radar imagery acquired by the Sentinel mission, which is part of the European Radar Observatory for the Copernicus joint initiative of the European Commission and the European Space

¹ See Land Subsidence Fundamentals in DWR (2025) DRAFT Land Subsidence. Best Management Practices of the Sustainable Management of Groundwater. 108 pg.

² See Land Subsidence Fundamentals in DWR (2025) DRAFT Land Subsidence. Best Management Practices of the Sustainable Management of Groundwater. 108 pg.

³ Reported as 18 mm (0.71 inches) vertical accuracy at 95% confidence level in Towill (2023). Towill (2023) InSAR Data Accuracy for California Groundwater basins CGPS Data Comparative Analysis January 2015 to October 2022. Final Report. Towill, Inc. California Department of Water Resources. Contract 4600013876 TO#1. 131 pg. SYWATER 528.

Agency (“ESA”) and comprises two satellites that share the same orbit, with each satellite acquiring data along swathes known as tracks, in the C-band wavelength (5.9 cm), and with a 5x20 meter ground resolution.¹ These data are used to evaluate and estimate monthly and annual land surface elevation changes since data collection was initiated in 2015.

CGPS collects very high-resolution three-dimensional movement of a sensor over time. The BUEG station, located near the City of Buellton, is a CGPS station that has been in operation since January 2015.

A potential threat to both current monitoring programs is recent changes in US federal policy. Both current monitoring programs for Land Subsidence rely on infrastructure outside of the control of the CMA GSA and subject to federal policy decisions. The InSAR data is sourced from the ESA, which being European-based is unlikely to be affected by US federal funding issues that may affect US-based space missions; however, this may mean that it may be subject to international trade issues. The CGPS data is collected by the USGS and relies on the US-based global position system (“GPS”) satellite system. The USGS is a federal agency which has had significant staffing and funding cuts. The GPS system is also a critical US national security asset. Currently the CMA GSA expects the continuation of both monitoring programs.

The current monitoring is adequate to assess if significant aquifer compaction is occurring. The monitoring network could be improved to directly measure aquifer compaction, but this is a very low priority, given the geological setting.

¹ Towill (2025) InSAR Land Surveying and Mapping Services to DWR supporting SGMA. April 2025 Update Technical Report. Towill, Inc. California Department of Water Resources.

6.6 Depletions of Interconnected Surface Water Monitoring



The depletions of interconnected surface water is a complicated sustainability indicator.

Competing definitions of the terms “surface water” and “groundwater” occur as these terms are defined for specific reasons that may not apply to the SGMA context.¹ Along the Santa Ynez River, recognized surface water diversions are conducted through shallow alluvium wells. These diverters are recognized as surface water users and are required to register with the SWRCB. In addition, as producers of groundwater as that term is broadly defined by Water Conservation District Law of 1931 (CWC, § 75502 [“...all water beneath the earth’s surface, ...”]), they must also register wells (and any other production facilities) and report their production to SYRWCD.²

As with some of the other SGMA indicators, the depletions of interconnected surface water cannot be easily or directly measured. The depletions must be derived from either measurable values or a series of calculations.

6.6.1 Indicator Assessment of Interconnected Surface Water

The GSP identified that a series of wells near the Santa Ynez River would reasonably account for subsurface water head conditions near the Santa Ynez River. Conditions at these wells would therefore be good indicators for adverse water conditions that could affect streamflow; the wells could be assessed with indicator criteria like those used for groundwater levels. These wells report fairly consistent monthly levels. Similar to the survey and video log data gap for groundwater levels,

¹ CWC Section 10721(g): “‘Groundwater’ means water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water, but does not include water that flows in known and definite channels.” Compare to the Water Conservation District Law of 1931, : CWC Section 75502: “ ‘Ground water’ means all water beneath the earth’s surface, but does not include water which is produced with oil in the production of oil and gas, or in a bona fide mining operation, or during construction operations, or from gravity or artesian springs.”

² CWA Section 75641: “Any person who produces water from any water-producing facility required to be registered pursuant to Chapter 2 (commencing with Section 75540) of this part is guilty of a misdemeanor unless such facility has been registered with the district within the time required by Chapter 2 and, if required by the board, has a water-measuring device affixed thereto capable of registering the accumulated amount of water produced therefrom. Each day of operation in violation of this section shall constitute a separate offense.”

there remains a data gap in the land surface elevation, depth and screen interval of these wells. This gap is planned to be addressed and filled through surveying and video logging of these wells.

These indicator wells for potential depletions of interconnected surface water are summarized in **Table 6-6**.

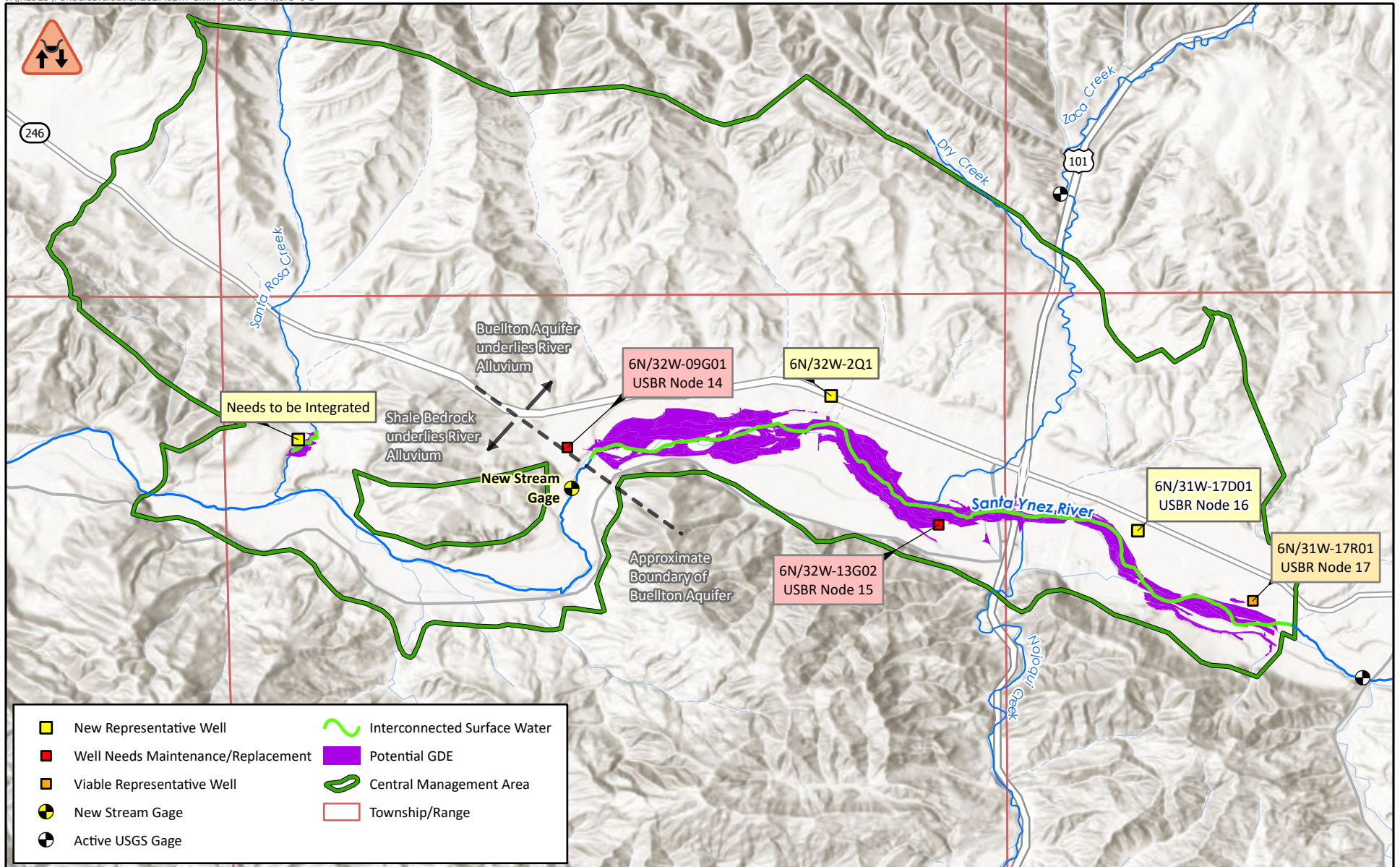
*Table 6-6:
Status of Representative Monitoring Wells for Surface Water Depletions Presented in 2022 GSP*

ID	Name	Unknown Elevation, Depth or Screen Interval?	Survey Completed?	Viable?
1120	6N/32W – 9G1	Yes	No	Yes, see text discussion.
1115	6N/32W – 13G2	Yes	No	No; see text discussion
1111	6N/32W – 17R1	Yes	No	Yes

The following wells did not have water level data for every seasonal low and seasonal high period:

- Well 6N/32W-13G2 (DBID 1115, Site Code 346051N1202013W001)
 - No water level measurement since 2024.
 - This well needs to be replaced. The CMA GSA is in the initial stages of replacing the well.
- Well 6N/32W-9G1 (DBID 1120, Site Code 346153N1202501W001)
 - Missing spring 2024 measurement.
 - This well did not report for spring 2024 but is expected to resume spring and fall measurements.

The CMA GSA is working to install a new shallow well (piezometer) along the distal end of Santa Rosa Creek (see **Figure 6-3**). This new well will improve the ability of the CMA GSA to evaluate the potential for groundwater-surface water connection and potential impacts of pumping on GDEs. The new well



UPDATED CMA GSA MONITORING NETWORK AND REPRESENTATIVE MONITORING FOR GROUNDWATER DEPENDENT ECOSYSTEMS (GDE) AND INTERCONNECTED SURFACE WATER

0 0.5 1 Miles



will be located in the potential GDE area along Santa Rosa Creek, as identified in the GSP.¹ This is near the intersection of Mail Road and Santos Road.

With the new shallow well, there will continue to be at least three viable RMWs. Additionally, two wells are added to the system of representative wells to help support coverage due to lack of data from Well 6N/32W-9G1 and 6N/32W-13G2. **Table 6-7** lists the three new wells, including the well to be drilled along Santa Rosa Creek.

*Table 6-7:
New Representative Monitoring Wells for Surface Water Depletions*

ID	Name	Unknown Elevation, Depth or Screen Interval?	Survey Completed?
91	6N/32W-2Q1	No	Yes
1113	6N/31W-17D01 USBR Node 16	Yes	No
New Well along Santa Rosa creek		Well to be drilled	

The Surface Water Depletion monitoring also includes the upstream USGS stream gage (USGS ID 11128500). This gage is still viable, providing consistent stream flow data. The new stream gage on the Santa Ynez River near the CMA/WMA boundary will be integrated into this existing network (see Figure 6-3). Other surface water monitoring is discussed below.

The monitoring network's data was incorporated into the groundwater model, which can be used to update the estimate of any ISW depletions due to groundwater pumping. As the model is developed, it might be useful to expand the ISW monitoring to confirm the model results. However, water levels and surface water monitoring in the existing network should be used as the primary indicator of actual impacts rather than model results.

¹ CMA GSP Figure 2b.6-4

6.6.2 Surface Water Monitoring

The SGMA regulations identify that monitoring should be set up to characterize and address some specific surface water components:

“Monitor surface water and groundwater, where interconnected surface water conditions exist, to characterize the spatial and temporal exchanges between surface water and groundwater, and to calibrate and apply the tools and methods necessary to calculate depletions of surface water caused by groundwater extractions. The monitoring network shall be able to characterize the following:

- (A) Flow conditions including surface water discharge, surface water head, and baseflow contribution.
- (B) Identifying the approximate date and location where ephemeral or intermittent flowing streams and rivers cease to flow, if applicable.
- (C) Temporal change in conditions due to variations in stream discharge and regional groundwater extraction.
- (D) Other factors that may be necessary to identify adverse impacts on beneficial uses of the surface water.”¹

Currently the monitoring of the surface water system is not sufficient to fully characterize these aspects of the surface water system. Flow conditions throughout the entire CMA are substantially but not fully characterized. As part of the GSP implementation, the CMA GSA is working to install a stream gage near CMA/WMA boundary along the Santa Ynez River (see Figure 6-3). The stream gage is closer to the edge of the Buellton Aquifer than the CMA/WMA boundary due to limitations in obtaining land access. However, the stream gage should still largely accomplish the goal of measuring the Santa Ynez River after it flows through the portion of the CMA most connected with the Buellton Aquifer.

¹ 23 CCR § 354.34(c)(6)

Also, as mentioned above, a new shallow well along Santa Rosa Creek will help characterize the ephemeral creek. See Figure 6-3 for the new stream gage and the new shallow well (new representative monitoring well). This new monitoring data will be used to finish calibration of the MODFLOW model, which can then be used to estimate the depletion of surface flows due to groundwater pumping.

6.7 Summary

The monitoring network for groundwater levels, groundwater storage, and land subsidence remains largely unchanged. While some data gaps are filled, there are remaining data gaps, like surveys of representative monitoring wells, that are recommended to be completed as soon as possible. The current monitoring largely meets the target of monitoring for undesirable results for key sustainability indicators in the Basin. The CMA GSA has taken steps to improve the monitoring network, including plans to conduct surveys and logging of existing wells, installing a new well and piezometer, installing a new stream gage, and working to integrate the new wells and gages.

The CMA GSA evaluated whether the monitoring network is sufficient to support groundwater management. The updated monitoring network is sufficient to:

- Track groundwater levels and storage changes;
- Track degradation of groundwater quality due potentially to groundwater pumping or GSA projects and management actions;
- Evaluate land subsidence using regional datasets;
- Identify potential undesirable results at a basin-wide scale.

However, the updated monitoring network is not yet fully sufficient to:

- Quantify whether there is any depletion of interconnected surface water due to groundwater pumping with high confidence;
- Eliminate all spatial and temporal data gaps.

The CMA GSA finds that the updated monitoring network is adequate to support the current determination of sustainability. However, additional monitoring improvements are needed to address identified data gaps. Planned improvements include finishing new monitoring wells, well surveys, and surface water monitoring. Continued monitoring improvements are necessary to support refinement of the GSP and long-term groundwater management decisions.

The primary monitoring networks that need improvement is the determination of the depletion of surface flow component of the interconnected surface water monitoring. While historical data and the monitoring identified in the GSP indicate that these networks are tied to low-risk sustainability indicators, the CMA GSA will work diligently to fill these new gaps.

The following actions should be the priority of the CMA GSA:

1. Finish integrating new wells (including shallow piezometer) and new stream gage into the monitoring network.
2. Integrate new wells and identify additional wells to add to the water level and water quality monitoring program. This potentially includes work to integrate new Public Water System wells.

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SECTION 7: Undesirable Results and Sustainable Management Criteria

This section evaluates and updates the Undesirable Results and Sustainable Management Criteria (SMC) from the GSP in the context of new data and new guidance from DWR. Some RCAs provided by DWR requested to reevaluate and update the Undesirable Results and SMCs. DWR published significant new guidance during the evaluation period (see Section 1.3). In this evaluation, the CMA also considers public comments on the finalized 2022 GSP (see Section 9.3.2) and new information (Section 2, New Information Collected). The evaluation also considers the sustainability goal:

“to manage groundwater resources in the WMA, CMA and EMA for the purpose of facilitating long-term beneficial uses of groundwater within the Basin. Beneficial uses of groundwater in the Basin include municipal, domestic, and agricultural and environmental supply. The sustainability goal is in part defined by the locally defined minimum thresholds and undesirable results.”¹

There are several key terms: An Undesirable Result occurs when groundwater problems become significant basin-wide and cause significant and unreasonable harm to beneficial uses and users. The SMCs are the rules and goals to avoid the Undesirable Result. SMCs include Minimum Thresholds (“MT”), which define the point at which conditions become unacceptable at an individual monitoring site. SMCs also include Measurable Objectives (“MO”), which are goals to track progress. The setting of Undesirable Results and SMCs occurs through a public process. The public brings diverse viewpoints and perspectives. **Table 7-1** summarizes the reasons for reevaluation of Undesirable Results or SMCs for each sustainability indicator.

¹ Same phrasing in 2022 WMA GSP, Section 3B.1 Sustainability Goal and 2022 CMA GSP, Section 3B.1 Sustainability Goal. 2022 EMA GSP, Section 5-4 phrased it as “to sustainably manage the groundwater resources in the Western, Central, and Eastern Management Areas to ensure that the Basin is operated within its sustainable yield for the protection of reasonable and beneficial uses and users of groundwater. The absence of undesirable results, as defined by SGMA and the Groundwater Sustainability Plans (GSPs), will indicate that the sustainability goal has been achieved.”

Table 7-1:
Summary of Updates to Undesirable Results or SMCs

Sustainability Indicators		RCAs Relative to SMC or UR		Significant New Information		Other	
		RCA # or No	If yes, Summary	Yes or No	If yes, Summary	Yes or No	If yes, Summary
	Chronic lowering of groundwater levels	4	Reevaluate to include drought conditions, reevaluate using seasonal low groundwater levels, use (new) well impact analysis	Yes	Monitoring started for seasonal low groundwater data	No	-
	Reduction of groundwater storage	No	-	No	-	No	-
	Seawater intrusion	-	-	-	-	-	-
	Degraded water quality	5	Re-evaluate to include drought conditions	Yes	Monitoring network reduced from anticipated	No	-
	Land subsidence	6	Re-evaluate, clarify and quantify undesirable results	No	-	Yes	New draft guidance on land subsidence.
	Depletion of interconnected surface water	7	Reevaluate to include drought conditions and using seasonal low groundwater levels; and re-evaluate using a model to estimate the rate, timing, and volume of depletions and effect on beneficial uses	Yes	Collection of surface water outflow measurements-in progress	Yes	New draft guidance on interconnected surface water.

Notes: Other includes any other assessed reasons for reviewing the undesirable results or sustainable management criteria, including public comments received after the publication of the GSP (see Section 9.3) or other reasons.

Seawater intrusion is gray as it is an indicator that applies only to the WMA GSA and does not directly apply to the CMA GSA.

7.1 Lowering of Groundwater Levels



DWR (RCA#4) requests that the Undesirable Results and SMCs be reconsidered to be based on the seasonal low groundwater levels under the conditions of drought.¹ As part of SGMA implementation, the CMA GSA has begun collecting low seasonal groundwater levels. This demonstrates progress towards developing a seasonal low data set sufficient to use this for the management indicator.

7.1.1 Historical Rationale

The CMA GSA set SMCs and Undesirable Results using the best available historical data that was available at the time of the GSP. The CMA GSA completed a well impact analysis, which was included in the GSP, and considered in the setting of the URs and SMCs. The SGMA statute includes the following drought exclusion in the definition of groundwater level undesirable results: “Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels [if] storage during a period of drought are offset by [...] other periods ”² The SGMA regulations require that SMCs include a “reasonable margin of operational flexibility [...] such as [...] periods of drought.”³ Drought was defined locally based on empirical data, and the well impact analysis used typical hydrology, and not drought conditions, as the baseline for considering undesirable results.

Historical groundwater level monitoring was only during the spring seasonal high for most wells. The driving force behind most historical groundwater data collection was the County of Santa Barbara

¹ The 2022 WMA GSP defined drought as two or more consecutive years that are classified as Dry or Critically Dry as drought years. With Dry or Critically Dry year defined as flows below the 40th percentile at the USGS stream gage Salsipuedes Creek Near Lompoc (USGS number 11132500). No drought years have occurred since the 2022 GSP. 17% of the years of the 83-year historical record (WY1942-WY2015) were drought years, with the last drought year occurring in WY2016.

² CWC Section 10721(x)(1). Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon. Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels if extractions and groundwater recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods.

³ 23 CCR § 354.30.(c) Measurable objectives shall provide a reasonable margin of operational flexibility under adverse conditions which shall take into consideration components such as historical water budgets, seasonal and long-term trends, and periods of drought, and be commensurate with levels of uncertainty.

and the SYRWCD. Starting in 1979 and every year thereafter, SYRWCD has published an annual engineering investigation and report pursuant to CWC Section 75560, et seq. The CMA GSA evaluated this data for the period 1982-2018 as sufficient to characterize “normal” hydrology and to have available pumping and water level data.

The CMA GSA considered DWR's publications about historical droughts.¹ This indicated that not all historical drought conditions are represented in the CMA GSA's data. Relatively recent² droughts that are missing include the late 1970s, the 1920s, and the Great Drought of 1862-64. More severe historical conditions, such as 1580, the driest year in the projected record, are also not included. The CMA GSA recognized that water levels under droughts are a result primarily of climate and the significantly reduced water supply. Drought conditions are transient events generally outside of the CMA GSA's ability to provide relief. The CMA GSA has some ability to change the water demand by reducing limiting groundwater extractions, but not the climate generally. As such, the CMA GSA set up the description of Undesirable Results and SMCs to exclude these types of events consistent with the SGMA statutory definition of undesirable results (CWC, § 10721(x)(1)).

Undesirable results were developed through a public process for non-drought conditions. This included a well impact analysis (used a baseline of no impact) to understand what level of water level decline from human activity was undesirable. This was used to set minimum threshold, measurable objectives, and interim milestones.

7.1.2 New Information

As a result of SGMA and the formation of the CMA GSA, groundwater level monitoring for seasonal low conditions has begun in the CMA. Continuing to collect seasonal low data is progress towards

¹ California Department of Water Resources (2015) California's Most Significant Droughts: Comparing Historical and Recent Conditions. 136 pg.

² From a geological perspective, an ideal period of record for this would be the entire upper subdivision of the Holocene epoch, the Meghalayan age, which started about 4,200 years ago.

developing the needed seasonal low data set. New wells are also being added to the groundwater monitoring network to fill identified data gaps.

Work has continued updating and improving the Groundwater Flow Model (Section 5.5). This represents progress towards a more reliable tool. Once it is more reliable and calibrated to measured surface water outflows, it could be used to simulate conditions outside of the period of record - such as those of severe droughts.

7.1.3 Updated Evaluation

The CMA GSA will continue to review this in future period evaluations. The expected result of moving to a seasonal low is a lowering of the SMCs to match current sustainable seasonal low water levels. The CMA GSA will plan to shift to using the seasonal lows once there is at least one cycle of wet and dry conditions. The CMA is in the area affected by the El Niño–Southern Oscillation (ENSO), which typically cycles every 2 to 7 years. The expectation for this changeover is within two cycles of Periodic Evaluation (~10 years).

The review of water conditions (see Section 3, Groundwater Conditions) showed that no years since the GSP publication were drought years.¹ The last year that this drought criterion applies to was 2016, before the GSP was published. Over the 83-year historical record (WY 1942 - WY 2025), drought is identified in less than 17% of the years. Based on this evaluation period, this appears to be an effective approach that is not overly broad in exclusion of years as droughts. See **Table 7-2** for the steps to be followed in resetting the SMCs.

The RCA for groundwater level evaluation (RCA#4) requests a revision to the SMCs to account for situations of drought. The current undesirable results were based on a public process, relative to a “normal baseline” condition, and consistent with the SGMA statutory definition of undesirable results. A revision for drought would need to run the same process relative to a “drought baseline”

¹ Two or more consecutive years with flows at the USGS stream gage Salsipuedes Creek Near Lompoc (USGS number 11132500) below the 40th percentile.

which may already include otherwise unwanted conditions. This drought baseline would need to be developed, probably using model results. The SMCs (MT and MO) would be developed based on these undesirable results. A new public evaluation may result in less restrictive SMCs.

Both of DWR's recommended changes are expected to lower the SMCs and require a public process. To be efficient, it is recommended that this be done at a single evaluation and update. New data collection of seasonal low water levels and improvements to the model indicate that the CMA GSA is making progress towards this in one of the next two periodic evaluation cycles. Waiting to update the SMC and undesirable results for groundwater levels will allow the CMA GSA to use the best available data and plans to meet DWR's recommendation adequately. Table 7-2 shows the current plan to revise the SMCs for groundwater levels.

*Table 7-2:
Steps to Revise Sustainable Management Criteria for Chronic Lowering of Groundwater Levels*

Step	Description of Step	Status
1	Collect data on fall groundwater levels for two cycles of the Periodic Evaluation (10 years) to include wet and dry periods.	In progress
2	Use data to estimate previous years' groundwater levels (at least as far back as 2015 as required in SGMA statute for annual reporting).	Future
3	Determine Minimum Thresholds ("MT") and Measurable Objectives ("MO") through public process.	Future
4	Include new MT and MO in next Periodic Evaluation.	Future

7.1.4 Updated Criteria

The CMA GSA plans to update the undesirable results and SMC in the next periodic evaluation once new data is available. There is no change to the SMC or undesirable results for groundwater levels in this Periodic Evaluation as discussed above.

7.2 Reduction of Groundwater in Storage



There were no RCAs, significant new information, or other material that affected the analysis of the sustainable management criteria for groundwater in storage. As a result, currently, no re-analysis of the groundwater in storage sustainability indicator is necessary.

7.3 Seawater Intrusion



The CMA is an inland management area of the Basin. Seawater intrusion is not an applicable sustainability indicator for the sustainable management of the CMA GSA, consistent with SGMA regulations around undesirable results not present and are not likely to occur,¹ the CMA GSP did not set specific seawater intrusion targets within the CMA. There were no RCAs related to the evaluation of seawater intrusion.

7.4 Degraded Water Quality



DWR, in RCA #5, requested that the undesirable results and SMCs be reconsidered to remove exclusions for conditions of drought.² When it next amends the GSP, the CMA GSA will remove the “non-drought” phrase from their SMCs for water quality. DWR, in RCA#5, also requested a comparison of the undesirable results and SMCs relative to other reference values for each of the water quality constituents and wells. This is lengthy and is presented in **Appendix 7-A**.

¹ 23 CCR § 354.26. An Agency that is able to demonstrate that undesirable results related to one or more sustainability indicators are not present and are not likely to occur in a basin shall not be required to establish criteria for undesirable results related to those sustainability indicators.

² The 2022 CMA GSP defined drought as two or more consecutive years that are classified as Dry or Critically Dry as drought years. With Dry or Critically Dry year defined as flows below the 40th percentile at the USGS stream gage Salsipuedes Creek Near Lompoc (USGS number 11132500). No drought years have occurred since the 2022 GSP. 17% of the years of the 83-year historical record (WY1942-WY2015) were drought years, with the last drought year occurring in WY2016.

7.4.1 Historical Rationale

The CMA GSA set SMCs and undesirable results for water quality based on the effects to beneficial uses and users of water. This included the selection of specific constituents for assessing water quality for these known beneficial uses. The 2022 GSP Appendix 3B-C includes the graphs of historical data.

The 2022 GSP Groundwater Conditions section included a summary of each constituent and concerns for specific beneficial uses. Local, state, and federal water quality standards applicable to the Basin were considered.¹ These standards included the Water Quality Objectives (“WQO”) from the 2020 Central Coast Water Quality Control Plan, 2015 concentrations, and Maximum Contaminant Level (“MCL”), or Secondary Maximum Contaminant Level (“SMCL”). Appendix 7-A provides detailed per-well details on specific water quality SMCs set in the GSP. In most cases, the CMA adopted the WQO.

Water quality was assessed as for typical conditions – drought years were excluded to be consistent with the water level SMCs and other GSAs in the basin.

7.4.2 New Information

As described in the New Information Section (see Section 2.1.3), the Basin Plan was updated in 2024. This included new Total Maximum Daily Loads (“TMDLs”) for nitrogen compounds. This did not directly affect the CMA GSA – as the CMA GSA uses nitrate as one of the indicator criteria.

Another change since the 2022 GSP was that many of the wells identified as groundwater water quality monitoring locations were not monitored as expected (see Section 6.4). Several new wells are added as part of this evaluation.

¹ 23 CCR § 354.28(c)(4) “the Agency shall consider local, state, and federal water quality standards applicable to the basin.”

7.4.3 Updated Evaluation

Water quality monitoring occurs periodically, often on a triennial schedule (see Section 6.4). This data collection frequency is too infrequent to support the distinction between drought and non-drought conditions. In evaluating the data for water quality, the CMA GSA finds that the water quality SMC was set with sufficient operational flexibility¹ to include drought years without significant additional data collection or analysis.

Additionally, the CMA GSP set undesirable results and SMCs based on effects to beneficial uses, which is mostly independent of water availability. During this periodic evaluation period beneficial uses have not changed (see Section 2 discussion of 2024 Basin Plan), and beneficial uses are not expected to change as a result of water availability. The CMA GSA finds that the basis for setting undesirable results and SMCs for degraded water quality is independent of the drought or water availability conditions. The drought exclusion can be removed without additional analysis of drought conditions.

Specific water quality SMCs and the methodology used for each well are explained in Appendix 7-A. As part of this evaluation, the SMCs for some wells were updated.

7.4.4 Updated Criteria

As an administrative update, the CMA GSA will consider the water quality targets to apply to all years. The CMA GSA when it next amends the GSP will remove the “non-drought” phrase from their SMCs for water quality. Additionally, the CMA GSA will update the water quality monitoring network and SMCs as represented in Appendix 7-A.

¹ 23 CCR § 354.30(c). Measurable objectives shall provide a reasonable margin of operational flexibility under adverse conditions which shall take into consideration components such as historical water budgets, seasonal and long-term trends, and periods of drought, and be commensurate with levels of uncertainty.

7.5 Land Subsidence (Aquifer Compaction)



DWR, in RCA #6, requested that the CMA GSA “reevaluate the sustainable management criteria for land subsidence.” This included new DWR issued draft guidance in July 2025.

In the 2022 GSP, the CMA GSA had demonstrated that Land Subsidence is “not present and are not likely to occur in the basin.”¹ Accordingly, when the CMA GSA next amends the GSP, the CMA GSA will remove the numerical undesirable results and SMCs for land subsidence. However, out of an abundance of caution, the CMA GSA will continue to collect and report third party data related to land subsidence – currently data from both a continuous global positioning system (“CGPS”) site and Interferometric Synthetic Aperture Radar (“InSAR”).²

7.5.1 Historical Rationale

The 2022 CMA GSP found no documented history of land subsidence in the CMA. The geology indicates that there is also a low potential for land subsidence. The CMA GSA conducted outreach to major infrastructure stakeholders in the Basin. None of the contacted major infrastructure stakeholders expressed concern about land subsidence in the CMA GSA, and all declined to participate in CMA GSA reporting on potential impacts of subsidence on infrastructure.

The GSP identified the CMA as located within the continental margin of California with ongoing tectonic activity. Additionally, there is some oil and gas production within the groundwater Basin, although currently in the margin of the CMA. If land subsidence occurred, consideration of these alternative factors would need to determine if the cause was due to groundwater withdrawal – a situation like that described by the 2014 LSCE report about the nearby basins of Santa Clara-Calleguas and Los Angeles.³ As will all indicators, the SGMA regulations require that the SMCs for

¹ 23 CCR § 354.26(d): “An Agency that is able to demonstrate that undesirable results related to one or more sustainability indicators are not present and are not likely to occur in a basin shall not be required to establish criteria for undesirable results related to those sustainability indicators.”

² Data collected from European Space Agency's Sentinel-1A satellite, processed by TRE ALTAMIRA Inc, and distributed by DWR.

³ Luhdorff & Scalmanini Consulting Engineers (LSCE) - Borchers, James W. and Carpenter, Michael (2014) Land Subsidence from Groundwater Use in California. 193pg. SYWATER 363.

land subsidence are set with sufficient operational flexibility to account for factors including uncertainty.¹

In the 2022 GSP, the CMA GSA quantified a rate and the extent of subsidence that could potentially cause substantial interference with surface land uses.² This was a “decline of six inches from the 2015 land surface elevation resulting from groundwater extractions” as a quantitative definition for the minimum threshold, and a less than two inches of land subsidence since 2015 for the quantitative indicator for a measurable objective.

7.5.2 New Information

DWR, in the 2024 review of the CMA GSP, identified³ that this quantitative definition did not have a way to resolve marginal situations where the CMA GSA contained areas both above and below the target. As the CMA GSP included the InSAR data, in addition to CGPS station data, there is potential for this situation to occur. InSAR data provides a three-dimensional surface of changes across the entire area of the CMA GSA, with some occasional data gaps.

DWR also issued draft guidance about Land Subsidence in 2025 (see Section 1.3). The CMA GSA best fits DWR guidance’s Scenario 1: Area without Subsidence, Managing Groundwater Levels Above Historical Low, for which DWR recommends:

“Given the low likelihood of land subsidence and the availability of public monitoring sources such as InSAR, devoting significant resources to develop a locally maintained, dedicated land subsidence monitoring network and/or performing modeling related to future land subsidence is likely not warranted.”

¹ 23 CCR § 354.30.(c): “Measurable objectives shall provide a reasonable margin of operational flexibility under adverse conditions which shall take into consideration components such as historical water budgets, seasonal and long-term trends, and periods of drought, and be commensurate with levels of uncertainty.”

² 23 CCR § 354.28(c)(5): “...threshold for land subsidence shall be the rate and extent of subsidence that substantially interferes with surface land uses and may lead to undesirable results]”

³ Department of Water Resources (Scarlett Tovar, Shane Edmunds, Anita Regmi, et al.). October 1, 2025. *RCA Discussion with Santa Ynez River Valley GW Basin GSAs*. Meeting between DWR and Western Management Agency, Central Management Agency, and Eastern Management Agency representatives.

However, DWR’s guidance cautions that groundwater withdrawals are not the only source of land subsidence, and other sources of subsidence can occur. In the 2025 guidance, DWR recognizes that what is measured is a result of many different phenomena in addition to aquifer compaction due to groundwater withdrawal:

“[S]ubsidence can also result from oil and gas operations (extraction of water and oil), tectonic and volcanic activity, hydrocompaction of historically dry sediment that becomes saturated, the elastic loading of the Earth’s crust due to mass changes, thawing of permafrost, and oxidation of organic matter such as peat soil.”¹

DWR guidance suggested several different targets: a “zero or the measurement error of the monitoring equipment” standard or a “substantially interferes with surface land uses” standard. Elsewhere, DWR guidance indicates that undesirable results and SMCs should incorporate all sources of subsidence, and not only those related to groundwater withdrawal. Additionally, SGMA regulations require that SMCs include a “reasonable margin of operational flexibility.”²

SGMA GSPs from regional GSAs with similar situations had different interpretations, including using rolling subsidence rates rather than absolute numbers relative to some start date.

7.5.3 Updated Evaluation

The CMA GSA reviewed and identified that the 2022 CMA GSP conveyed that any significant amount of the area being impacted by land subsidence is undesirable. A percentage of area is used to account for method uncertainty. The following clarifies the quantitative definition of undesirable result as a “decline of six inches from the 2015 land surface elevation resulting from groundwater extractions occurring over 20% or more of the area of the CMA GSA.”

¹ Department of Water Resources (DWR) 2025. DRAFT Land Subsidence: Best Management Practices for the Sustainable Management of Groundwater. 108pg. SYWATER 558.

² 23 CCR § 354.30(c): “Measurable objectives shall provide a reasonable margin of operational flexibility under adverse conditions which shall take into consideration components such as historical water budgets, seasonal and long-term trends, and periods of drought, and be commensurate with levels of uncertainty.”

In re-evaluating the 2022 GSP on Land Subsidence, this periodic evaluation also found the CMA GSA had demonstrated that Land Subsidence is not present and is not likely to occur in the CMA GSA portion of the Basin. A review of recent monitoring data through WY2025 did not change this assessment. In re-evaluating Land Subsidence, the following SGMA regulation was identified:

“An Agency that is able to demonstrate that undesirable results related to one or more sustainability indicators are not present and are not likely to occur in a basin shall not be required to establish criteria for undesirable results related to those sustainability indicators.” (23CCR § 354.26(d))

As such, the CMA GSA is not required to establish criteria for undesirable results related to Land Subsidence.

7.5.4 Updated Criteria

The CMA GSA clarifies the quantitative definition of undesirable result as a “decline of six inches from the 2015 land surface elevation resulting from groundwater extractions occurring over 20% or more of the area of the CMA GSA.” As this is consistent with the 2022 CMA GSP, this can be considered as an administrative update. Because undesirable results related to land subsidence are neither present nor likely to occur, when the CMA GSA next amends the GSP, the CMA GSA should consider removing the numerical undesirable results and SMCs for land subsidence.

However, out of an abundance of caution, the CMA GSA should continue to collect and report data related to land subsidence – currently data from both a continuous global positioning system (“CGPS”) site and Interferometric Synthetic Aperture Radar (“InSAR”).¹

¹ Data collected from European Space Agency's Sentinel-1A satellite, processed by TRE ALTAMIRA Inc, and distributed by DWR.

7.6 Depletions of Interconnected Surface Water



The CMA GSA finds that its 2022 GSP did not clearly identify the MT for depletions of interconnected surface water in the format the SGMA regulations require.¹ Unlike most of the other SGMA indicators which derive more directly from measured values, the MT for this indicator is a maximum of a water budget component before adverse impacts. Existing data gaps prevented, and currently prevent, fully quantifying this MT. The 2022 GSP used a quantitatively measurable proxy for this SGMA indicator: spring groundwater levels in wells near interconnected surface water.

DWR's 2024 draft guidance series on depletions of interconnected surface water notes:

“[D]epletions cannot be measured directly because they represent the difference between surface water flows with groundwater pumping in place, which can be measured, and surface water flows without groundwater pumping in place, which cannot be measured.”²

The extent of streamflow depletion is sensitive to the assumptions, definitions, and baseline conditions used in the analysis. Comparisons between scenarios with and without groundwater pumping are inherently theoretical and depend on how the no-pumping condition is defined. Within the Santa Ynez River watershed, much of the runoff is potentially subject to surface water diversion and export from the watershed (see Section 5.4 and Appendix 5-C). In addition, releases from upstream reservoirs are managed, in part, to support surface water and groundwater uses within the CMA. Consequently, in a hypothetical scenario without groundwater pumping, water no longer subject to streamflow depletion would not necessarily remain in the river system. Depending on reservoir operations and diversion practices, some or all of this water could instead be diverted and exported upstream of the CMA. Conversely, reductions in upstream diversions could increase water availability for beneficial groundwater and surface water uses within the watershed.

¹ 23 CCR § 354.28.(c)(6) [...] The minimum threshold for depletions of interconnected surface water shall be the rate or volume of surface water depletions caused by groundwater use that has adverse impacts on beneficial uses of the surface water and may lead to undesirable results. [...]

² DWR (2024) DRAFT Depletions of Interconnected Surface Water. An Introduction. 25pg. SYWATER 539.

DWR, in RCA#7, made several recommendations and requests regarding undesirable results and SMCs for the depletions of interconnected surface water. The actionable items from RCA#7 for evaluating undesirable results and SMCs are summarized in **Table 7-3** and **Table 7-4**.

*Table 7-3 :
Items from RCA #7 Related to Current Proxy MTs*

Actionable Item	How Addressed
"recommend" the undesirable result includes conditions of drought.	Planned adoption when GSP is next amended, if not superseded with a new groundwater model-based SMC (see Table 7-3).
"should [...] use fall or seasonal low groundwater levels to assess"	Planned adoption when GSP is next amended, if not superseded with a new groundwater model-based SMC (see Table 7-3).

*Table 7-4 :
RCA #7 Items to be Addressed Through Model*

Actionable Item
"Provide [...] an analysis of the potential impacts to beneficial uses and users" to show the SMCs "avoid an unreasonable depletion"
"consider" revising undesirable results and SMCs based on new 2025 guidance
How to Address
1. Collect surface water outflow measurements (from new stream gage).
2. Recalibrate model using surface water measurements.
3. Use model to determine streamflow depletions due only to groundwater pumping. (Will need to consider streamflow with no groundwater pumping and with Lake Cachuma releases).
4. Use model to determine impact to beneficial users from groundwater pumping. a. Determine what impacts are permissive and what impacts may be undesirable from the amount of streamflow depletions due to groundwater pumping. b. Collaborate 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. c. Consider the beneficial uses and how the particular depletions may impact depending on timing and amount (i.e. consider fish spawning impacts).
5. Reset SMCs based on new information if applicable.

When it next amends the GSP, the CMA GSA will more clearly identify that the groundwater level measurements are quantitative proxy indicators, but not the actual MT, which, according to SGMA regulation, is a volume or flow rate of streamflow depletion. The proxy for this indicator will be updated to use the fall or seasonal low groundwater levels, using 15 feet below the channel thalweg.

For the new wells added to the monitoring network, the SMCs and undesirable results are consistent with the 2022 GSP.

7.6.1 Historical Rationale

The CMA GSA set SMCs and undesirable results using the best available historical data that was available at the time of the 2022 GSP. The GSP reviewed the beneficial uses and users including groundwater dependent ecosystems (“GDE”). The 2022 GSP considered potential impacts such as typical rooting depths of the GDEs that exist on the banks of the Santa Ynez River, historical conditions, as well as “reasonable margin of operational flexibility.”¹ With these considerations, the CMA GSA set quantitatively measurable target water levels in specific wells near the Santa Ynez River. These were set to spring water levels that drop to 15 feet below channel thalweg elevation during non-drought years.² Droughts were excluded in the 2022 GSP because the Santa Ynez River typically dried up completely during droughts during pre-development. The spring water levels were used due to the period of record that was available as of the 2022 GSP.

The numerical groundwater model was used to estimate ISW depletions in the groundwater budget. However, the Basin generally lacked information about streamflow in key downstream locations and whether groundwater pumping from the principal groundwater aquifer contributes to streamflow depletion. This data gap undermined the reliability of the modeling results used to estimate streamflow depletions, both with and without pumping. Therefore, the CMA GSA has not yet

¹ 23 CCR § 354.30.(c) Measurable objectives shall provide a reasonable margin of operational flexibility under adverse conditions which shall take into consideration components such as historical water budgets, seasonal and long-term trends, and periods of drought, and be commensurate with levels of uncertainty.

² The 2022 CMA GSP defined drought as two or more consecutive years that are classified as Dry or Critically Dry as drought years. With Dry or Critically Dry year defined as flows below the 40th percentile at the USGS stream gage Salsipuedes Creek Near Lompoc (USGS number 11132500). No drought years have occurred since the 2022 GSP. 17% of the years of the 83-year historical record (WY1942-WY2015) were drought years, with the last drought year occurring in WY2016.

identified a specific maximum rate or volume of streamflow depletion from groundwater pumping that would cause undesirable results because additional streamflow measurements are needed to address this data gap.

7.6.2 New Information

The primary new information is the DWR's 2024 draft guidance series on Depletions of Interconnected Surface Water and the new wells that are incorporated in the monitoring network. The guidance offers multiple ways to estimate ISW depletions but focuses heavily on groundwater modeling. As of July 2026, part of this new guidance, "Guidance for Managing ISW Depletion" is under development.

Appendix 7-B presents the hydrographs for the two new wells that are added to the monitoring network. The hydrographs show the measurable objective (five feet below the channel thalweg) and the minimum threshold (15 feet below the channel thalweg or the well bottom) for the new wells. For well 6N/32W-2Q1, since the well bottom (the total depth of well) is less than the 15 feet used to set the minimum threshold for the other wells, the well bottom is used as the minimum threshold.

As of this evaluation, the CMA GSA is working on, but has not yet completed, installing additional surface water monitoring gages. This will more precisely quantify the volume of water leaving the CMA. This will improve the water budget and the estimation of this streamflow depletion component.

Work has continued updating and improving the Groundwater Flow Model. This represents the progress made towards a more reliable tool. Once it is more reliable, it could be used to simulate the "optimization problem" that fully addressing the MT requires: what is the rate or volume of surface water depletions where adverse impacts on beneficial uses of the surface water that may lead to undesirable results begins.

7.6.3 Updated Evaluation

The CMA GSA evaluates that the data gaps in the 2022 GSP are not yet addressed, and so the MT for depletions of interconnected surface water from groundwater pumping will not be set as part of this periodic update.

As an interim value, the CMA GSA evaluates that the proxy for this indicator should be updated to use the fall or seasonal low values,¹ using 15 feet below the channel thalweg, if not superseded with a new groundwater model-based SMC (see Table 7-3).

7.6.4 Updated Criteria

When it next amends the GSP and if the SMCs for the streamflow depletion are not yet established using the groundwater model (Table 7-3), the CMA GSA will more clearly identify that the groundwater level measurements are quantitative indicators, but not the actual MT, which, according to SGMA regulation, is a volume or flow rate of streamflow depletion. The proxy for this indicator will be updated to use the fall or seasonal low groundwater levels, using 15 feet below the channel thalweg or the bottom of the perforation interval, whichever is higher. The following table, **Table 7-5**, summarizes the current proxy indicators.

¹ These are the values at the end of the water year, and in some cases may be collected up to a month after the end of the water year. Water years run from one seasonal low to the next seasonal low (October to September).

Table 7-5:

Groundwater Elevations, Proxy for Interconnected Surface Water (feet in NAVD88)

Name	ID	Measuring Point	Current Reference Values (for Spring Measurements)	
			Measurable Objective	Minimum Threshold
6N/32W-9G1	1120	309.3	267	257
6N/32W-13G2	1115	320.5	304	294
6N/31W-17R1	1111	368.3	332	322
6N/32W-2Q1*	91	360.8	292	284
6N/31W-17D1*	1113	TBD ^A	315 ^A	305 ^A

Notes:

*New representative well.

^A Measuring point needs to be verified, and current reported USBR groundwater elevations may be adjusted accordingly.

NAVD88 = North American Vertical Datum of 1988.

The Measurable Objective is 5 feet below the channel thalweg.

The Minimum Threshold is 15 feet below the channel thalweg.

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SECTION 8: GSA Authorities and Enforcement Actions

This section includes a “*description of relevant actions taken by the Agency*”¹ and an evaluation and “*enforcement or legal actions taken by the Agency.*”² Key actions of the CMA GSA since the 2022 GSP include the reorganization of the CMA GSA as a separate public entity under the Joint Exercise of Powers Act³ and Joint Exercise of Powers Agreement (“JPA”), approving wells under the State of California Executive Order N-7-22,⁴ preserving access to a monitoring well with historic production data that was slated for destruction, securing access agreements for additional monitoring wells/piezometer, and approval of a groundwater management fee. No major update to the CMA GSA authorities or major enforcement actions have occurred that significantly changed from the GSP.

The Administration Information section (CMA GSP Section 1b) described the CMA GSA’s authorities. The section explains governance, legal authority, implementation and costs, and inter-basin communication and coordination. In the following section, these topics are revisited, along with the related enforcement through Project Management Actions.

¹ 23 CCR § 356.4(g). A description of relevant actions taken by the Agency, including a summary of regulations or ordinances related to the Plan.

² 23 CCR § 356.4(h). Information describing any enforcement or legal actions taken by the Agency in furtherance of the sustainability goal for the basin.

³ Gov. Code section 6500, et seq.

⁴ Executive Orders are directives to state agencies. These cannot create or change the statute and are subject to judicial review.

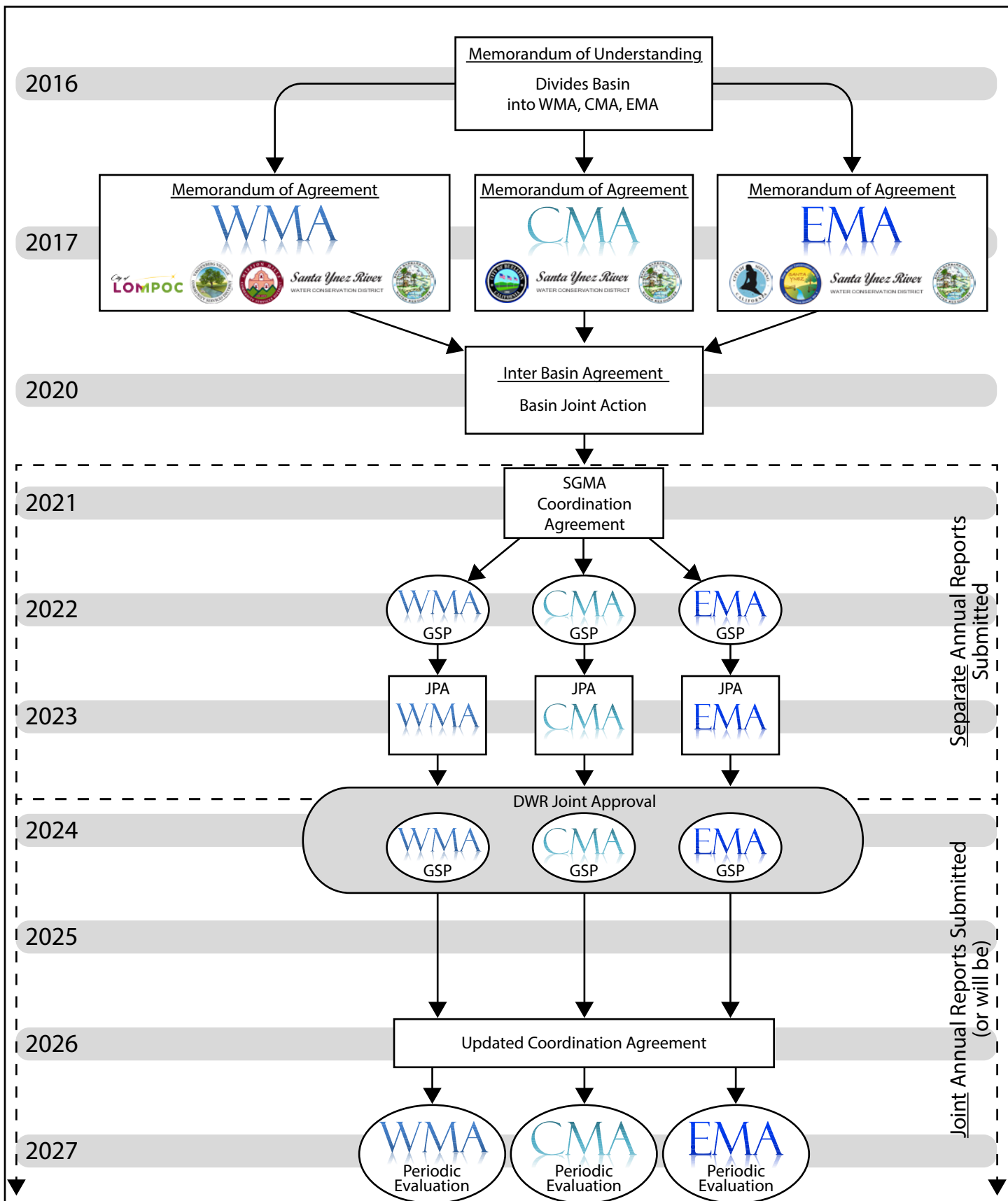
8.1 Agency Administration and Organization

The most significant change to the GSA as an agency was the reorganization as a separate public entity during WY 2023 and WY 2024. The Joint Exercise of Power Act¹ authorizes the public agencies to create a separate public entity, sometimes referred to as a “joint powers agency,” by entering into a joint powers agreement, and SGMA (CWA, § 10723.6(a)(1)), provides a combination of local public agencies may form a GSA by using a joint powers agreement. The new legal status of the GSA enables the member agencies to create a separate entity to exercise the powers common to them, including exercise of SGMA power and authorities available to GSAs, and to protect themselves from the CMA GSA’s debts or other liabilities. This public entity was established through a Joint Exercise of Powers Agreement (“JPA”), which was signed by the member agencies. This agreement is attached as **Appendix 8-A**. The change in governance structure was communicated to DWR in January 2024.

The JPA was amended in 2025 to add a non-voting “Agricultural Representative” to the CMA Board of Directors. The amendment to the JPA is attached as **Appendix 8-B**. This representative is appointed by and serves at the discretion of a majority of the voting members of the Board. The purpose of this representative is specifically to represent agricultural interests.

Figure 8-1 is a timeline of important organizational documents for the development and implementation of SGMA in the Basin. The figure expands upon a related figure in the GSP for 2016 to 2022 that showed the evolution of the 2016 shared Memorandum of Understanding (“MOU”) to the three Memorandums of Agreement (“MOA”) in 2017 that established the individual GSAs for each management area, and finally to the CMA GSA JPA and WMA GSA JPA executed in November of 2023 and EMG GSA JPA executed in July 2024. The new CMA GSA JPA is consistent with the core principles of the MOA that initially formed the GSAs. The CMA GSA has remained consistent in terms of member agencies and weight of voting members. The powers granted by SGMA also remain unchanged.

¹ CWC Section 10723.6 and Government Code Section 6500 et seq.



The CMA GSA’s governing body met eight times in WY 2024, including two joint meetings with the governing bodies of the other two GSAs in the Basin. In WY 2024, the CMA GSA’s Board of Directors received updates on various staffing and administrative matters, including selecting SYRWCD to provide the Executive Director/Plan Manager and administrative support. The CMA GSA also selected an attorney, a Certified Public Accountant (“CPA”), and a bookkeeping firm. The Board discussed and approved a new Conflict of Interest Code for the CMA GSA. The Board discussed and endorsed an amendment to the JPA for the addition of a non-voting Agricultural Representative on the CMA GSA’s Board of Directors.

8.2 Resolutions Passed by the CMA GSA Board of Directors

Since the GSP was submitted in January 2022, there have been seven Resolutions passed to date. See **Table 8-1**, below, for the complete list of resolutions. The resolutions primarily relate to operations, CMA GSA organization, and financial procedures.

Resolution 2021-001 on Authorizing Teleconference Meetings and Resolution 2024-02 adopting a Conflict-of-Interest Code. Teleconference meetings were implemented as a result of COVID-19 protocols and addressed the legal requirements for holding in-person and publicly accessible GSA meetings. While California’s State of Emergency due to COVID-19 ended February 28, 2023,¹ the CMA has maintained the virtual option for meetings in part to increase public engagement and accessibility. The Conflict-of-Interest Code clarifies proper protocol for compliance with state and local governmental conflict of interest requirements.²

¹ California Governor Gavin Newsom. February 28, 2023. A Proclamation By The Governor Of The State Of California Terminating State Of Emergency. End of COVID State of Emergency.

² Government Code Section 81000 requires state and local government agencies to adopt and promulgate conflict of interest codes.

Table 8-1:

Resolutions Passed by the CMA GSA Board of Directors

Year	Adoption Date	Resolution CMA #	Resolution Name/Topic
WY2022	10/20/2021	2021-001	Authorizing Remote Teleconference Meetings Under AB 361
	11/15/2021	2021-002	Authorizing the CMA GSA Chairperson to sign the Santa Ynez River Valley Groundwater Basin Coordination Agreement
	1/3/2022	2022-001	Adopting Groundwater Sustainability Plan for the Central Management Area of the Santa Ynez River Valley Groundwater Basin
	8/22/2022	2022-002	Establishing Fee and Deposit for CMA GSA Well Verification as Required by Executive Order N-7-22
WY2023	11/28/2022	2022-003	Approving the Santa Ynez River Water Conservation District to Submit a Proposition 68 Grant Application for Implementation of SGMA on Behalf of the Santa Ynez River Valley Groundwater Basin
WY 2024	2/26/2024	2024-01	Authorizing the Opening of an Account at Five Star Bank.
	5/20/2024	2024-02	Approve and Adopt a Conflict-of-Interest Code
WY2025	4/22/2025	2025-01	Fixing Procedures for a Proposition 218 Majority Protest Hearing Regarding a Sustainable Groundwater Management Fee
	6/23/2025	2025-02	Declaring the Results of a Proposition 218 Majority Protest Process and Adopting the Groundwater Management Fee
	6/23/2025	2025-03	Setting Groundwater Management Fee and Requesting Collection of Groundwater Management Fees for FYE 2026 in the same manner as Municipal Ad Valorem Taxes
WY2026	5/18/2026	2026-01	Setting Groundwater Management Fee and Requesting Collection of Groundwater Management Fees for FYE 2027 in the same manner as Municipal Ad Valorem Taxes
	5/18/2026	2026-02	Establishing a process to appeal calculation of the CMA GSA's Groundwater Management Fee

Notes: Resolutions compiled through August 19, 2026. Colors above are coded by water year. Resolutions are listed on the CMA GSA Resolutions page at <https://www.cma-santaynezwater.org/cma-gsa-resolutions> (Accessed 2026-08-19).

Resolution 2021-002 authorized the CMA GSA Chairperson to sign the Basin Coordination Agreement and Resolution 2022-001 to adopt the GSP and enable the CMA GSA to fulfill SGMA's requirements. These resolutions are reflected in the Organizational Documents as discussed in Section 8.1. Similarly, pursuant to the Governor of California's Executive Order N-7-22, the CMA GSA adopted Resolution 2022-02 providing for the GSA's verification regarding proposed new wells. With

the end of the drought¹ in Santa Barbara County and rescission of Executive Order N-7-22, the CMA GSA's authority to participate in well verification ended.

The other resolutions relate to establishing funding through Proposition 68 (Resolution 2022-003) and, importantly, the successful adoption and collection of a groundwater management fee to fund CMA GSA administration and SGMA compliance (Resolution Nos. 2024-01, 2025-01, 2025-02, 2025-03, 2026-01, and 2026-02). The fee and funding actions are discussed in more detail in the next section.

8.3 GSA Regulations / Ordinances

8.3.1 Established Programs -Well Registration

Section 4 (Projects and Management Actions) provides information on the established and future projects and management actions identified as part of the GSP PMAs. A primary focus of the CMA GSA has been establishing Well Registration and Groundwater Management Fee. SGMA statute authorizes the CMA GSA to “propose and update fees” and “monitoring compliance and enforcement” of the GSP.² For well registration, CMA GSA has coordinated with the SYRWCD, a member agency of the CMA GSA, as all water producers within the SYRWCD boundaries are required to register their wells and report their groundwater production to the SYRWCD.

8.3.2 Fee and Funding Actions

Article 14 of the 2023 CMA GSA JPA identifies the CMA GSA Funding and Contributions. This includes identifying the member agency's role in funding the CMA GSA, if and when no other funding source is available. The CMA GSA's member agencies have each contributed funding to the CMA JPA, which will be paid back in future years from other funding sources. Additionally, the CMA GSA has worked to secure funding sources outside of the member agencies. The CMA GSA's primary fee and funding

¹ California Governor Gavin Newsom. September 4, 2024. A Proclamation By The Governor Of The State Of California Terminating State Of Emergency. End of drought conditions in Santa Barbara county and other select counties.

² CWC Section 10725.4 Investigations

actions since the GSP have included member agency loans, Proposition 68 funding, and establishment of a Groundwater Management Fee.

Grant Funding

The initial funding for the CMA GSP development was largely provided through the State of California's Proposition 1 (Sustainable Groundwater Planning Grant) program. This grant helped fund the initial GSP preparation but did not continue into the implementation phase.

At the request of the three Basin GSAs, the SYRWCD (a member agency of all three GSAs) applied for Proposition 68 grant funding in October 2022, on behalf of Basin GSAs. As Grantee, the SYRWCD was awarded a total of \$5,534,000 by DWR, which was the total amount requested. The Basin GSAs' projects and management actions funding by the grant are discussed throughout this report. As most of these activities are still in progress, the subsequent Periodic Evaluation will provide updates to all completed efforts funded by the Proposition 68 grant. The first phase of Proposition 68 funding was also used, as reported in the GSP, for the AEM survey. Part of the Proposition 68 funding was used in the Rate Study for the Groundwater Management Fee.

Groundwater Management Fee

The Groundwater Management Fee is primarily intended as a regular source of revenue for the CMA GSA to use for costs of administration and new projects to maintain sustainability in the CMA. As a fee on groundwater water extractions, the fee may encourage conservation and reduce groundwater extraction.

The Central Management Area Sustainable Groundwater Management Fee Study (referred to as the "Rate Study") established a basis for the Groundwater Management Fee. The Rate Study process included a workshop, press release, and various resolutions. The CMA GSA Board of Directors adopted the following Groundwater Management Fee, which include extraction and acreage charge components on June 23rd, 2025, shown in **Table 8-2**.

Table 8-2:
Groundwater Management Fee Charges per CMA GSA Resolution 2025-02

Applicable Year:	Start Date:	Extraction Charge: (\$/AF)	Acreage Charge: (\$/Acre)
FYE 2026	July 1, 2025	\$63.32	\$2.08
FYE 2027	July 1, 2026	\$65.85	\$2.16
FYE 2028	July 1, 2027	\$68.48	\$2.25
FYE 2029	July 1, 2028	\$71.22	\$2.34
FYE 2030	July 1, 2029	\$74.07	\$2.43

FYE = Fiscal Year Ending.

The CMA GSA uses a fiscal year that begins July 1 and ends June 30 of the following calendar year, e.g. FYE 2026 starts July 1, 2025, and ends June 30, 2026.

The Resolution to adopt the Groundwater Management Fee notes that the implementation of the CMA GSA GSP requires funding. The Resolution cites Water Code Section 10730 as part of the legal basis for the fees. CMA GSA passed Resolution 2025-01 which initiated the process to approve this two-component Fee as a “property-related fee” within the meaning of Article 13D, Section 6 of the California Constitution (“Proposition 218”) and Water Code section 10730. This process included a majority protest hearing under Proposition 218, which was held on June 23, 2025. The total number of parcels to which notices were distributed were 2,591, requiring 1,296 or more parcel protests to form a majority. The CMA GSA Board accepted and tabulated all written protests against the proposed Groundwater Management Fee that were received before the close of the public hearing as well. Based on the results of this tabulation there were only 32 parcel protests, and a majority protect did not exist against the Groundwater Management Fee as proposed in the Rate Study, and the Groundwater Management Fee was adopted and subsequently imposed and collected by the GSA.

8.4 GSA Enforcement

The CMA GSA has not yet had a need to conduct enforcement actions. The CMA GSA as of yet has also not issued penalties, conduct litigation, or formal compliance actions.

8.5 Legal Challenges / Actions

The CMA GSA has faced no legal challenges at this time.

8.6 Other Regulatory Requirements

8.6.1 Executive Order N-7-22 for GSA Well Permit Approval

California Governor Gavin Newsom published Executive Order N-7-22 in March 2022 that addressed, in part, an existing State of Emergency due to drought conditions in California (including in Santa Barbara county¹). This order restricted selected well permit approvals by public agencies without written verification from the GSA managing the basin or area in which the well would be located. This restriction was modified partially in subsequent Order N-3-23 (February 2023). As described above, CMA GSA Resolution 2022-002 established the verification process for the executive order.

In September 2024, Executive Order N-3-24 was issued, which effectively terminated paragraph 9 of Executive Order N-7-22 pertaining to well permitting approvals by GSAs and all amendments, in Santa Barbara County, effectively ending this process.

¹ California Governor Gavin Newsom. July 8, 2021. Proclamation of A State of Emergency. Declaration of drought conditions in Santa Barbara county.

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SECTION 9: Coordination, Outreach, and Engagement

In compliance with SGMA, the CMA GSA informs and provides interested parties, beneficial users, and the public with opportunities to engage in discussions of implementation of the GSP and CMA GSA activities. Additionally, the CMA GSA has coordinated with other agencies to carry out implementation efforts in the Basin. The CMA is one of three GSAs in the Basin (the WMA GSA, CMA GSA, and EMA GSA), each of which has its own separate GSP, member agencies, board of directors, officers, jurisdiction, and stakeholders. This section includes a “*summary of coordination that occurred*”¹ between the three GSAs, other coordination efforts, and outreach and engagement with other agencies and stakeholders.

9.1 Coordination

The CMA GSA coordinates closely with a range of local, regional, and state agencies to develop and implement the CMA GSP and to carry out the associated Projects and Management Actions. This coordinated effort ensured that the plan reflects diverse perspectives, aligns with regulatory requirements, and incorporates best practices for sustainable groundwater management. Through ongoing partnerships, the CMA GSA continues to support the implementation of strategies that protect and enhance the long-term sustainability of the groundwater basin.

9.1.1 Coordination with other Santa Ynez SGMA Agencies

The CMA GSA is one of three SGMA agencies that, combined, cover the series of aquifers that make up the Basin (DWR Basin No. 3-015). The three agencies, the WMA GSA, CMA GSA, and EMA GSA,

¹ 23 CCR § 356.4 (j) Where appropriate, a summary of coordination that occurred between multiple Agencies in a single basin, Agencies in hydrologically connected basins, and land use agencies.

work together to coordinate and ensure consistency and coverage of the entire Basin.¹ The three agencies have distinct and different aquifers, stakeholders, and member agencies. Coordination imposes additional costs in terms of complexity, negotiation, and scheduling compared to independent actions of the CMA GSA.

Significant coordination for the Basin pertains to the joint understanding of the flows and underflow of the Santa Ynez River. This is an issue of significant local concern since before SGMA, dating at least to the establishment of the SYRWCD in 1939. The three GSPs all included an appendix describing the underflow of the Santa Ynez River.² In response to SWRCB comments on the GSPs, the three GSAs jointly produced additional documentation and analysis to clarify this topic³ and met with DWR and the SWRCB. The three GSAs coordinated to develop the Action Plan to address concerns while staying within the powers granted by SGMA.

As part of the approval process for the CMA GSP, DWR provided a review document that jointly reviewed the three GSPs for the three Basin GSAs (see Section 9.3.2 below). This review document included a list of Recommended Corrective Actions (“RCAs”), which, as a joint review, are applicable to all three GSPs. The three Basin GSAs are coordinating to address the RCA. The RCAs are discussed throughout this Periodic Evaluation. The RCAs are included as Appendix A-2. Additionally, an overview of each RCA and the relevant sections is included below.

As much of the work addressing the GSP implementation, Action Plan, and RCAs involves leveraging funding from Proposition 68, the GSAs delegate specific tasks and consultants as needed. For example, the funding of the Periodic Evaluations for the three GSAs uses Proposition 68 sources. Stetson Engineers is completing the Periodic Evaluation for the WMA GSA and the CMA GSA while GSI Water Solutions is completing the Periodic Evaluation for the EMA GSA. Stetson Engineers and

¹ See CMA GSP, section 1B,2 “Intra-Basin Coordination Between Management Areas” and section 1d.1-2 “SGMA Coverage of Basin.”

² Stetson Engineers Technical Memorandum Hydrogeological Basis for Characterization of Water within the Santa Ynez River Alluvium Upstream of the Lompoc Narrows as Underflow of the River in a Known and Definite Channel Dated December 15, 2021 Included as WMA GSP Appendix 1d-B CMA Appendix 1d-B, and EMA GSP Appendix K.

³ Santa Ynez GSAs' Response to April 14 2023 SWRCB Staff Comment Letter. CMA Chair, WMA Chair, EMA Chair. August 11, 2023. RE: SANTA YNEZ VALLEY GROUNDWATER SUSTAINABILITY PLANS, GROUNDWATER BASIN NO. 3-015. <https://sywater.info/bibliography/show.php?id=522> Accessed 2025-07-15.

GSI Water Solutions have collaborated throughout this process. Similarly, Geosyntec Consultants received funds and a scope of work to install three monitoring wells and three piezometers throughout the Basin.

Each year, the three GSAs are required to produce an Annual Report about the conditions within their jurisdiction,¹ which for the first three years was coordinated in terms of content and configuration. Each GSA prepared and submitted individual GSA Annual Report with information about conditions in their specific GSA. At DWR's request,² the three Basin GSAs combined their individual Annual Reports under a single cover as a Joint report for the first time for the WY 2024 report.³ This now also includes a new section which aggregates the conditions for all three GSAs. However, this additional coordination came at an additional cost. The individual GSAs produced and approved content as before through their individual Board processes. After completion, the individual content from each GSA was submitted to a central editor to edit into a single document, which added the requested aggregated information. The three Basin GSAs' Boards then held an additional joint meeting⁴ to discuss and approve the combined document and joint material.

Other key GSA activities, like well registration and reporting, also require coordination with the other GSAs. This work involves coordinating with the member agencies, primarily SYRWCD, a member agency of all three GSAs, to ensure consistent and updated monitoring. The three GSAs also work to ensure that all wells in the Basin are registered with their appropriate GSA or other organization, providing guidance based on depth and location.

¹ CWC Section 10728 and 23 CCR § 356.2

² Gosselin, Paul. Deputy Director, Sustainable Groundwater Management. May 17, 2024. *RE: Review of Annual Reports for the Santa Ynez River Valley Basin, Water Year 2023*. <https://sgma.water.ca.gov/portal/gspar/correspondences/282> Accessed 2025-07-15.

³ Annual Report Water Year 2024 for the Santa Ynez River Valley Groundwater Basin. Joint Report of the Groundwater Sustainability Agencies. <https://sgma.water.ca.gov/portal/gspar/preview/450> Accessed 2025-07-15.

⁴ Joint meeting of the WMA Board, CMA Board, and EMA Board. WMA Board Meeting documentation: <https://www.wma-santaynezwater.org/2025-03-07-wma-gsa-jpa-board-meetings-joint-gsas-special-meeting-9am> Accessed 2025-07-15, CMA Board Meeting documentation: <https://www.cma-santaynezwater.org/2025-03-07-cma-gsa-jpa-board-meetings-joint-gsas-special-meeting-9am> Accessed 2025-07-15, EMA Board Meeting documentation <https://www.ema-santaynezwater.org/2025-03-07-ema-gsa-jpa-board-joint-gsas-special-meeting-9-00-am> Accessed 2024-07-15.

The current coordination agreement between the three GSAs was reviewed and signed in December 2021. The agreement is effective as of January 1, 2022, and is being updated in connection with the submission of this periodic evaluation. **Appendix 9-A** is the updated coordination agreement. The three GSAs periodically conduct formal reviews and updates of their agreements.¹

9.1.2 Coordination with Hydrologically Connected Basins

The CMA GSA does not have any hydrologically connected groundwater basins. San Antonio Creek Valley Groundwater Basin (DWR Basin No. 3-014) is located north of the CMA on the other side of the Purisima Hills. The geological formations between the CMA and San Antonio Creek Valley are not aquifer formations, so there is no direct connection to the CMA. Due to the lack of groundwater flow exchange, the CMA GSA has not engaged in coordination activities with the San Antonio Basin Groundwater Sustainability Agency, which is the GSA agency for DWR basin No. 3-014.

9.1.3 Coordination with CMA GSA Member Agencies

Member agency support has been important for the development of the GSP and ongoing monitoring and evaluation of the CMA GSA groundwater system. Monitoring data from CMA GSA member agencies has been critical for the CMA GSA in developing the annual reporting. Of critical importance to the monitoring program is the groundwater level monitoring data collected and provided by the City of Buellton and the Santa Barbara County Water Agency². Administrative and technical assistance provided by the SYRWCD, as well as annual groundwater production data, has also been critical to the CMA GSA's sustainable groundwater management of the CMA. SYRWCD has for decades required registration of wells and reporting of groundwater production and has annually produced a report on groundwater conditions, including groundwater production, within the SYRWCD which encompasses the entirety of the CMA GSA. As mentioned in Section 4, the

¹ 23 CCR § 357.4(i) Coordination agreements shall be reviewed as part of the five-year assessment, revised as necessary, dated, and signed by all parties.

² Santa Barbara County is a non-voting participant agency in the CMA GSA. The Santa Barbara County Water operates under the county's Water Resource's Division but was originally established by the State of California legislature in 1945.

SYRWCD modernized the registration and groundwater pumping reporting during this Periodic Evaluation period in coordination with and support of the CMA GSA.

9.1.4 Coordination on County Drought Planning and Drought Task Force

The CMA GSA continually coordinates with appropriate groundwater users and the county jurisdictions developing drought plans and establishing local drought task forces to align groundwater management strategy with drought planning, response, and mitigation efforts within the basin.

Santa Barbara County last updated their Multi-Jurisdictional Hazard Mitigation Plan (“MJHMP”) in April 2023 (see Section 2.2). The MJHMP looks at hazards that affect the county and includes prevention and mitigation actions. This MJHMP includes drought as one of the topics covered as a natural hazard and documents that there is a Drought Task Force for Santa Barbara County. As a follow-up to the MJHMP, in 2024 the Drought Task Force developed a Santa Barbara County Drought Resilience Plan which covered the Santa Ynez Valley. The Santa Barbara County Water Agency, a CMA GSA member agency, ensured that MJHMP and the drought plan was consistent with the CMA GSP.

The Drought Task Force goal is “to seek countywide solutions to the current drought situation, and to provide the best advice possible to local decision-makers.” The Drought Task Force includes representatives from the County Executive Office, Office of Emergency Management, Public Works, Agricultural Commissioner, County Fire Department, Central Coast Water Authority, and COMB. The County maintains the Drought Task Force to 1) Assess vulnerability to drought risk; 2) Monitor drought conditions; 3) Monitor water supply; 4) Plan for drought; 5) Develop related mitigation projects and programs.

Santa Barbara County Water Agency staff are members of the Drought Task Force and attend all WMA GSA, CMA GSA, and EMA GSA meetings, acting as a conduit for information and coordination when necessary. The Basin GSAs promoted the July 2024 public meetings for the Drought Resilience Plan through their websites. Section 5 of the Drought Resilience Plan mentions future long-term

mitigation strategies involving GSAs. Additionally, the Drought Task Force has meetings with external agencies, including the CMA GSA annually.

9.1.5 Coordination with Other Public Agencies

The CMA GSP identified the two agencies as having to land use authority in the CMA (**Table 9-1**). Both agencies are member agencies of the CMA GSA. Since the publication of the GSP, the CMA GSA has not coordinated with any of these agencies on land use.

*Table 9-1:
Agencies with Land Use Jurisdiction in the CMA*

Agency	CMA GSA Member Agency	Type of Agency
Santa Barbara County	Yes (non-voting)	Local
City of Buellton	Yes	Local

In reviewing conditions in the Basin, CMA GSA uses data collected by other agencies, including data that is collected or compiled by the SWRCB, United States Bureau of Reclamation (Reclamation), Central Coast Water Authority, and United States Geological Survey.

The CMA GSA monitors and reviews conditions of the Santa Ynez River for conditions within the underflow. However, the CMA GSA is not party to the agreements that control Bradbury Dam and Lake Cachuma and the resulting flows of the Santa Ynez River. Any water releases that the CMA GSA could request can only be done through request to SYRWCD and subject to WR 2019-0148 criteria governing the release of water from and downstream of Bradbury Dam (see discussion in Appendix 5-C).

9.2 Outreach and Engagement

The CMA GSA has taken steps to continue to involve and collaborate with all the stakeholders in managing the CMA GSA's groundwater resources. The CMA GSA's outreach and engagement often involves collaboration between the three Basin GSAs. The CMA GSA conducted effective outreach

and engagement in the first three phases of SGMA: the GSA formation and coordination, the GSA preparation and submission, and the GSP review and evaluation. Since the GSP has been accepted, the CMA GSA continues to build on its outreach and engagement efforts in the implementation and planning phase, including:

- Annual Updates on groundwater conditions and sustainability in the CMA GSA.
- Board Meetings, including funding and GSP implementation projects.
- Providing public notice before the CMA GSA imposes or increases fees.
- Re-evaluating the CMA GSP in this periodic evaluation.
- Providing public notice and holding public meetings before amending the CMA GSP.

9.2.1 Stakeholder Groups

The evaluation of outreach and engagement efforts is, in part, an assessment of the CMA GSA's relationship with stakeholders within the CMA. This relationship is a key indicator of how effectively the CMA GSA communicates, collaborates, and incorporates stakeholder input into the planning and implementation process. **Table 9-2**, below, outlines the stakeholder categories identified by the CMA GSA for the Plan Area.

*Table 9-2 :
Stakeholder Categories in the CMA GSA Plan Area*

Category of Interest	Examples of Stakeholder Groups	Engagement Purpose
General Public	General public	Inform to improve public awareness of sustainable groundwater management
Land Use	County of Santa Barbara City of Buellton	Consult and involve to ensure land use policies support GSP and vice-versa
Private Users/Agriculture	Domestic users Agricultural users	Inform and involve to avoid a negative impact on these users. Collaborate to ensure sustainable management of groundwater.
Urban/ Recreational Users	City of Buellton Small mutual water systems Golf courses	Collaborate to ensure sustainable management of groundwater

Category of Interest	Examples of Stakeholder Groups	Engagement Purpose
Environmental and Ecosystem	California Department of Fish and Wildlife National Marine Fisheries Service	Inform and involve to sustain a vital ecosystem
Economic Development	City of Buellton Mayor County District 3 Supervisor State Assembly Member State Senator	Inform and involve to support a stable economy.
Human Right to Water	Domestic water users Disadvantaged communities	Inform and involve to provide safe and secure groundwater supplies to DACs
Tribes ^{NOTE}	Santa Ynez Band of Chumash Indians	Inform and involve to support sustainable management of groundwater
Federal and State lands	Bureau of Land Management	Collaborate to ensure sustainable management of groundwater
Integrated Water Management	Regional water management groups (IRWM regions)	Inform, involve, and collaborate to improve regional sustainability

Notes: DAC = disadvantaged community; IRWM = Integrated Regional Water Management. There are no Federally Recognized Tribes with reservations within the CMA; however, the Santa Ynez Band of Chumash Mission Indians of the Santa Ynez Reservation is located within the EMA. On the California Native American Heritage Commission map of Cultural Regions, the CMA is located within the Chumash region¹.

9.2.2 Public Outreach

The CMA GSA utilizes a diverse array of media channels to effectively communicate and deliver important information to the public. These channels serve as vital tools for sharing updates on past and upcoming meetings, adopted resolutions, and the status of the groundwater basin. By maintaining transparency and accessibility, the CMA GSA ensures that community members, stakeholders, and interested parties remain informed and empowered to participate in local water resource management.

Public Communication and Comment Portal

The CMA GSA website (<https://www.cma-santaynezwater.org/>) is the primary outreach to stakeholders and contains links to the calendar, the GSP, the annual reports, an interactive map, and the SGMA portal. The website also provides more general information about CMA GSA, CMA,

¹ California Native American Heritage Commission (2025) Estimated Population in 1769 layer on Digital Atlas of California Native Americans. <https://experience.arcgis.com/experience/88d47f08dc124f80a425534bbb761b72> Accessed 2025-07-29.

CMA GSP, and SGMA. Key documents provided on the website are the annual reports, CMA GSA's budget, the Groundwater Management fee information, the GSP, Joint Exercise of Powers Agreement ("JPA") information, and resolutions. The CMA GSA website, along with the WMA GSA and EMA GSA websites, can be found at the Basin's umbrella website: <https://www.santaynezwater.org/>.

Public Electronic Distribution List

The CMA GSA maintains an electronic mailing list as a key means of communicating new updates with interested parties, including stakeholders and the public at large. Interested members of the public are able to subscribe. This platform is used to distribute timely updates regarding meetings, developments related to the GSP implementation, and other relevant information. Individuals may subscribe to the mailing list by visiting the CMA GSA's official website and completing the subscription form provided. This ensures broad and equitable access to important updates and facilitates ongoing public engagement in CMA GSA activities.

Press Releases, Published Newspaper Notices, and Announcements

The County of Santa Barbara and the SYRWCD, acting on behalf of the CMA GSA, regularly publish public notices and announcements in adjudicated newspapers of general circulation. These publications serve as official channels for informing the public about upcoming meetings, key decisions, project milestones, and other activities related to GSP implementation within each management area.

Mailed Notifications

The CMA GSA has contacted the public by sending out letters and information through the United States Postal Service (mail). There are two primary channels utilized for these mailings, including informational materials within member agency utility bills and direct mailing by the CMA GSA. The mailed material has included newsletters detailing the progress of SGMA management within the CMA GSA, notifications regarding groundwater management fees, and notices about workshops concerning well activities related to the Santa Ynez River underflow. As a relatively expensive method for public notification, the CMA GSA limits the pages sent through this method: **Appendix 9-**

B is a copy of documents the CMA GSA has sent through either of these mail channels since the publication of the GSP (2022-2025).

Collaboration with Member Agencies

The CMA GSA's member agencies, including the SYRWCD and City of Buellton, also distribute public notices and related information on their respective websites. While not managed directly by the CMA GSA, the member agencies' outreach reflects the coordination between the member agencies. As described in the section above, CMA GSA's member agencies have also collaborated with the CMA GSA by distributing public notices through inserts in member agency utility bills.

Public Access to Data Management System

The CMA GSA furthers the goal of public outreach by providing public access to portions of its data management system ("DMS").¹ By providing up-to-date and easily accessible groundwater data and technical information regarding Basin conditions, the CMA GSA empowers citizens, researchers, and stakeholders to understand the local groundwater system, stewardship efforts, and support informed decision-making. This open access fosters trust and collaboration, helping the CMA GSA build stronger connections with the public and advance its conservation goals.

The main functions of the public website portion of the DMS include a dashboard summary of SGMA indicator status, a map interface, GSP reports, a library of related materials, and links to relevant websites. **Appendix 9-C** documents some of the public access features of the local DMS.

Table 9-3 is a listing of the number of public logins over time, after the enabling of public access during WY2022.

¹ Santa Ynez River Valley Groundwater Basin SGMA DMS - Western and Central Management Areas. <https://sywater.info> Accessed 2025-07-24.

Table 9-3 :
Public Login Events to the DMS

Water Year	Count of Public Login Events
2020	0
2021	0
2022	1,235
2023	3,079
2024	5,702

Notes: The number of public logins includes all public login events and does not differentiate for confounding factors, such as logins by staff or automated access to documents. The WMA GSA and CMA GSA both use the same DMS.

9.2.3 Public Engagement

The CMA GSA has actively prioritized public engagement by consistently seeking input from community members, stakeholders, and interested parties. As a public entity, the CMA GSA is committed to transparency, accountability, and inclusive decision-making. Through public meetings, accessible communication channels, and stakeholder focus group meetings, the CMA GSA has created opportunities for meaningful dialogue and collaboration. This commitment ensures that local voices are heard and considered in the development and implementation of groundwater sustainability efforts.

Public Elections

The voting members of the CMA GSA Board of Directors are composed of individuals who have been publicly elected or appointed to serve on the governing bodies of their respective member agencies. Their election or appointment to the respective member agency through democratic processes ensures that the Board reflects the will and interests of the community. This public relationship

enhances accountability, transparency, and trust in decision-making, reinforcing the foundational role of representative governance in managing local water resources for the collective benefit.

Public Board Meetings

The CMA GSA Board of Directors meets at times and places subject to the public process and requirements of the Ralph M. Brown Act (Govt. Code sections 54950 et seq.). The meetings follow the Brown Act requirements, which include how they are noticed, called, and conducted. For example, a quorum of the Board members cannot meet outside of the public meeting to discuss agency business. The meetings are always open to the public and provide a place for public comment and a venue for stakeholders to directly communicate with the CMA GSA Board of Directors.

Regular meetings are scheduled to occur once per quarter on either the 3rd or 4th Monday of the second month of the quarter (February, May, August, and November). Occasionally, special meetings are scheduled as well.

The meeting format evolved with the onset of the COVID-19 pandemic, shifting initially from in-person meetings to a virtual-only model for a period. Currently, meetings occur in person with optional remote public participation via telephone or Zoom.

Public Communication and Comment Portal

The Public Communication and Comment Portal, replaced by the current CMA GSA website platform, in addition to providing a notice interface, allows the public and stakeholders to provide written feedback and review directly to the CMA GSA. When directed by the Board, draft documents are posted for periods of public review on the website. This allows users to provide structured comments on draft documents, which allows the CMA GSA to more effectively address identified issues before finalization.¹ During the development of the GSP, individual GSP chapters, major

¹ The adequacy of responding to these comments is one of the ten considerations of DWR's plan assessment, see 23 CCR § 355.4 (b)(10).

supporting documents, and the combined GSP went through public review through the Portal. More recent documents posted on the CMA GSA website for public review and comment included the CMA GSA Rate Study in March 2025.

Public Workshops

The CMA GSA actively engaged with the public about specific topics by hosting public workshops on topics of important public concern. An example is the educational workshops that the CMA GSA, in collaboration with the two other Basin GSAs, hosted for well owners and producers in the Above Narrows Alluvium Area. These workshops are about well registration and reporting requirements to the applicable GSA, or to the State Board, and SYRWCD. These workshops in part fulfilled commitments made in the Action Plan (which was addressed in the DWR's RCAs).

Citizens Advisory Group

The Citizen Advisory Group ("CAG") provides an additional, collaborative space for engagement with the CMA GSA development and implementation process. This is a group formed at the direction of the CMA GSA Board that includes members who are selected based on being representatives of diverse categories of groundwater uses and users in the CMA. CAG members are public volunteers who review, discuss, and provide feedback on materials produced by the CMA GSA. The CMA GSA Plan Manager organizes and facilitates the CAG meetings.

Like the CMA GSA Board meetings, the CMA GSA website publishes the CAG's agendas, meeting materials, and teleconferencing information.

The following lists of all the CAG meetings and workshops that the CMA GSA Board of Directors has held since the publication of the GSP (2022-2025). Agendas, materials, and meeting minutes (after approval) are posted to the CMA GSA website (linked from the umbrella website <https://www.santaynezwater.org/>).

- 2025: Workshops (3/25/2025, 9/12/2025, and 9/19/2025)

- 2022: CAG meetings (10/13/2022, 8/12/2022, 2/3/2022)

Public Comments through DWR SGMA Portal

In addition to the CMA GSA website, where documents are available for review and comment before finalization, stakeholders and the public can also provide comments on finalized documents after submittal to DWR through DWR's SGMA portal.¹ The CMA GSA considers these post-finalization comments in subsequent documents produced by the CMA GSA. However, in some cases, additional supplemental information has been posted by the CMA GSA directly in response to these comments. A summary of the comments and how they are addressed is included in the SGMA Portal Public Comments section below.

9.2.4 Evaluation of Outreach and Engagement

The CMA GSA continues to broaden and deepen outreach and engagement. Most of the actions identified in the 2019 Outreach and Engagement Plan and GSP have been largely met. These include providing regular updates on GSA activities via email to the list of interested parties, building and maintaining a website where stakeholders can obtain CMA GSA information, ask questions, and provide comments, and holding public meetings where members of the public can ask questions and provide comments.

However, on some measures, engagement has declined. Public attendance is tracked in the meeting minutes for each board meeting, and attendance is down since the GSP adoption in 2022 through the end of 2024. The most significant reduction is that the CMA GSA CAG has not met since 2022 – but this is likely due to a limited number of documents being produced for public review.

After the CMA GSP approval in 2024 and new funding implementation, the CMA GSA has moved into a more active phase of GSP implementation and is expected to have more dynamic information and

¹ Department of Water Resources SGMA Portal. <https://sgma.water.ca.gov/portal/> Accessed 2025-07-23.

activities to present and engage with the public, including documents and materials for potential CAG review and comment.

Actions that the CMA GSA can take to improve engagement and increase engagement opportunities include the following:

- Survey for the mailing list.
- Additional public meetings and workshops as appropriate on CMA GSA key projects.
- Explore the use of social media on a limited, non-interactive basis for posting notices.
- Consider the development of informational videos to support GSP implementation efforts.
- Continuing regular written/electronic communications, including newsletters, press releases, and newspaper op-eds.
- Produce drafts of the Annual Reports earlier and completion as an opportunity to engage the public as to basin conditions, consider public review periods, press releases, as well as providing companion information summaries suitable for distribution on social media.

9.3 Public Comments on DWR SGMA Portal

The DWR SGMA portal has three categories of comments: Groundwater Sustainability Plan, Annual Reports, and General Basin Comments. This meets the SGMA regulation, which directs DWR to post items it received, including the GSP,¹ public comments to DWR about the GSP,² DWR's written assessment of the GSP,³ and submitted annual reports.⁴ As described in the

¹ 23 CCR 23 CCR § 355.2(b): "The Department shall post the adopted Plan, submittal date, and materials submitted by the Agency on the Department's website within 20 days of receipt."

² 23 CCR 23 CCR § 355.2(e): "The Department shall evaluate a Plan within two years of its submittal date and issue a written assessment of the Plan, which shall be posted on the Department's website. [..]"

³ 23 CCR 23 CCR § 353.8(e): "Comments received by the Department shall be posted on the Department's website."

⁴ 23 CCR 23 CCR § 355.8(a): "The Department shall acknowledge the receipt of annual reports by written notice and post the report and related materials on the Department's website within 20 days of receipt."

Public Engagement section, the documents posted are already finalized, and the CMA GSA typically does not reply.

9.3.1 General Basin Comments

DWR has not posted any general basin comments regarding the CMA GSA. Included in this category are comments on the decision to develop a GSP and comments on elements of a proposed GSP.¹

9.3.2 Groundwater Sustainability Plan Comments and Assessment

The CMA GSP went through an extensive development process. Individual chapters, sections, and some appendices of the GSP went through an extensive public review and comment process. After these were addressed, the individual components were combined into a single document, which also went through a public review and comment process.² The final document was approved by the action of the CMA GSA Board.

Public Comments to DWR

The CMA GSP was posted on the DWR SGMA portal on January 31, 2022. DWR had a 76-day public review comment period³ ending on April 16, 2022. During the public comment period, DWR received four public comment letters about the CMA GSP. **Table 9-4** lists the public comments. These letters to DWR are from groups that provided comments to the CMA GSA on drafts of the CMA GSP.

*Table 9-4 :
Comment letters to DWR regarding the CMA GSP*

Date	Entity	Summary Content
March 31, 2022	National Marine Fisheries Service	Recommends DWR find the GSP “insufficient.” Disagreement about characterization of Santa Ynez River subterranean streamflow as other than SGMA groundwater and resulting

¹ 23 CCR 23 CCR § 353.8 (c)

² The adequacy of responding to these comments is one of the ten considerations of DWR’s plan assessment, see 23 CCR § 355.4 (b)(10).

³ 23 CCR § 355.2 (c) The Department shall establish a period of no less than 60 days to receive public comments on the adopted Plan, as described in Section 353.8.

Date	Entity	Summary Content
		treatment of above ground flows, including effects on Southern California (SC) steelhead (<i>O. mykiss</i>) and its designated critical habitat.
April 15, 2022	California Department of Fish and Wildlife	Groundwater-dependent ecosystem concerns, including interaction with interconnected surface water.
April 15, 2022	Santa Ynez Water Group	The financing structure for the projects and management actions is unfair to agricultural users. Other technical concerns regarding the method used to set SMCs and MTs.
April 16, 2022	Joint letter from Clean Water Action/Clean Water Fund, The Nature Conservancy, Union of Concerned Scientists, Audubon California, CivicWell	Found plan as Incomplete. Evaluated plan using a rubric distinct from DWR guidance. A series of concerns, including stakeholder engagement, groundwater-dependent ecosystems, interconnected surface water, SMC development, and monitoring network layout.

While these public comments are directed at DWR, not to the CMA GSA, the CMA GSA has considered and addressed in places the concerns raised as part of this Periodic Evaluation. The Plan Amendments also consider the concerns and issues raised in these comments to DWR.

Approximately a year after the end of the DWR's public comment period, DWR received an additional comment letter from the SWRCB on each of the GSPs for the SYRVGB regarding the GSP's characterization of the alluvial aquifer above the Lompoc Narrows. Through joint actions, the three Basin GSAs submitted a response supporting the GSA's characterization of that area. The joint group met with DWR and SWRCB representatives and submitted the Action Plan as a possible approach to address SWRCB and DWR concerns, while staying consistent with SGMA and California water law. A summary of all four of these letters is presented in the following **Table 9-5**.

*Table 9-5:
Comment letters to DWR regarding the CMA GSP after the Close of the Public Comment Period*

Date	Entity	Summary Content
April 14, 2023	State Water Resources Control Board	Water in the Santa Ynez River Alluvium should be presumed percolating groundwater subject to SGMA.
August 14, 2023	Joint Letter, Western Management Area, Central Management Area, Eastern Management Area GSAs	Response about applicability of presumption, including legal issues, technical issues, history, and past findings that Underflow of the Santa Ynez River is surface water.

Date	Entity	Summary Content
January 5, 2024	Joint Letter, Western Management Area, Central Management Area, Eastern Management Area GSAs	Action Plan to coordinate with DWR and the State Board to ensure that surface and groundwater system interactions along the Lower Santa Ynez River are fully addressed and managed.
January 16, 2024	State Water Resources Control Board	Approval of Action Plan.

Written Assessment of Groundwater Sustainability Plan

DWR approved the CMA GSP on January 14, 2024. The DWR has evaluated the three GSPs (individually, the WMA GSP, CMA GSP, and EMA GSP) and components of the coordination agreement collectively in a single written assessment. The written assessment had three parts: Cover Letter, Statement of Findings, and Staff Report. The Staff Report concludes in the “Staff Recommendations,” which in part is a list of Recommended Corrective Actions (RCAs).

Components from the written assessment are addressed throughout this Periodic Review, including but not limited to the RCAs. **Table 9-6** summarizes where specific RCAs are addressed throughout this document.

Table 9-6 :
Discussion of Recommended Corrective Actions in this Periodic Evaluation of the CMA GSP

Recommended Corrective Action		Where Addressed in Periodic Evaluation								
#	Description	New Information	Groundwater Conditions	Projects and Management Actions	Basin Setting	Monitoring Networks	Undesirable Results and Sustainable Management Criteria	GSA Actions	Coordination, Outreach and Engagement	Proposed Revisions
1	Incorporate the Action Plan associated with the management of the Santa Ynez River Alluvium into the GSP and GSP implementation.	Yes	-	Yes	Yes	-	-	Yes	Yes	-
2	Fill data gaps and better understanding the principal aquifers.	Yes	Yes	-	Yes	-	-	-	-	-
3	Evaluate methodologies and terminology in the water budgets for better consistency across the three management areas.	-	-	-	Yes	-	-	-	-	-
4	Reevaluate the sustainable management criteria for the chronic lowering of groundwater levels.	-	Yes	-	-	-	Yes	-	-	Yes
5	Reevaluate the sustainable management criteria for the degradation of water quality.	-	Yes	-	-	-	Yes	-	-	Yes
6	Address inconsistencies in the sustainable management criteria for land subsidence.	-	Yes	-	-	Yes	Yes	-	-	-
7	Reevaluate the sustainable management criteria for the depletions of interconnected surface water.	-	-	-	Yes	-	Yes	-	-	-

9.3.3 Annual Report

Consistent with SGMA Regulations, the CMA GSA prepares Annual Reports that provide information on groundwater conditions and implementation of the GSP for the prior water year. Annual Reports under SGMA began with the first annual report (WY 2021), in March 2022, less than two months after the submission of GSP. For the first three years, the CMA GSA submitted the Annual Report under its own cover. At the request of DWR, starting with WY 2024, the CMA GSA Annual Report is submitted as part of a joint report alongside the annual reports by the WMA GSA and EMA GSA, and a joint analysis of all three independent GSAs.

Comments

Although not required by the SGMA statute or regulations, DWR has opted to allow comments on the Annual Reports. **Table 9-7** lists the public comments that DWR has received in the Annual Reports.

*Table 9-7:
Comment letters to DWR regarding CMA GSA Annual Reports*

Annual Report	Date	Entity	Summary Content
Water Year 2022	June 22, 2023	Central Coast Regional Water Quality Control Board	Request for evaluation of groundwater quality data in future annual reports.

The CMA GSA has considered and addressed this comment by including a periodic evaluation of water quality assessment in the following annual report (Third Annual Report, Water Year 2023).

Assessment by DWR

DWR has provided feedback on two of the four annual reports submitted by the CMA GSA, as summarized in **Table 9-8**.

The CMA GSA, along with the other two Basin GSAs, addressed these items identified by DWR on the WY2023 Annual Report in preparing the WY 2024 Annual Report, although these changes mean a more expensive reporting process. Compiling the three GSA annual reports into a single document

requires each GSA Board to approve the contents of their annual report as before. Now, in coordination with the other two Basin GSAs, the contents are submitted to a central editor, contents are compiled, and then a new joint action by all three GSA Boards is required to approve the complete report. Each of these steps includes public review requirements. To meet the April 1 filing deadline, this means the CMA GSA content typically must be completed no later than January 31.

Table 9-8:
Review of CMA GSA Annual Reports by DWR

Annual Report	Date	Summary Content
Water Year 2023	May 31, 2024	The GSAs of the SYRVGB should submit a single annual report document with aggregate data. Do not use projected groundwater pumping data for gap between the end of the SYRWCD fiscal year (end of June) and water year (end of September).
Water Year 2024, Joint WMA/CMA/EMA GSAs	August 22, 2025	Some sustainable management criteria were not updated, although letter does not identify management area or criteria.

Estimated data¹ reporting to the SYRWCD, used by the CMA GSA, for the last quarter of the water year was used due to water use reporting, which is collected on a biannual basis (January-June, July-December).² The biannual data is disaggregated into estimated monthly data. The reporting date for July-December is January 31, so all data is typically compiled by February 15. To accommodate this schedule, this analysis must then be completed twice – initially with projected data, and again with the reported data. For the WY 2024 report, the CMA GSA released an updated version with the change made from the projected-estimated data to the reported data.

¹ Regulation anticipated estimated data, see 23 CCR § 356.2(b)(2): “Data shall be collected using **the best available measurement methods** ..., and identifies the method of measurement (direct **or estimate**)....” (Emphasis added.)

² As per CWC Section 75611, which applies to each operator of a water-producing facility within the SYRWCD.

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SECTION 10: Summary of Proposed or Completed Revisions to Plan Elements

This section summarizes recommendations regarding the need for any amendment to the Groundwater Sustainability Plan for the Santa Ynez River Valley Groundwater Basin Bulletin 118 Basin No. 3-15 Central Management Area Groundwater Sustainability Agency (“GSP”).¹ These recommendations are provided for consideration by the CMA GSA Board of Directors as revisions to the GSP approved by DWR in 2024. As a result of this Periodic Evaluation, at this time no amendments to the GSP are needed or recommended to the CMA GSA Board of Directors.

Plan Amendments under SGMA are discretionary and initiated and approved by the CMA GSA’s Board of Directors. Neither the SGMA statute nor the regulations require amendments at a specific time or under specific conditions. In general, amendments are considered when proposed changes are significant or material, such that they affect the overall management of the basin, including Sustainable Management Criteria (SMCs), the sustainability goal, the representative monitoring network in a substantial way, or the Projects and Management Actions that support achieving sustainability. Amendments may also be appropriate when revisions are needed to support funding , improve public transparency, or reflect fundamental changes in governance or implementation.

Plan Amendments require significant procedural action to be implemented. Plan Amendments can only occur along with a plan evaluation. In terms of procedure, SGMA requires outreach and engagement, public hearing and noticing of not less than 90 days, and adoption by the CMA GSA’s Board of Directors. Following adoption, the amended GSP is submitted to DWR for review and public comment. This review period lasts up to two years, which may result in an indeterminate finding by DWR. An indeterminate finding by DWR likely would restart the process.

¹ 23 CCR § 356.4 (i) A description of completed or proposed Plan amendments.

This Periodic Evaluation reviews new information, new guidance, proposed RCAs, and identified potential updates to the projects and management actions, basin setting, monitoring networks, undesirable results, and sustainable management criteria. **Table 10-1** is a listing of updated items related to GSP elements and recommendations for addressing each item. As summarized in this table, the updates identified through this Periodic Evaluation are considered part of normal adaptive management and do not require material changes to the GSP. The updates, therefore, do not require a formal amendment of the GSP and one is not recommended at this time.

10.1 Sustainability Considerations

Updated items (see Table 10-1) were evaluated based on significance and effects on findings sustainability, and update urgency. An item that resulted in altered findings related to sustainability would be a reason for an immediate Plan Amendment. As detailed in Section 3, the CMA GSA is currently meeting the sustainability goal. Conditions in the CMA are not near the criteria that would indicate unsustainable conditions, and based on current trends and management actions, conditions are expected to continue to be sustainable through 2042 and beyond.

Items addressing changes to the CMA GSA governance and administration and Basin Setting did not directly affect how sustainability is assessed in the CMA. Changes made to the monitoring network including filling of data gaps are administrative updates to the network and do not change findings of sustainability.

Several of the RCAs are for updates to the SMCs, and these are evaluated in Section 7. These include reevaluation of the potential for undesirable results for different time periods and hydrologic conditions. As described in Section 7, the results of this reevaluation are expected to result in more permissive criteria for sustainability. These changes are not expected to make a change in the findings of sustainability, if (as expected) the CMA GSA continues to be sustainable, as it has during this entire Periodic Evaluation period.

Table 10-1:
Updated Items related to GSA Plan Elements

Plan Element	Type of Change/ Completion Status	Update Item	Basis for Revision	Basis for Limited or Delayed Action	Related DWR RCA
GSA Governance and Administration	Administrative Update COMPLETED	Update to reflect Joint Powers Authority (JPA) structure and fee program	Institutional organizational changes since GSP adoption	Same voting structure and member agencies.	—
Basin Setting – Hydrogeologic Conceptual Model	Administrative Update COMPLETED	Incorporate AEM survey results and updated 3D geologic model	Improved understanding of aquifer geometry and structure	Refines and improves understanding but not substantially altered.	RCA #2
Basin Setting – Climate Change Assumptions	Administrative Update COMPLETED	Incorporate updated sea-level rise projections and reduced SWP reliability	New state guidance alters long-term conditions	Does not affect understanding of undesirable results related to sea-level rise.	—
Basin Setting – Groundwater Flow Model	Administrative Update COMPLETED	Update model layering and inputs based on new geophysical data	Reflects best available science and improved basin representation	Refines and improves understanding but not substantially altered.	RCA #2

Plan Element	Type of Change/ Completion Status	Update Item	Basis for Revision	Basis for Limited or Delayed Action	Related DWR RCA
Monitoring Network – Groundwater Levels and Storage	Administrative Update	Add new wells; remove/replace unreliable wells; improve spatial coverage	Changes in monitoring availability and performance since 2022 GSP	Monitoring networks are substantially similar to GSP.	RCA #2
Monitoring Network – Water Quality	Administrative Update COMPLETED	Expand monitoring coverage; standardize parameters; reduce reliance on external programs	Data gaps and reduced ILRP/USGS coverage affect SMC evaluation	Monitoring networks are substantially similar to GSP.	RCA #5
Monitoring Network – Surface Water / ISW	Administrative Update	Integrate new stream gage; expand surface water monitoring framework	Data gaps in surface water interactions and outflow estimates	Monitoring networks are substantially similar to GSP.	RCA #7
Sustainable Management Criteria – Water Quality	Administrative Update	Remove “non-drought” qualifier.	Improves clarity and consistency; reflects updated regulatory framework and monitoring limitations	Monitoring networks are substantially similar to GSP.	RCA #5
Sustainable Management Criteria – Land Subsidence	Administrative Update	Clarify quantitative undesirable result is when it is “occurring over 20% or more of the area of the CMA GSA”	Improves clarity when applying undesirable result to regional data such as InSAR.	Substantially similar to GSP.	RCA #6

Plan Element	Type of Change/ Completion Status	Update Item	Basis for Revision	Basis for Limited or Delayed Action	Related DWR RCA
Sustainable Management Criteria – Land Subsidence	Future Amendment	Remove numerical thresholds.	Aligns with DWR guidance and avoids unnecessary thresholds	Does not significantly affect findings of sustainability.	RCA #6
Sustainable Management Criteria – Interconnected Surface Water	Future Amendment	Revise minimum threshold proxy using seasonal low (fall) groundwater levels; incorporate new stream gage data. Calibrate model with new streamflow data.	Existing proxy not fully supported by data; improves defensibility and responsiveness to new monitoring	The period of record currently is too limited, and the data lack sufficient maturity to justify establishing new criteria.	RCA #7
Sustainable Management Criteria – Groundwater Levels	Future Amendment	Evaluate incorporation of seasonal lows and updated dataset in future cycles	Additional monitoring data needed before revising thresholds	The period of record currently is too limited, and the data lack sufficient maturity to justify establishing new criteria.	RCA #4
Sustainable Management Criteria – Groundwater Levels	Future Amendment	Change hydrology basis for undesirable results and SMCs from typical hydrology to drought conditions.	Improves clarity and consistency; allows for single criteria to be used in all conditions.	The period of record currently is too limited, and the data lack sufficient maturity to justify establishing new criteria. Improved groundwater model	RCA #4

Plan Element	Type of Change/ Completion Status	Update Item	Basis for Revision	Basis for Limited or Delayed Action	Related DWR RCA
				and model runs may be required.	
Projects and Management Actions (PMA)	Administrative Update	Update project status; prioritize monitoring/data gap projects; clarify triggers for future actions	Reflects implementation experience, funding changes, and current basin conditions	PMAs substantially similar to GSP.	—

10.2 Maturity Considerations

Several of the updated items currently do not have a sufficient period of record. Analysis based on the limited period of record would be limited in value. It is, therefore, recommended that the CMA GSA's Board of Directors continue gathering relevant data and conduct future analysis of the need for development of a potential future GSP amendment based on that longer period of record and additional data.

10.3 Agency Action Considerations

The current GSP for the CMA GSA does not require that unsustainable conditions occur prior to acting on Projects and Management Actions. As described in Section 6, the CMA GSA's Board of Directors may opt to take projects and actions designed to improve groundwater sustainability prior to any findings of conditions at or approaching SMCs. Thus, delaying any proposed future project amendments identified in Table 10-1 would not jeopardize the CMA GSA's ability to achieve its sustainability goal.

10.4 Summary of Plan Revisions

This evaluation concludes that groundwater conditions in the CMA GSA remain sustainable, and no undesirable results have occurred during the evaluation period. The CMA GSA evaluated whether amendments to the GSP are required based on:

- New information;
- Monitoring results;
- Evaluation of sustainability indicators;
- Implementation progress of PMAs.

The CMA GSA finds that:

- No undesirable results are occurring;
- The GSP continues to function as intended;
- Existing SMCs and PMAs are sufficient under current conditions.
- Amendments may result in more permissive SMCs during typical hydrologic conditions.

In the future, a GSP amendment may be necessary. These could, for example, help fully address new guidance, including with regards to interconnected surface water and improved groundwater management during conditions of drought. However, the development of any appropriate amendments needs to follow the same data-driven approach that informed the GSP. The period of record is currently relatively limited and additional period of record and data will help better inform the potential need for any future GSP amendments.

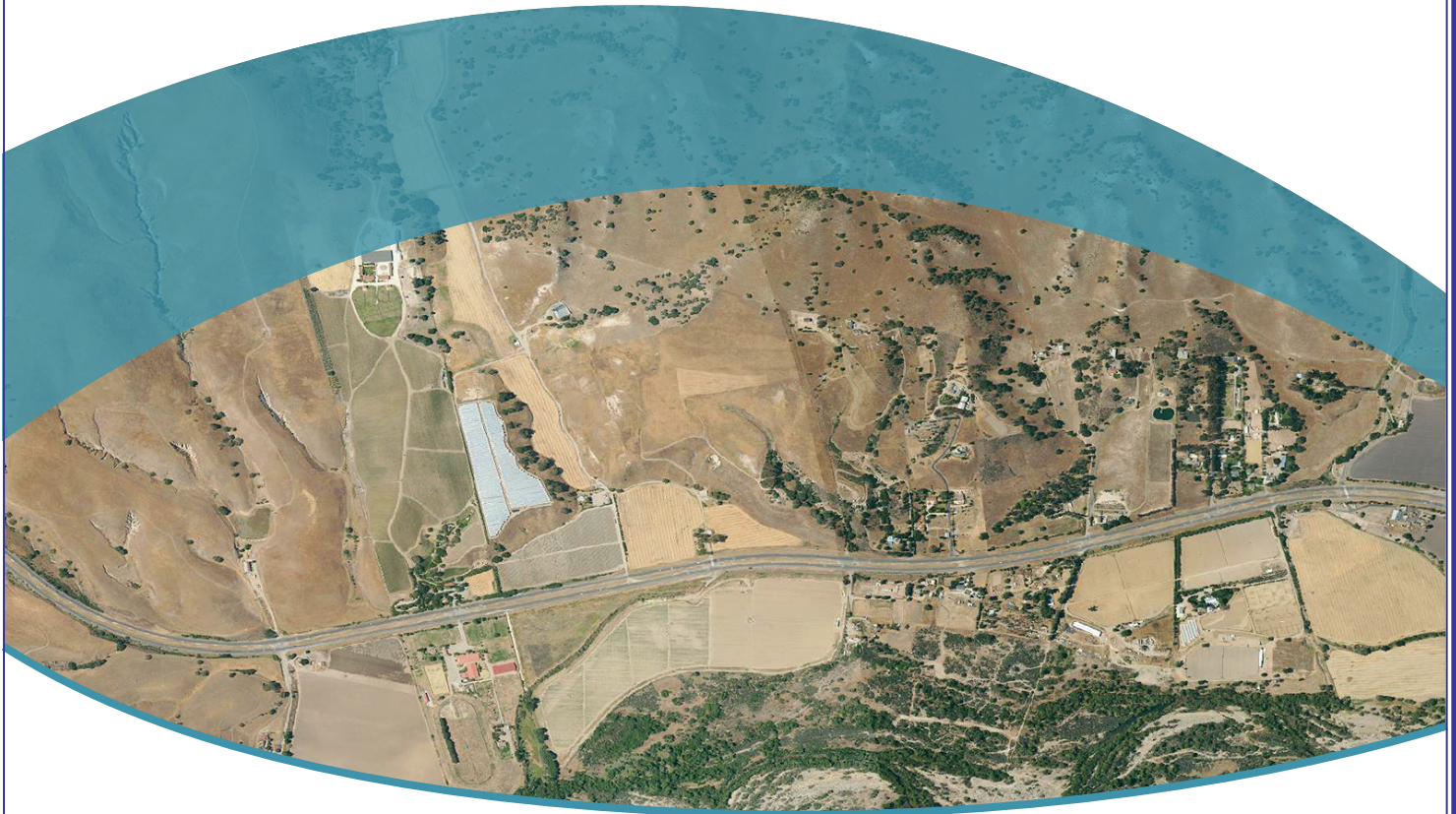
No Plan Amendments to the CMA GSP are recommended to the CMA GSA's Board of Directors at this time.

SECTION 11: Appendices

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Santa Ynez River Valley Groundwater Basin
Central Management Area
Groundwater Sustainability Agency



Section 1 – Introduction

Appendix 1-A:

SGMA Annual Report Statute and Regulations

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**Portions of Sustainable Groundwater Management Act Statute and Regulations
Specific to Periodic Review and Assessment Requirements**

**CALIFORNIA WATER CODE
DIVISION 6. CONSERVATION, DEVELOPMENT, AND UTILIZATION OF STATE
WATER RESOURCES
PART 2.74. SUSTAINABLE GROUNDWATER MANAGEMENT
CHAPTER 6. GROUNDWATER SUSTAINABILITY PLANS**

Section 10728.2. Periodic Review and Assessment

A groundwater sustainability agency shall periodically evaluate its groundwater sustainability plan, assess changing conditions in the basin that may warrant modification of the plan or management objectives, and may adjust components in the plan. An evaluation of the plan shall focus on determining whether the actions under the plan are meeting the plan's management objectives and whether those objectives are meeting the sustainability goal in the basin.

Section 10733. Department Review of Plans

- (a) The department shall periodically review the groundwater sustainability plans developed by groundwater sustainability agencies pursuant to this part to evaluate whether a plan conforms with Sections 10727.2 and 10727.4 and is likely to achieve the sustainability goal for the basin covered by the groundwater sustainability plan.
- (b) If a groundwater sustainability agency develops multiple groundwater sustainability plans for a basin, the department shall evaluate whether the plans conform with Sections 10727.2, 10727.4, and 10727.6 and are together likely to achieve the sustainability goal for the basin covered by the groundwater sustainability plans.
- (c) The department shall evaluate whether a groundwater sustainability plan adversely affects the ability of an adjacent basin to implement their groundwater sustainability plan or impedes achievement of sustainability goals in an adjacent basin.

**CALIFORNIA CODE OF REGULATIONS
TITLE 23. WATERS
DIVISION 2. DEPARTMENT OF WATER RESOURCES
CHAPTER 1.5. GROUNDWATER MANAGEMENT
SUBCHAPTER 2. GROUNDWATER SUSTAINABILITY PLANS**

ARTICLE 1. Introductory Provisions

§ 350.4. General Principles

Consistent with the State's interest in groundwater sustainability through local management, the following general principles shall guide the Department in the implementation of these regulations.

[.]

(c) The Department shall evaluate the adequacy of all Plans, including subsequent modifications to Plans, and reports and periodic evaluations based on a substantial compliance standard as described in Article 6, provided that the objectives of the Act are satisfied.

[...]

ARTICLE 3. Monitoring Protocols

§ 352.2. General Principles

(c) Monitoring protocols shall be reviewed at least every five years as part of the periodic evaluation of the Plan, and modified as necessary.

ARTICLE 4. Procedures

§ 353.4. Reporting Provisions

Information required by the Act or this Subchapter, including Plans, Plan amendments, annual reports, and five-year assessments, shall be submitted by each Agency to the Department as follows:

- (a) Materials shall be submitted electronically to the Department through an online reporting system, in a format provided by the Department as described in Section 353.2.
- (b) Submitted materials shall be accompanied by a transmittal letter signed by the plan manager or other duly authorized person.

ARTICLE 5. Plan Contents

SUBARTICLE 3. Sustainable Management Criteria

§ 354.38. Assessment and Improvement of Monitoring Network

- (a) Each Agency shall review the monitoring network and include an evaluation in the Plan and each five-year assessment, including a determination of uncertainty and whether there are data gaps that could affect the ability of the Plan to achieve the sustainability goal for the basin.
- (b) Each Agency shall identify data gaps wherever the basin does not contain a sufficient number of monitoring sites, does not monitor sites at a sufficient frequency, or utilizes monitoring sites that are unreliable, including those that do not satisfy minimum standards of the monitoring network adopted by the Agency.
- (c) If the monitoring network contains data gaps, the Plan shall include a description of the following:
 - (1) The location and reason for data gaps in the monitoring network.
 - (2) Local issues and circumstances that limit or prevent monitoring.

(d) Each Agency shall describe steps that will be taken to fill data gaps before the next five-year assessment, including the location and purpose of newly added or installed monitoring sites.

(e) Each Agency shall adjust the monitoring frequency and density of monitoring sites to provide an adequate level of detail about site-specific surface water and groundwater conditions and to assess the effectiveness of management actions under circumstances that include the following:

- (1) Minimum threshold exceedances.
- (2) Highly variable spatial or temporal conditions.
- (3) Adverse impacts to beneficial uses and users of groundwater.
- (4) The potential to adversely affect the ability of an adjacent basin to implement its Plan or impede achievement of sustainability goals in an adjacent basin.

ARTICLE 7. Annual Reports and Periodic Evaluations by the Agency

§ 356. Introduction to Annual Reports and Periodic Evaluations by the Agency

This Article describes the procedural and substantive requirements for the annual reports and periodic evaluation of Plans prepared by an Agency.

[...]

§ 356.4. Periodic Evaluation by Agency

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, and shall include the following:

- (a) A description of current groundwater conditions for each applicable sustainability indicator relative to measurable objectives, interim milestones and minimum thresholds.
- (b) A description of the implementation of any projects or management actions, and the effect on groundwater conditions resulting from those projects or management actions.
- (c) Elements of the Plan, including the basin setting, management areas, or the identification of undesirable results and the setting of minimum thresholds and measurable objectives, shall be reconsidered and revisions proposed, if necessary.
- (d) 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.
- (e) A description of the monitoring network within the basin, including whether data gaps exist, or 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.

(f) 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.

(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.

(i) A description of completed or proposed Plan amendments.

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

(k) 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 10733.

ARTICLE 8. Interagency Agreements

§ 357.4. Coordination Agreements

[...]

(d) The coordination agreement shall describe a process for submitting all Plans, Plan amendments, supporting information, all monitoring data and other pertinent information, along with annual reports and periodic evaluations.

Section 1 – Introduction

Appendix 1-B:

DWR (2024) Proposed Recommended Corrective Actions
excerpt from GSP

Assessment Staff Report,
Santa Ynez River Valley Basin (No. 3-015)

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5. Continually coordinate with the appropriate groundwater users, including but not limited to domestic well owners and state small water systems, and the appropriate overlying county jurisdictions developing drought plans and establishing local drought task forces to evaluate how their Plan's groundwater management strategy aligns with drought planning, response, and mitigation efforts within the basin.

5 STAFF RECOMMENDATION

Department staff recommend approval of the GSP with the recommended corrective actions listed below. The Santa Ynez River Valley Basin GSP conforms with Water Code Sections 10727.2 and 10727.4 of SGMA and substantially complies with the GSP Regulations. At this time, it appears that implementation of the GSP will likely achieve the sustainability goal for the Santa Ynez River Valley Basin. The GSAs have identified several areas for improvement of their Plans and Department staff concur that those items are important and should be addressed as soon as possible. Department staff have also identified additional recommended corrective actions that should be considered by the GSAs for the first periodic assessment of the GSPs.

These recommended corrective actions apply to all three of the GSPs in the Basin (unless otherwise stated) and should be addressed in a coordinated manner. Addressing these recommended corrective actions will be important to demonstrate that implementation of the Plan is likely to achieve the sustainability goal for the Basin consistent with SGMA timeframes. The recommended corrective actions include:

RECOMMENDED CORRECTIVE ACTION 1

In response to a series of meetings between the GSAs, the Department, and the State Water Board regarding the management of water pumped from the Santa Ynez River Alluvium, the GSAs prepared and transmitted an action plan via the Department's SGMA Portal titled *Action Plan for Management of All Well Production Along the Lower Santa Ynez River, Above the Lompoc Narrows*. Department staff recommend incorporating the action plan (as described in the GSAs' January 5, 2024, letter) into the Plan for the Basin and document the implementation of the action plan in future periodic evaluations of the Plan. The Department will track progress through review of annual reports and periodic evaluations.

RECOMMENDED CORRECTIVE ACTION 2

Provide additional analysis and description that more clearly delineates the physical properties of the principal aquifers and the physical relationship of the Santa Ynez River Alluvium with those principal aquifers. The analysis and description should indicate improved understanding of the hydrogeologic contact, lateral flow, and vertical flow of groundwater between the principal aquifers, the river alluvium, and various surface

streams – including tributaries – in the entire Basin. This analysis should inform the GSA's continued effort to understand interconnected surface water and the approach to manage depletions of interconnected surface water due to pumping.

RECOMMENDED CORRECTIVE ACTION 3

The GSAs need to reevaluate the water budgets for consistency:

- a. Collectively, in the coordination agreement or otherwise, collaboratively and consistently assess the Basin's hydrologic conditions, develop consistent groundwater inflows and outflows, assess associated data gaps effecting the water budget (like groundwater level information), and refine the water budgets to show how projected GSA projects and management actions will improve the current and projected groundwater deficits. This assessment should be conducted for the Basin as a whole, and not just the individual management areas.
- b. Adopt and employ consistent time periods, methods, terminologies, and definitions for the various physical components of the Basin that inform the Basin-wide water budget including the sustainable yield and groundwater change in storage. For example, the GSAs should collectively use the same time periods for the development of their sustainable yields and should clearly explain how releases from Lake Cachuma are managed to effectively regulate the surface water and groundwater system through each of the three management areas.

RECOMMENDED CORRECTIVE ACTION 4

The GSAs need to reevaluate the sustainable management criteria for the chronic lowering of water levels and address the following items:

- a. Revise the definition of undesirable results and language pertaining to significant and unreasonable chronic lowering of groundwater levels to remove the non-drought year condition and discuss how extractions and recharge will be managed as necessary to ensure that reductions in groundwater levels or storage during dry years are offset by increases in groundwater levels or storage during other years within the sustainable management criteria for the chronic lowering of groundwater levels.
- b. Revise the sustainable management criteria to be based on seasonal low groundwater levels to ensure potential impacts to beneficial uses and users are considered.
- c. Through a well impact analysis, describe where the proposed minimum thresholds are set relative to well construction information that would indicate whether or not more substantial impacts to beneficial users are occurring. This assessment should include evaluating how the sustainable management criteria may affect production wells relative to the depth of pump intake, bottom of the screen interval, and well dewatering, as applicable. This information should be clearly reported in

the Plan for the entire Basin including quantities of wells that may be impacted and the approximate locations of where any potential impacts may occur.

RECOMMENDED CORRECTIVE ACTION 5

The GSAs need to reevaluate the sustainable management criteria for water quality and address the following items:

- a. The EMA GSP should reevaluate the quantitative definition of undesirable results related to degradation of water quality. The quantitative definition of an undesirable result should incorporate a combination of minimum threshold exceedances, similar to the WMA GSP and CMA GSP, and clearly explain how that quantitative criteria represents significant and unreasonable conditions occurring throughout the management area and Basin.
- b. Provide an assessment of when and how GSA activities may impact water quality and how the GSAs will discern whether or not the increased degradation of water quality is distinct from the “other causes of increase salt and nutrients” as noted in the Plan.
- c. Similar to the chronic lowering of groundwater levels sustainable management criteria and other sustainability indicators, the GSAs should not include water year type criteria when defining undesirable results. The GSAs should revise the definition of undesirable results and language pertaining to significant and unreasonable degradation of water quality to remove the non-drought year condition.
- d. Clearly convey the minimum threshold values for each representative monitoring well including explaining which methodology was used (i.e., WQO, MCL, current conditions) to derive the minimum threshold values. The GSAs should also provide more detail regarding how average concentrations (i.e., between 2015 and 2018), January 2015 baseline conditions, and “current conditions” were derived. The GSAs should compile this information – including the minimum thresholds; measurable objectives; and interim milestones – for each well in a tabular format indicating the minimum threshold value and any comparative averages and baseline conditions for the entire Basin.

RECOMMENDED CORRECTIVE ACTION 6

Reevaluate the sustainable management criteria for land subsidence and clarify in the GSP what specifically the GSA considers the quantitative definition of an undesirable results.

RECOMMENDED CORRECTIVE ACTION 7

Department staff understand that estimating the location, quantity, and timing of stream depletion due to ongoing, Basin-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 in understanding and sustainably managing depletions of interconnected surface water.

The GSA should work to address the following items by the first periodic evaluation:

- a. Provide additional details to demonstrate how the proposed minimum thresholds and measurable objectives for interconnected surface water will avoid an unreasonable depletion of surface water, supported by an analysis of the potential impacts to beneficial uses and users. Additionally, staff recommend that the GSAs eliminate the non-drought year condition in the definition of the undesirable result for depletions of interconnected surface water. The GSAs should also use fall or seasonal low groundwater levels to assess minimum thresholds and quantify undesirable results.
- b. Continue to fill data gaps, collect additional monitoring data, and implement the current strategy to understand and manage depletions of interconnected surface water and define segments of interconnectivity and timing.
- c. 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 GSA's jurisdictional area.
- d. Consider utilizing the interconnected surface water guidance, as appropriate, when issued by the Department to establish quantifiable minimum thresholds, measurable objectives, and management actions.

Section 2 – New Information Collected

Appendix 2-A:

Ramboll (2022) Santa Ynez Western And Central Management
Area AEM Survey Project 1690019527

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The Santa Ynez Western And Central Management Area AEM Survey prepared by Ramboll Water
Resources can be found here:

<https://www.santaynezwater.org/cma-wma-a-e-m-survey>

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Section 3 – Groundwater Conditions

Appendix 3-A:

Groundwater Level Hydrographs for Assessing Chronic Decline in Groundwater Levels, Central Management Area

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**APPENDIX 3-A:
GROUNDWATER LEVEL HYDROGRAPHS
FOR ASSESSING
CHRONIC DECLINE IN GROUNDWATER LEVELS,
CENTRAL MANAGEMENT AREA
WATER YEAR 2024**



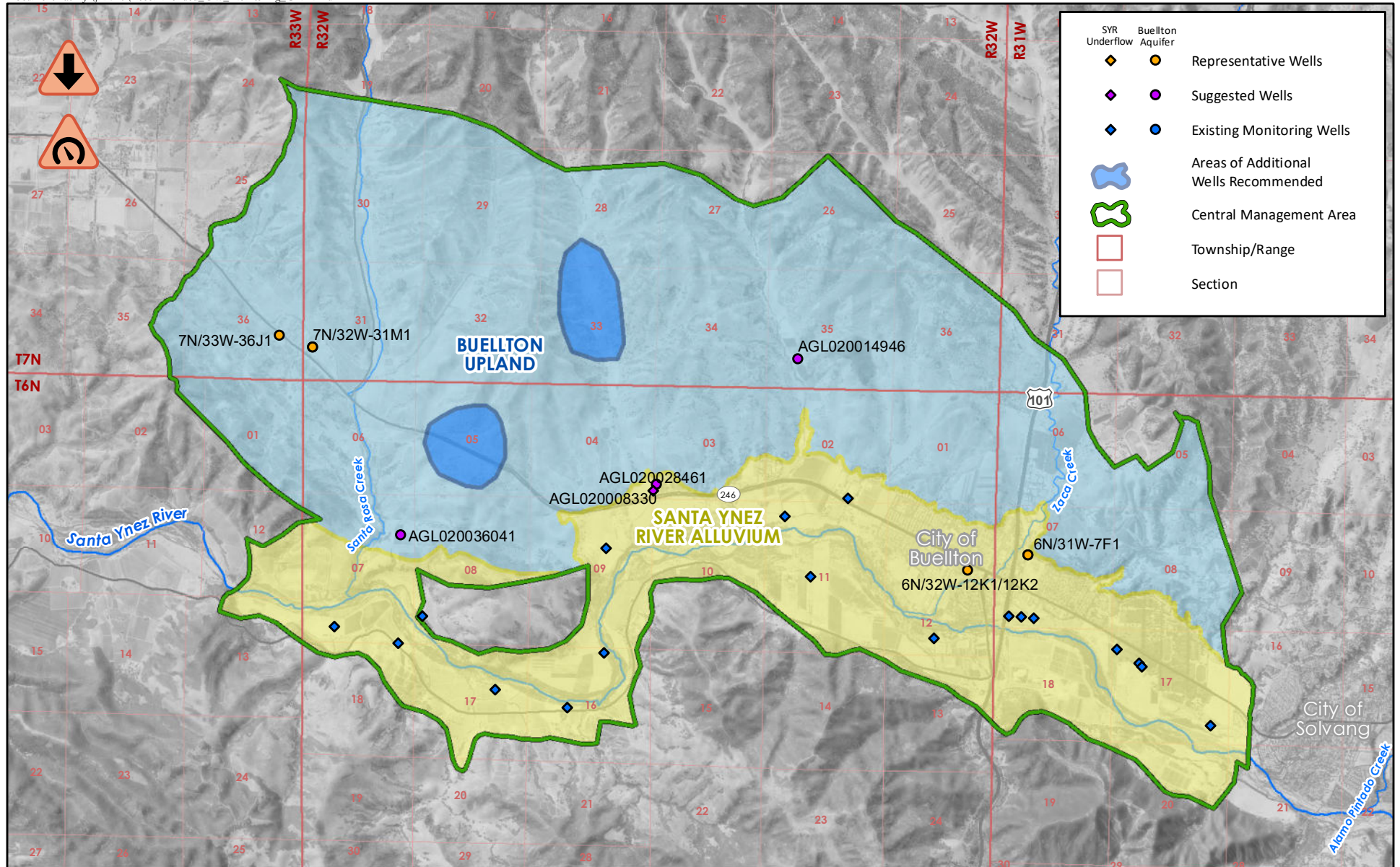
This appendix includes hydrographs, which are graphs of water levels in wells. These are the representative wells for monitoring groundwater level decline. As per the SGMA regulations, this includes the period from January 1, 2015 through the end of the Water Year 2024. Shown on these graphs are key SGMA criteria: measurable objective, early warning, and minimum threshold. All included wells are in the Buellton Aquifer.

The Groundwater Sustainability Plan (GSP) includes hydrographs of the long-term period of record. A copy of the GSP, water level data, and hydrographs are available at <https://sywater.info>.



LIST OF ACRONYMS AND ABBREVIATIONS

BGS	below ground surface
CASGEM	California Statewide Groundwater Elevation Monitoring
CMA	Central Management Area
FT	feet
NAVD88	North American Vertical Datum of 1988
USBR	United States Bureau of Reclamation
USGS	United States Geologic Survey
WL	Water Level



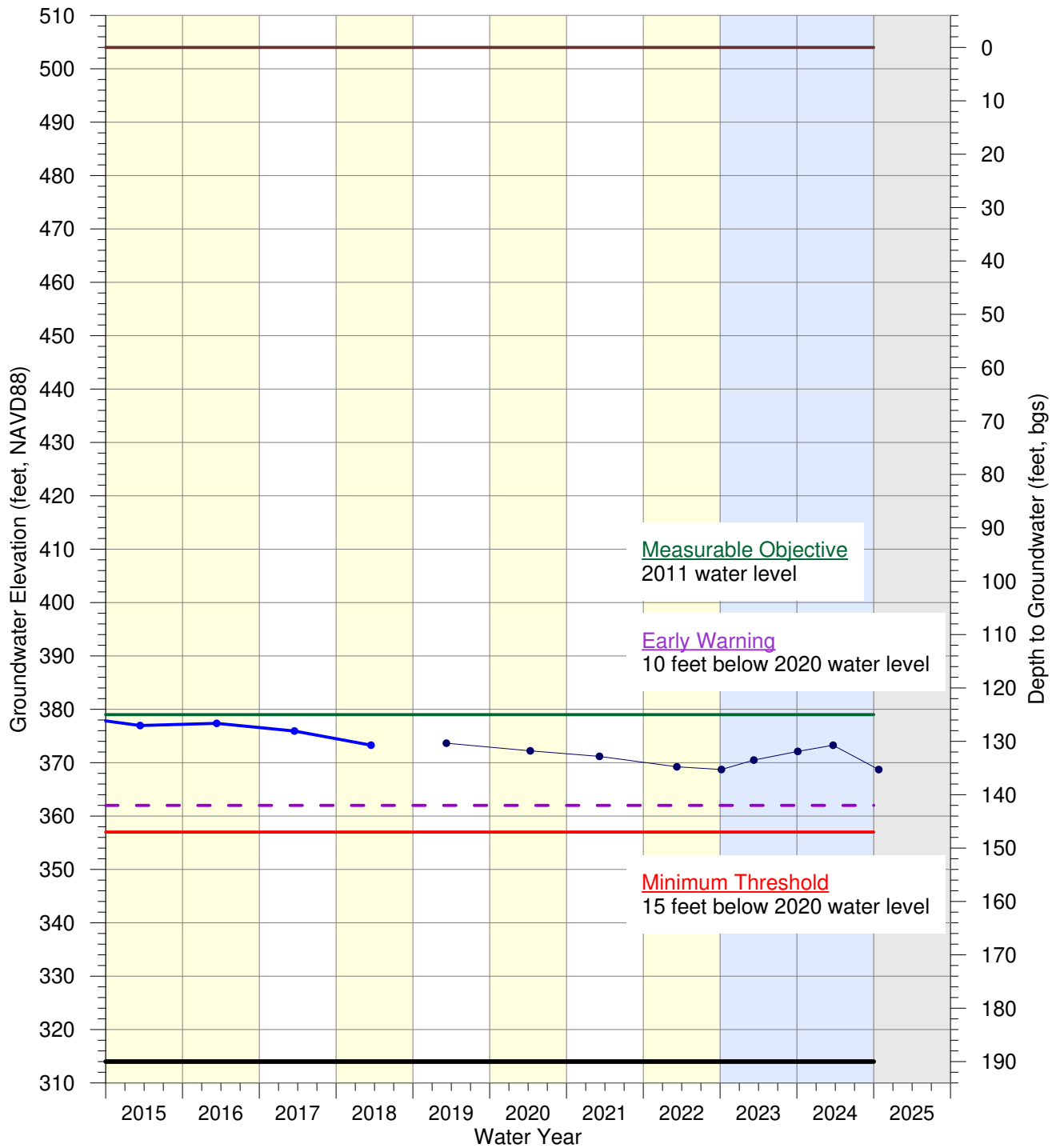
CMA MONITORING NETWORK AND REPRESENTATIVE MONITORING WELLS FOR GROUNDWATER LEVELS AND GROUNDWATER STORAGE

0 0.5 1
Miles



CASGEM ID
25268
Voluntary

CMA Representative Monitoring Well
for Buellton Aquifer
(Buellton Upland Subarea)
7N/33W-36J1



- USGS (343824120175201)
- County of Santa Barbara
- Ground Surface (504 feet above mean sea level)
- Depth of Well (190 feet); Perforations TBD

DBID
82



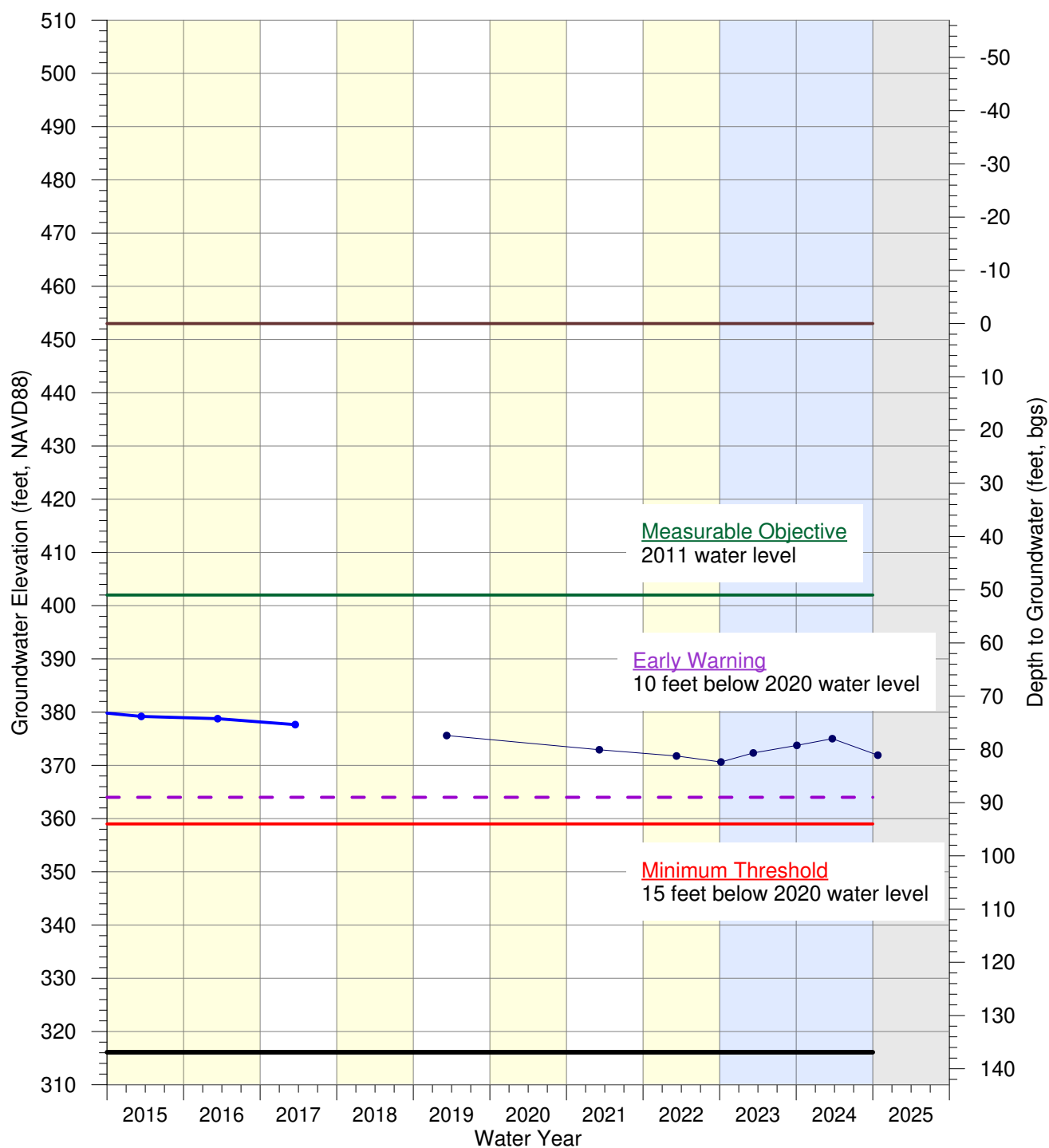
REPRESENTATIVE
MONITORING WELL
Buellton Aquifer
Buellton Upland

Water Year Type (1942-2024)

- Wet
- No Data
- Above/Below Normal
- Dry / Critically Dry

CASGEM ID
23681
Voluntary

CMA Representative Monitoring Well
for Buellton Aquifer
(Buellton Upland Subarea)
7N/32W-31M1



- USGS (343821120173601)
- County of Santa Barbara
- Ground Surface (453 ± 20 feet above mean sea level)
- Depth of Well (136.9 feet); Perforations TBD

DBID
75

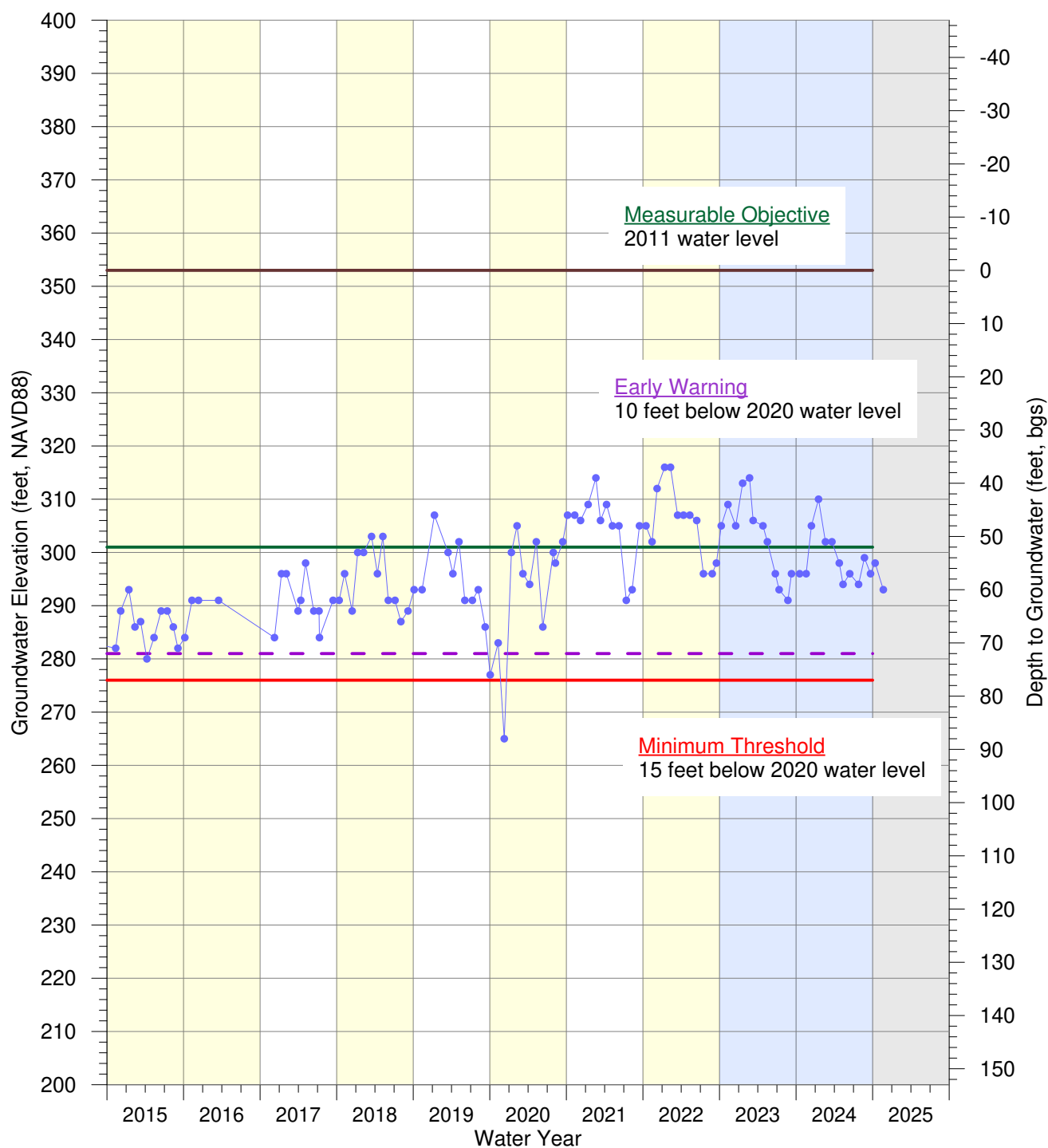


REPRESENTATIVE
MONITORING WELL
Buellton Aquifer
Buellton Upland

Water Year Type (1942-2024)

- Wet
- No Data
- Above/Below Normal
- Dry / Critically Dry

CMA Representative Monitoring Well
for Buellton Aquifer
(Santa Ynez River Alluvium Subarea)
6N/32W-12K2



- USGS (343649120114401)
- City of Buellton
- Ground Surface (353 ±5 feet above mean sea level)
- Depth of Well (1,014 feet); Perforations 620-1,000 feet

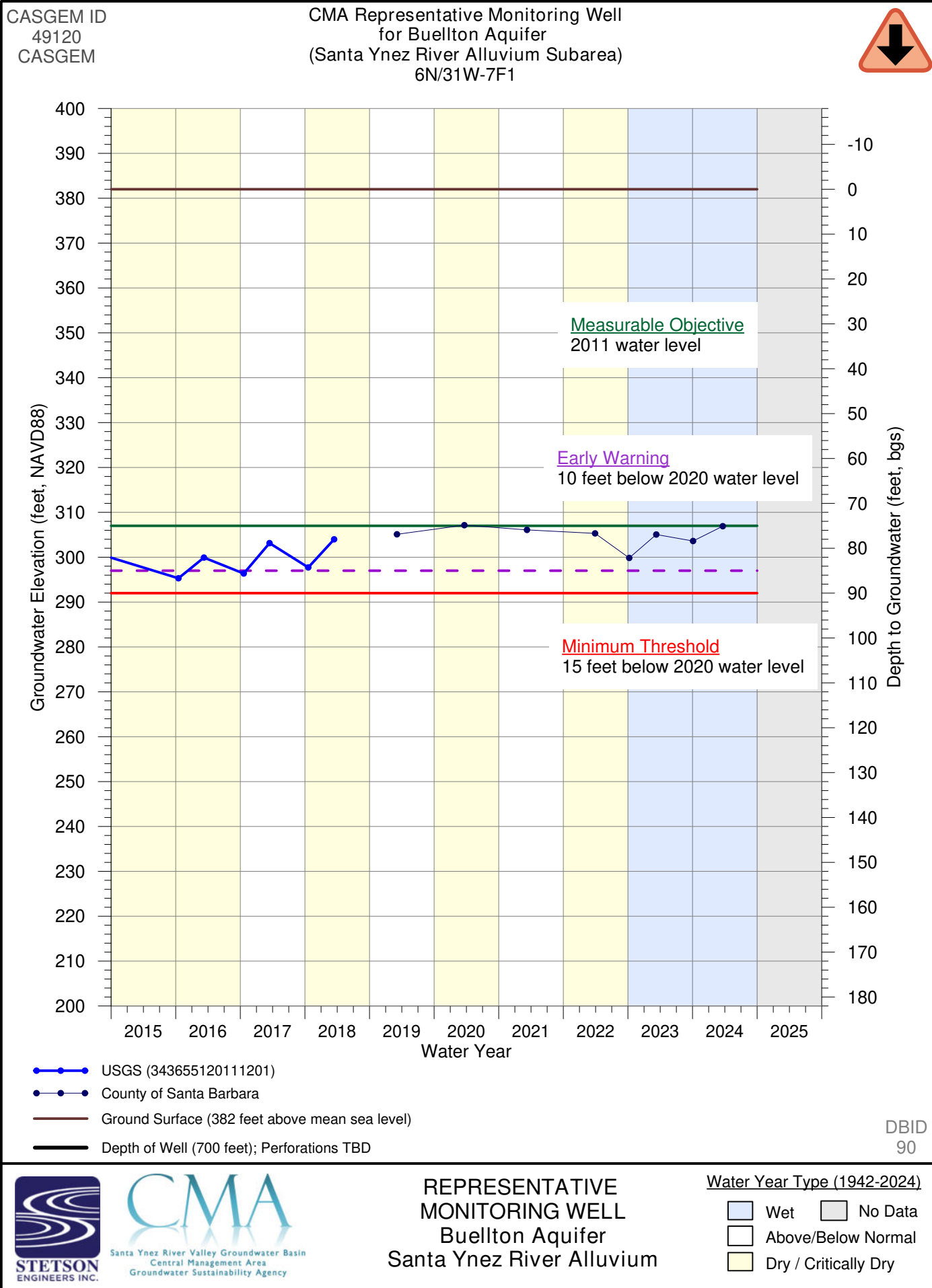
DBID
909



REPRESENTATIVE
MONITORING WELL
Buellton Aquifer
Santa Ynez River Alluvium

Water Year Type (1942-2024)

- Wet
- No Data
- Above/Below Normal
- Dry / Critically Dry



Section 3 – Groundwater Conditions

Appendix 3-B:

CMA Water Quality, Detailed Documentation about Water Quality Indicators By Well

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APPENDIX 3-B:
GROUNDWATER QUALITY,
CENTRAL MANAGEMENT AREA
WATER YEAR 2025



This appendix includes a discussion of groundwater quality. This is the same information presented in the Water Year 2025 Annual Report

LIST OF ACRONYMS AND ABBREVIATIONS

Cl	Chloride
CMA	Central Management Area
DWR	Department of Water Resources
GSP	Groundwater Sustainability Plan
ILRP	Irrigated Lands Reporting Program
mg/L	milligrams per Liter
MO	Measurable Objective
MT	Minimum Thresholds
N	Nitrogen
Na	Sodium
NO ₃	Nitrate
TDS	Total Dissolved Solids
SGMA	Sustainable Groundwater Management Act
SO ₄	Sulfate
µg/L	micrograms per Liter (1 mg/L = 1000 µg/L)

The Central Management Area (CMA) Groundwater Sustainability Plan (GSP) identified minimum thresholds (MT), measurable objectives (MO), and interim milestones (at 5 years (2027), 10 years (2032), and 15 years (2037)) for the assessment of groundwater quality. **Table B-1** summarizes the constituents and concentrations identified for the CMA to assess water quality sustainability. **Table B-2** identifies the wells used to assess water quality. Groundwater quality data collection is currently through two programs of the State Water Resources Control Board: Public Water System Reporting in the Safe Drinking Water Information System (SDWIS) and the California Irrigated Lands Reporting Program (ILRP). ILRP data is accessed through the GeoTracker GAMA website.

Table B-1
SGMA Assessment Criteria for Water Quality in the CMA

Constituent	Minimum Thresholds (mg/L)	Measurable Objectives (mg/L)	Interim Milestones (mg/L)		
			5-year (2027)	10-year (2032)	15-year (2037)
Salinity as Total Dissolved Solids (TDS)	1,000	1,000	1,000	1,000	1,000
Chloride (Cl)	150	150	150	150	150
Sulfate (SO ₄)	700	700	700	700	700
Sodium (Na)	100	100	100	100	100
Nitrate (N)	10	10	10	10	10

Table B-2
Representative Monitoring Wells for Water Quality

DMS ID	RMW Name	WQ Well ID	Principal Aquifer	Subarea
Buellton Aquifer – Buellton Upland Subarea				
3337	7N/32W-35	AGL020014946	Buellton Aquifer	Buellton Upland
3220	6N/32W - 7	AGL020036041	Buellton Aquifer	Buellton Upland
3173	7N/33W-36	AGL020021622	Buellton Aquifer	Buellton Upland
3137	7N/32W-31	AGL020001355	Buellton Aquifer	Buellton Upland
3139	6N/31W-8	AGL020028450	Buellton Aquifer	Buellton Upland
Buellton Aquifer – Santa Ynez River Alluvium Subarea				
909	6N/32W-12K1, 12K2	Buellton Well 09	Buellton Aquifer	Santa Ynez River Alluvium
3076	6N/32W-3	AGL020008330	Buellton Aquifer	Santa Ynez River Alluvium

DMS = Data Management System, RMW = Representative Monitoring Well

B-1 SALINITY - TOTAL DISSOLVED SOLIDS (TDS)

Salinity, as measured by total dissolved solids (TDS), is the dry mass of constituents dissolved in each volume of water. There are two measurements of salinity: TDS, which is a measurement of the total mass of the mineral constituents dissolved in the water, and electrical conductivity, which is a measurement of the conductivity of the solution of water and dissolved minerals. **Table B-3** identifies the results of total dissolved solids at the identified wells.

Table B-3
Salinity as Total Dissolved Solids (TDS) in mg/L,
Historical Water Quality Summary, Representative Monitoring Wells

Well Information		Criteria		Recent Data			
DMS ID	Well ID	MT	MO	Concentration	Date	Source	Currently Exceeds MT?
Buellton Aquifer – Buellton Upland Subarea							
3337	AGL020014946	1,000	1,000	440	2018-04-05	ILRP	No
3220	AGL020036041	1,000	1,000	1,120	2019-12-09	ILRP	Yes
3173	AGL020021622	1,000	1,000	362	2024-03-12	ILRP	No
3137	AGL020001355	1,000	1,000	178	2024-03-05	ILRP	No
3139	AGL020028450	1,000	1,000	530	2017-10-24	ILRP	-
Buellton Aquifer – Santa Ynez River Alluvium Subarea							
909	Buellton Well 09	1,000	1,000	840	2025-09-09	SDWIS	No
3076	AGL020008330	1,000	1,000	970	2017-03-20	ILRP	-

Notes: All concentrations are mg/L, n/a = not assessed, MT = Minimum Threshold, MO = Measurable Objective, TDS = Total Dissolved Solids

B-2 CHLORIDE

Chloride (Cl⁻) is a mineral anion and a major water-quality constituent in natural systems. Chloride is characteristically retained in solution through most of the processes that tend to separate other ions. The circulation of chloride ions in the hydrologic cycle is through physical processes. **Table B-4** identifies the results for chloride at the identified wells.

Table B-4
Chloride (Cl) in mg/L,
Historical Water Quality Summary, Representative Monitoring Wells

Well Information		Criteria		Recent Data			
DMS ID	Well ID	MT	MO	Concentration	Date	Source	Currently Exceeds MT?
Buellton Aquifer – Buellton Upland Subarea							
3337	AGL020014946	150	150	43	2018-04-05	ILRP	No
3220	AGL020036041	150	150	127	2019-12-09	ILRP	No
3173	AGL020021622	150	150	31	2017-11-15	ILRP	-
3137	AGL020001355	150	150	32	2017-12-26	ILRP	-
3139	AGL020028450	150	150	82	2017-10-24	ILRP	-
Buellton Aquifer – Santa Ynez River Alluvium Subarea							
909	Buellton Well 09	150	150	56	2025-09-09	SDWIS	No
3076	AGL020008330	150	150	132	2017-03-20	ILRP	-

Notes: All concentrations are mg/L, n/a = not assessed, MT = Minimum Threshold, MO = Measurable Objective, Cl = Chloride

B-3 SULFATE

Sulfate (SO_4^{2-}) is a naturally occurring anion and a major water quality constituent. **Table B-5** identifies the results for sulfate at the identified wells.

Table B-5
Sulfate (SO_4) in mg/L,
Historical Water Quality Summary, Representative Monitoring Wells

Well Information		Criteria		Recent Data			
DMS ID	Well ID	MT	MO	Concentration	Date	Source	Currently Exceeds MT?
Buellton Aquifer – Buellton Upland Subarea							
3337	AGL020014946	700	700	120	2018-04-05	ILRP	No
3220	AGL020036041	700	700	405	2019-12-09	ILRP	No
3173	AGL020021622	700	700	19.6	2017-11-15	ILRP	-
3137	AGL020001355	700	700	14	2017-12-26	ILRP	-
3139	AGL020028450	700	700	94.1	2017-10-24	ILRP	-
Buellton Aquifer – Santa Ynez River Alluvium Subarea							
909	Buellton Well 09	700	700	357	2025-02-26	SDWIS	No
3076	AGL020008330	700	700	210	2017-06-20	ILRP	-

Notes: All concentrations are mg/L, n/a = not assessed, MT = Minimum Threshold, MO = Measurable Objective, SO_4 = Sulfate

B-4 SODIUM

Sodium (Na^+) is a mineral cation and a major water-quality constituent in natural systems. The 2019 Central Coast Basin Plan indicates the primary concern for sodium in irrigation water is the sodium absorption ratio (SAR). The sodium absorption ratio is the relative concentration of sodium to calcium and magnesium and is managed to maintain soil permeability. **Table B-6** identifies the results for sodium at the identified wells.

Table B-6
Sodium (Na) in mg/L,
Historical Water Quality Summary, Representative Monitoring Wells

Well Information		Criteria		Recent Data			
DMS ID	Well ID	MT	MO	Concentration	Date	Source	Currently Exceeds MT?
Buellton Aquifer – Buellton Upland Subarea							
3337	AGL020014946	100	100	35	2018-04-05	ILRP	No
3220	AGL020036041	100	100	115	2019-12-09	ILRP	Yes
3173	AGL020021622	100	100	27.6	2017-11-15	ILRP	-
3137	AGL020001355	100	100	31	2017-12-26	ILRP	-
3139	AGL020028450	100	100	54.5	2017-10-24	ILRP	-
Buellton Aquifer – Santa Ynez River Alluvium Subarea							
909	Buellton Well 09	100	100	64	2023-08-23	SDWIS	No
3076	AGL020008330	100	100	79.4	2017-03-20	ILRP	-

Notes: All concentrations are mg/L, n/a = not assessed, MT = Minimum Threshold, MO = Measurable Objective, Na = Sodium

B-5 NITRATE

Nitrogen is the primary atmospheric gas, however, its presence in water is related to the breakdown of organic waste. Total nitrogen in groundwater is the sum of organic nitrogen and the three inorganic forms: nitrate (NO_3^-), nitrite (NO_2^-), and ammonia (NH_3). Nitrate concentrations are reported either as nitrate (the full mass of the nitrate anion) or as nitrogen (the mass of the Nitrogen). In some cases, a combined nitrate-nitrite as nitrogen is reported. **Table B-7** identifies the results for nitrate at the identified wells.

Table B-7
Nitrate as Nitrogen (NO_3 as N) in mg/L,
Historical Water Quality Summary, Representative Monitoring Wells

Well Information		Criteria		Recent Data			
DMS ID	Well ID	MT	MO	Concentration	Date	Source	Currently Exceeds MT?
Buellton Aquifer – Buellton Upland Subarea							
3337	AGL020014946	10	10	0.6	2018-04-05	ILRP	No
3220	AGL020036041	10	10	Less than 0.1	2019-12-09	ILRP	No
3173	AGL020021622	10	10	1.85	2024-03-12	ILRP ($\text{NO}_3 + \text{NO}_2$)	No
3137	AGL020001355	10	10	2.19	2024-03-05	ILRP ($\text{NO}_3 + \text{NO}_2$)	No
3139	AGL020028450	10	10	0.9	2017-10-24	ILRP ($\text{NO}_3 + \text{NO}_2$)	-
Buellton Aquifer – Santa Ynez River Alluvium Subarea							
909	Buellton Well 09	10	10	0.13	2023-12-12	SDWIS (as NO_3)	No
3076	AGL020008330	10	10	1.9	2018-11-14	ILRP ($\text{NO}_3 + \text{NO}_2$)	No

Notes: All concentrations are mg/L, values reported as NO_3 converted to NO_3 as N, values $\text{NO}_3 + \text{NO}_2$ as N as reported,
n/a = not assessed, MT = Minimum Threshold, MO = Measurable Objective,
 NO_3 = Nitrate, NO_2 = Nitrite, N = Nitrogen

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Section 3 – Groundwater Conditions

Appendix 3-C:

Groundwater Level Hydrographs for Assessing Surface Water Depletion, Central Management Area

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CMA APPENDIX 3-C:
GROUNDWATER LEVEL HYDROGRAPHS
FOR ASSESSING
SURFACE WATER DEPLETION,
CENTRAL MANAGEMENT AREA
WATER YEAR 2024



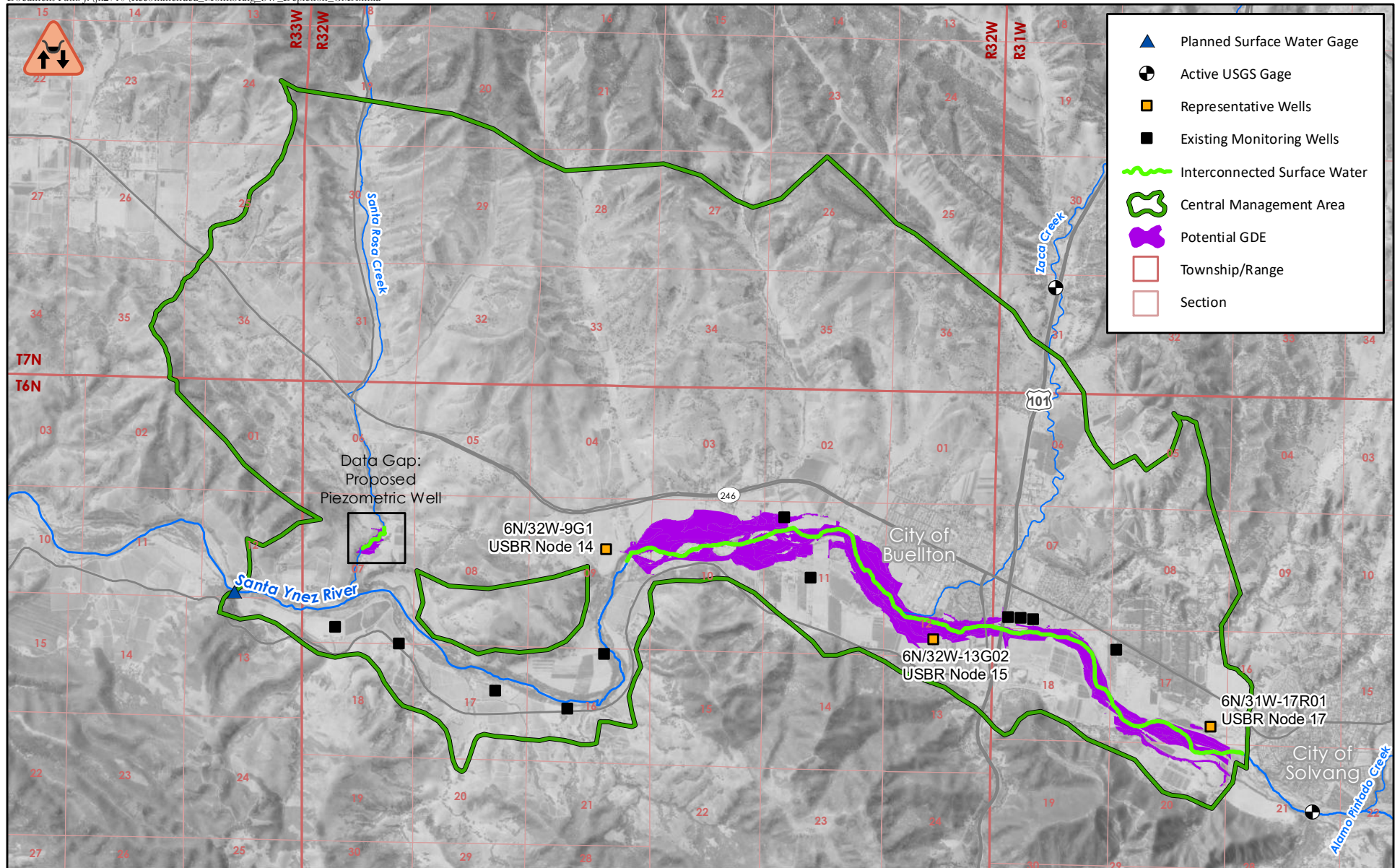
This appendix includes hydrographs, which are graphs of water levels in wells. These are the representative wells for monitoring potential surface water depletion. As per the SGMA regulations, this includes the period from January 1, 2015 through the end of the Water Year 2024. Shown on these graphs are key SGMA criteria: measurable objective, early warning, and minimum threshold.

The Groundwater Sustainability Plan (GSP) includes hydrographs of the long-term period of record. A copy of the GSP, water level data and hydrographs are available at <https://sywater.info>.



LIST OF ACRONYMS AND ABBREVIATIONS

BGS	below-ground surface
CASGEM	California Statewide Groundwater Elevation Monitoring
CMA	Central Management Area
FT	feet
NAVD88	North American Vertical Datum of 1988
USBR	United States Bureau of Reclamation
USGS	United States Geologic Survey
WL	Water Level



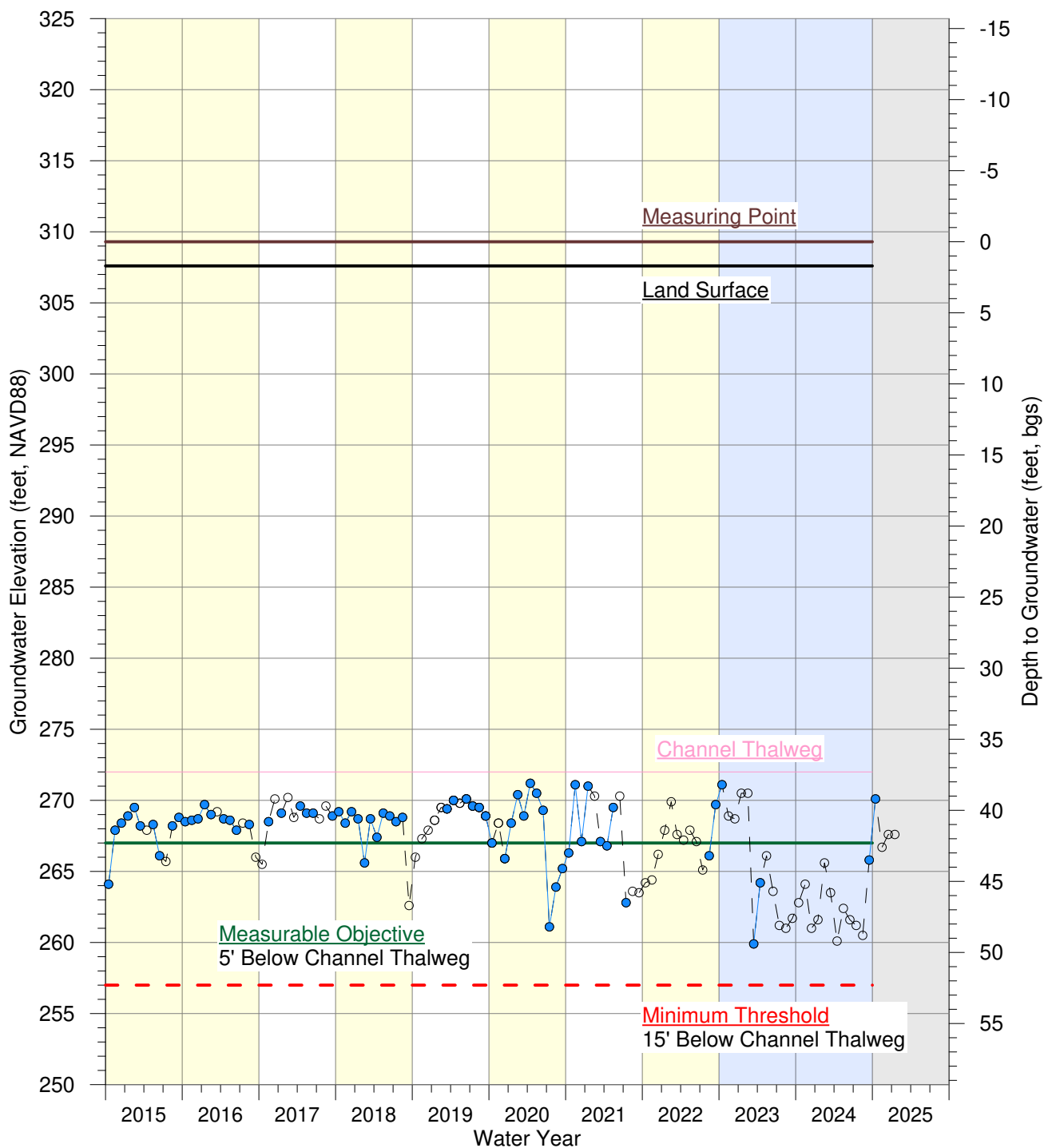
CMA MONITORING NETWORK AND REPRESENTATIVE MONITORING FOR INTERCONNECTED SURFACE WATER AND GROUNDWATER DEPENDENT ECOSYSTEMS

0 0.5 1 Miles





CMA Representative Monitoring Well for
Interconnected Surface Water and Groundwater Dependent Ecosystems
6N/32W-9G1



○ ○ ○ US Bureau of Reclamation (Estimated) — Land Surface (307.6 feet above mean sea level)
— Measuring Point (309.3 feet above mean sea level) — Depth of Well (97 feet); Perforations TBD

DBID
1120



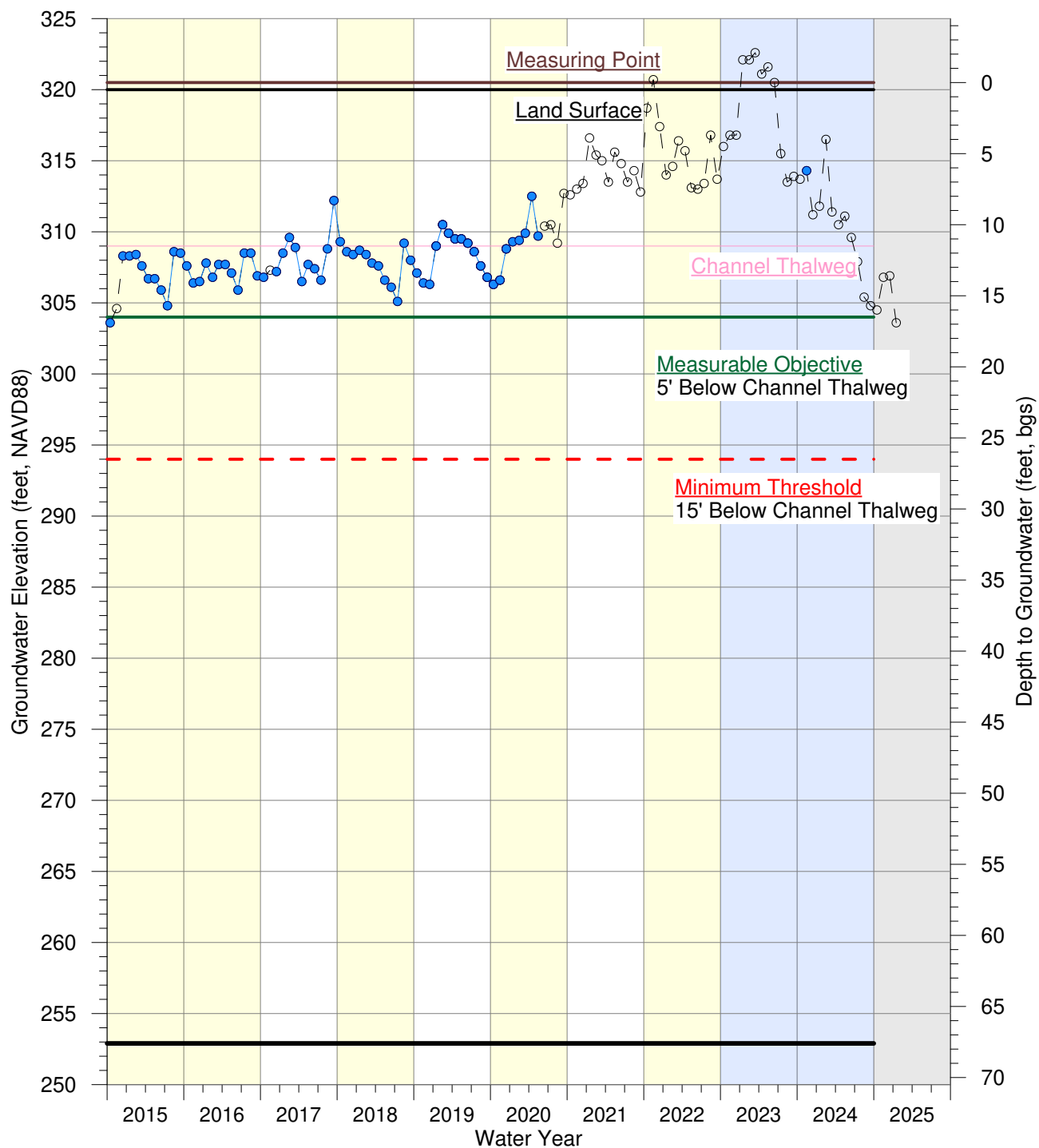
REPRESENTATIVE
MONITORING WELL
ASSESSING SURFACE WATER
DEPLETION

Water Year Type (1942-2024)

Wet
Above/Below Normal
Dry / Critically Dry



CMA Representative Monitoring Well for
Interconnected Surface Water and Groundwater Dependent Ecosystems
6N/32W-13G2



- ● ● US Bureau of Reclamation
- ○ ○ US Bureau of Reclamation (Estimated)
- Measuring Point (320.5 feet above mean sea level)
- Land Surface (320.0 feet above mean sea level)
- Depth of Well (67.6 feet); Perforations TBD

DBID
1115



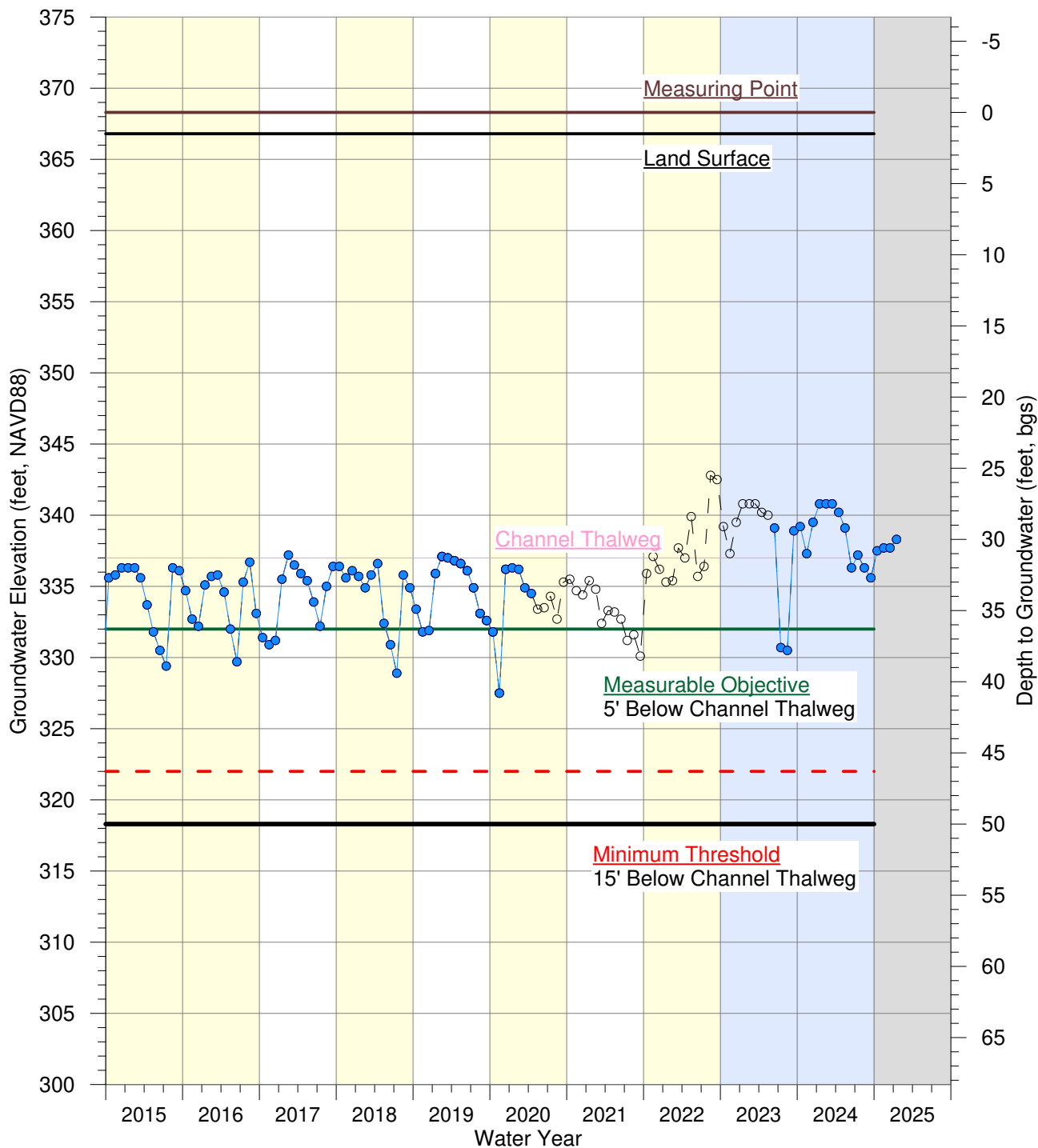
REPRESENTATIVE
MONITORING WELL
ASSESSING SURFACE WATER
DEPLETION

Water Year Type (1942-2024)

- Wet
- Above/Below Normal
- Dry / Critically Dry
- No Data



CMA Representative Monitoring Well for
Interconnected Surface Water and Groundwater Dependent Ecosystems
6N/31W-17R1



- ● ● US Bureau of Reclamation
- ○ ○ US Bureau of Reclamation (Estimated)
- Measuring Point (368.3 feet above mean sea level)
- Land Surface (366.8 feet above mean sea level)
- Depth of Well (50 feet); Perforations TBD
- Minimum Threshold (15' Below Channel Thalweg)

DBID
1111



REPRESENTATIVE
MONITORING WELL
ASSESSING SURFACE WATER
DEPLETION

Water Year Type (1942-2024)

- Wet
- No Data
- Above/Below Normal
- Dry / Critically Dry

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Section 4 – Projects and Management Actions

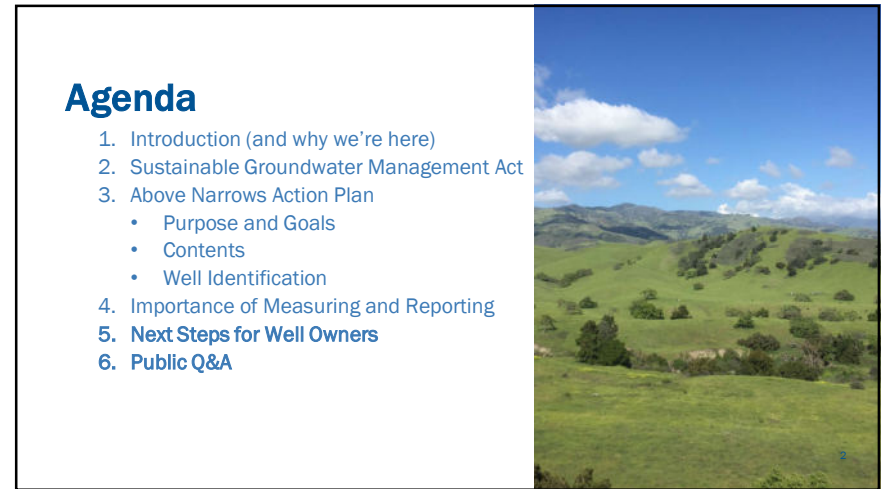
Appendix 4-A:

Slides from the 2025 Above Narrows Action Plan Workshop
Santa Ynez Basin. September 12, 2025

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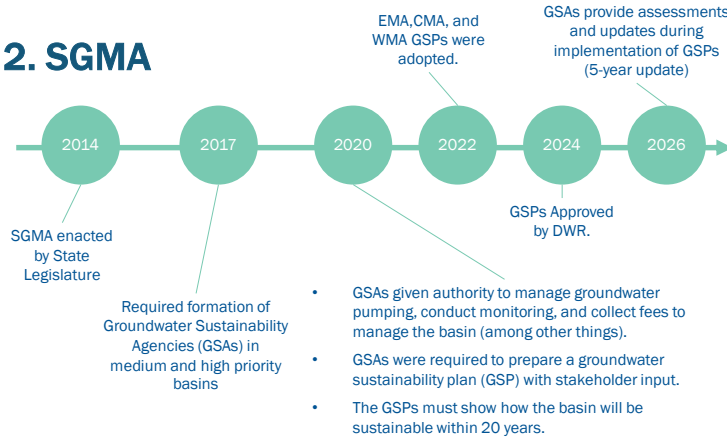


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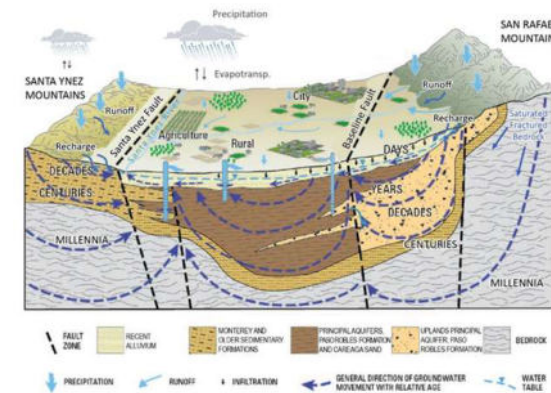
4

2. SGMA



5

Santa Ynez River Valley Groundwater Basin



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6



3. Above Narrows Action Plan

7

3. Above Narrows Action Plan

"The GSAs are committed to the goal of ensuring that all well production and well owners in the Santa Ynez River Alluvium Area are registered and reporting to the applicable GSA, to the State Board, and/or the Conservation District."

Steps

Step 1 – Preparation of Detailed Illustration of Surface Water System

Step 2 – Well Identification

Steps 3 and 4 – Identify All Existing Wells Currently Registered and Reporting to Conservation District and the State Board

Step 5 – Educational Workshop Support

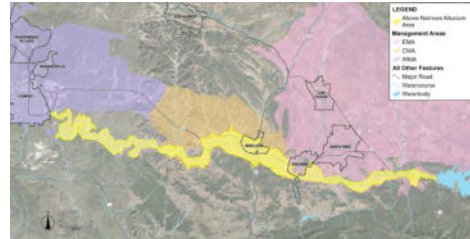


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3. Above Narrows Action Plan Background: Surface Water System

The Groundwater Sustainability Plans (GSPs) for the WMA, CMA, and EMA each characterize a portion of the lower Santa Ynez River and its underflow as a “surface water” system, that exists in parallel with the “groundwater” system of the Basin.

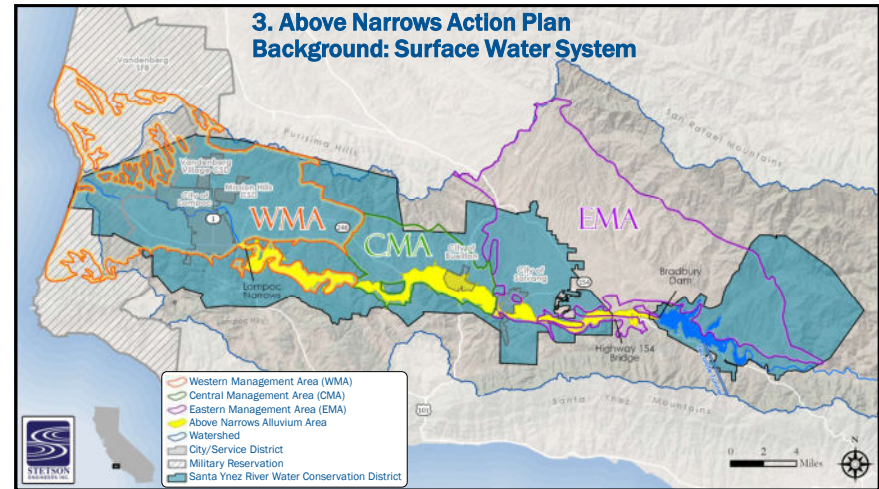


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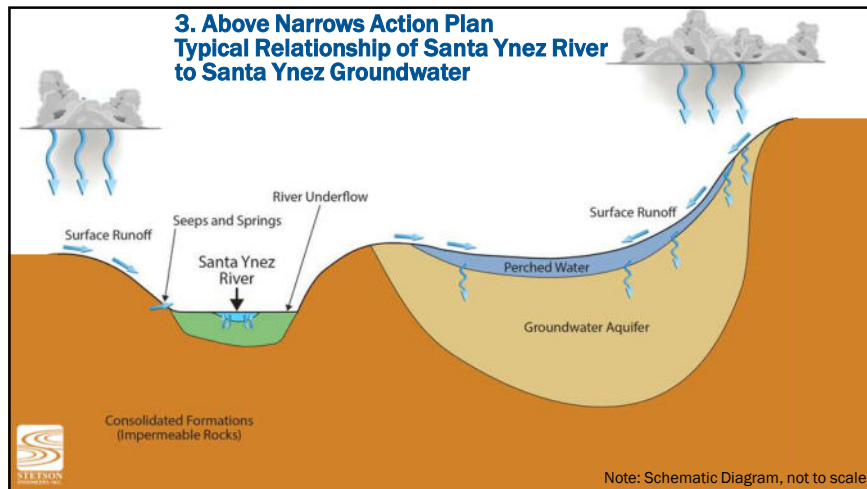
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3. Above Narrows Action Plan Background: Surface Water System



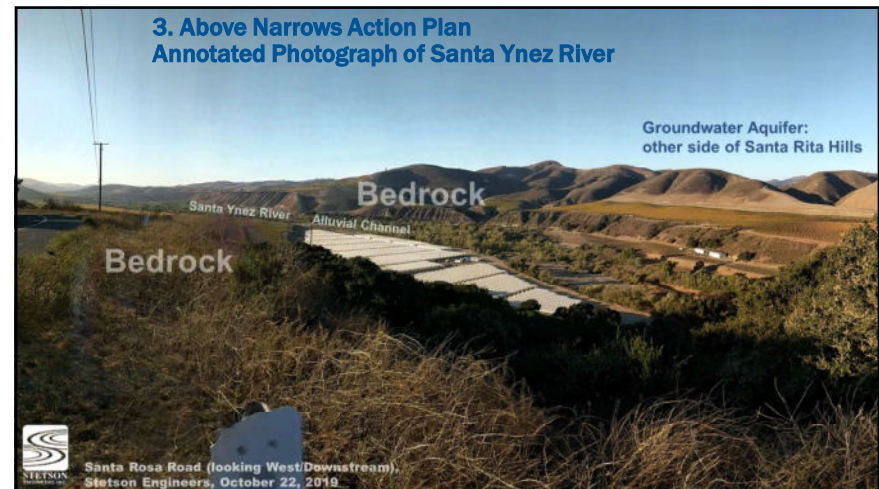
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3. Above Narrows Action Plan Typical Relationship of Santa Ynez River to Santa Ynez Groundwater

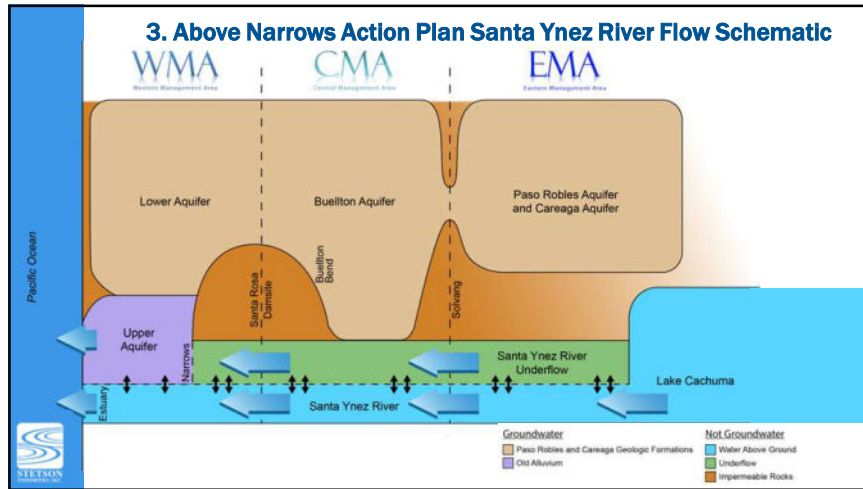


11

3. Above Narrows Action Plan Annotated Photograph of Santa Ynez River



12



13

3. Above Narrows Action Plan

Steps

Step 1 – Preparation of Detailed Illustration of Surface Water System

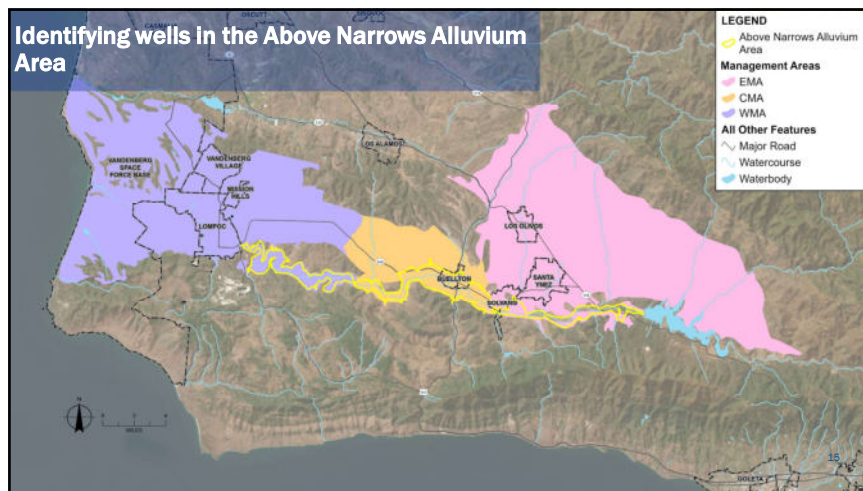
Step 2 – Well Identification

Steps 3 and 4 – Identify All Existing Wells Currently Registered and Reporting to Conservation District and the State Board

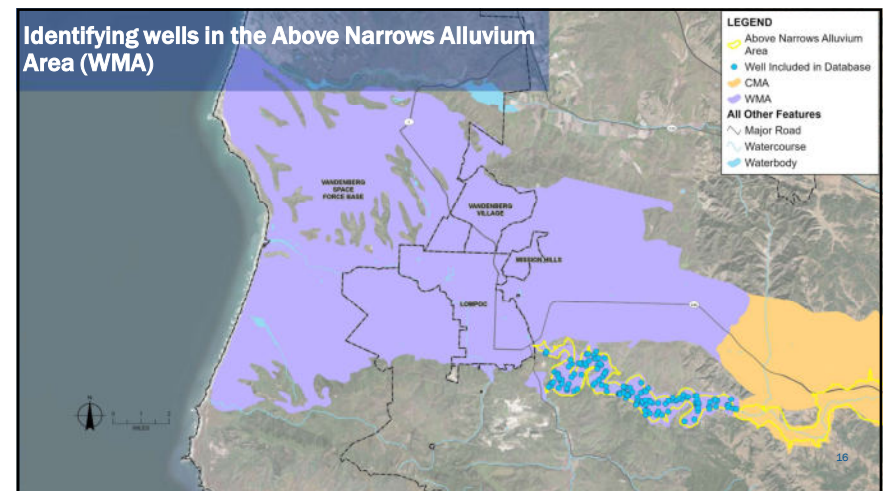
Step 5 – Educational Workshop Support

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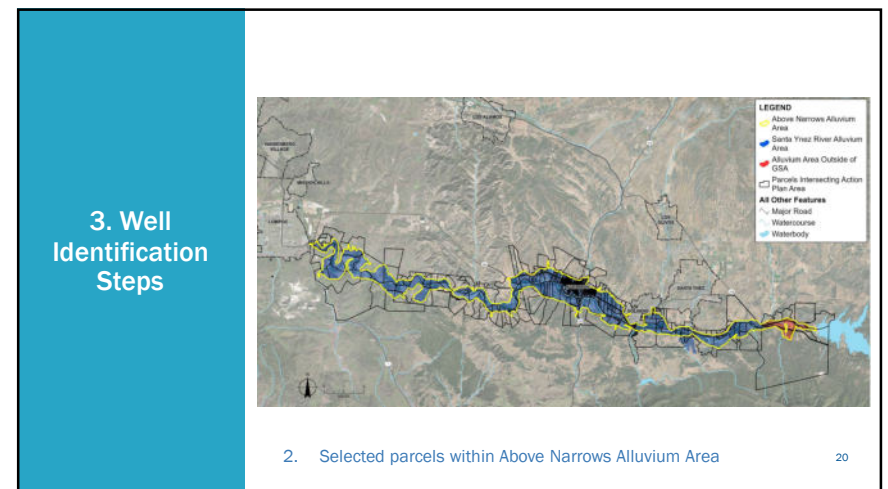
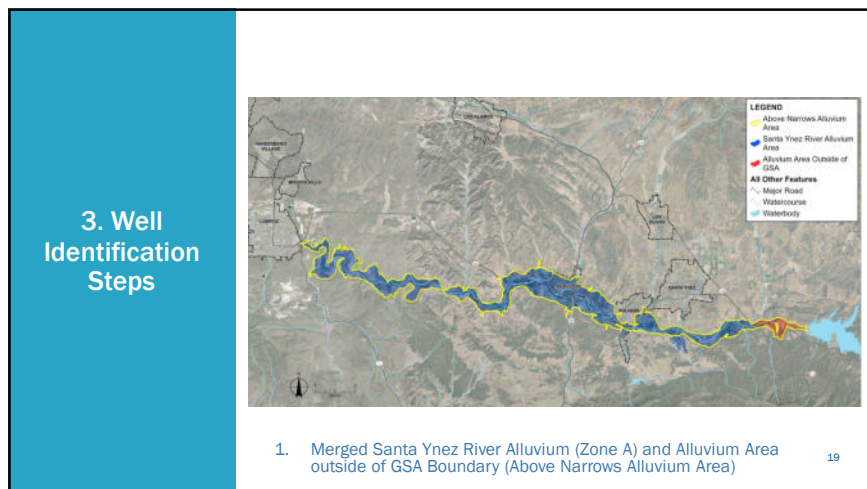
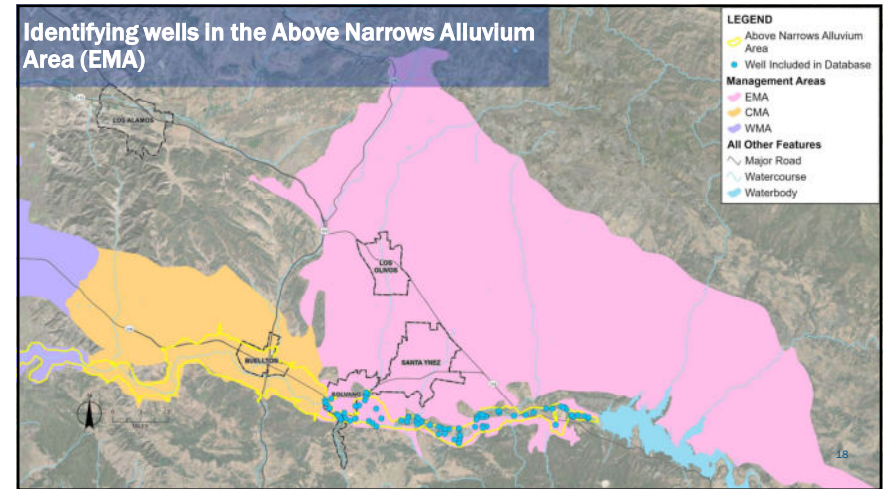
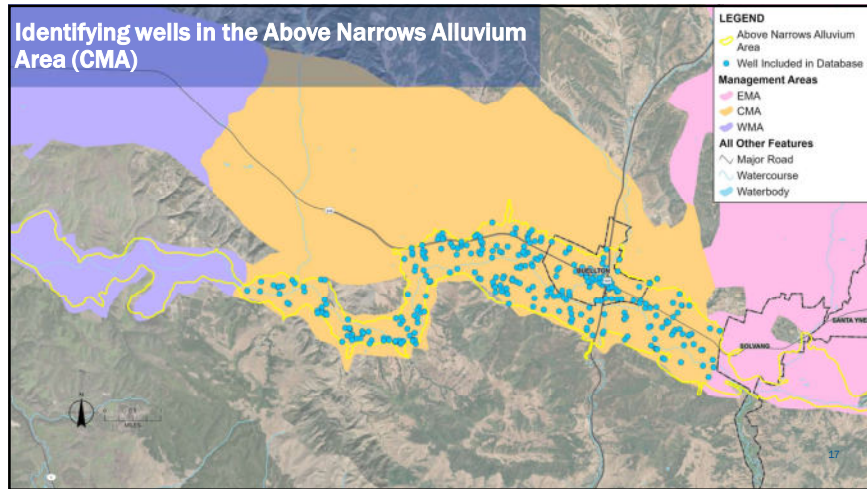
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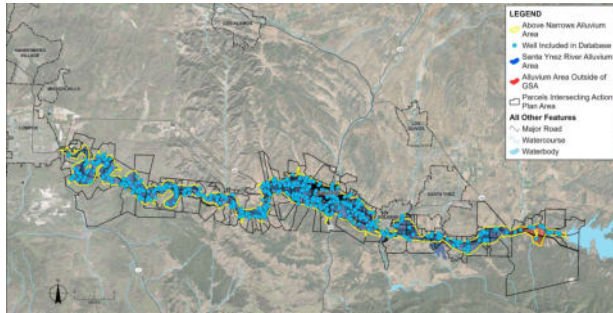
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16



3. Well Identification Steps

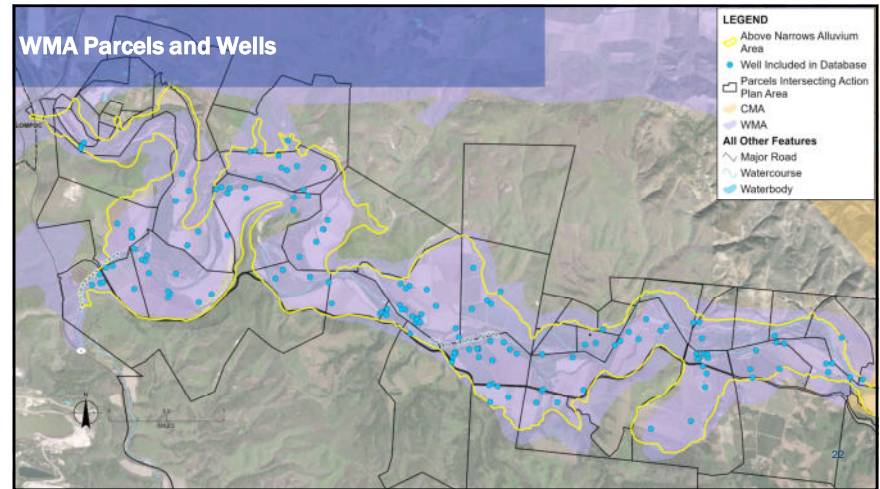


3. Selected all well records within the parcels that are at least partially within Above Narrows Alluvium Area (may include duplicates and inactive wells).

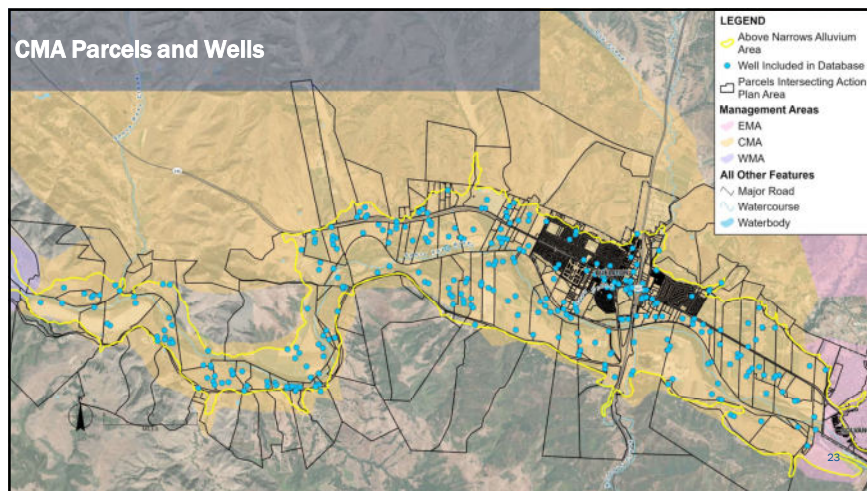
21

21

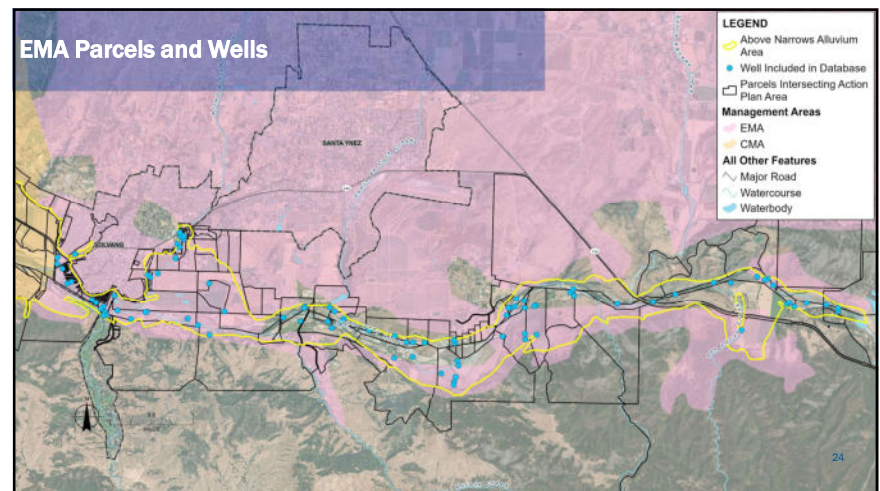
WMA Parcels and Wells



22



23



24

3. Above Narrows Action Plan

Steps

Step 1 – Preparation of Detailed Illustration of Surface Water System

Step 2 – Well Identification

Steps 3 and 4 – Identify All Existing Wells Currently Registered and Reporting to Conservation District and the State Board

Step 5 – Educational Workshop Support

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4. Importance of measuring and reporting

26

26

4. Importance of Measuring and Reporting

- [Legal Disclaimer](#)
- [Action Plan Statement of Importance](#): Whether extracting “groundwater” or “surface water” in the Basin ... ALL production must be reported to the appropriate agency
- [“Surface Water” – Inside the Above Narrows Alluvium Area](#)
 - Report to SWRCB
 - Appropriative Permittees and Licensees (Post 1914) – Annual Reports
 - Riparian and Pre-1914 Diversions – Initial/Annual Statements of Water Diversion and Use
 - See SWRCB website (next slides)
 - Report to Conservation District
 - Semiannual Groundwater Production Statements (1/31 & 7/31, for prior 6 months)
- [“Groundwater” – Outside the Above Narrows Alluvium Area](#)
 - Report to the applicable GSA (WMA, CMA, EMA)
 - Separate reporting may be required to the Conservation District

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4. Statements of Diversion and Use

- Pre-1914 and Riparian water rights claimants
 - N/A: Permitted Right/Licensed Right; [Registered Small Domestic or Irrigation or Livestock Use](#), as defined; other exceptions.
- Benefits
- Initial Statement
- Annual Supplemental Statement (Feb 1 for prior yr.)
- Water Code section 5103 (information required)
- Oct 1, 2025 (Est.):
 - File w/ CalWATRS (eWRIMS filing closed 6/8)
 - New Measurement/Reporting Regulation - 10 AFY or more (Oct. 1)

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4. Statements of Diversion and Use



https://www.waterboards.ca.gov/waterrights/water_issues/programs/diversion_use/

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4. Statements of Diversion and Use

- CalWATERS (Accounting, Tracking & Reporting System)

www.waterboards.ca.gov/upward/calwatsr/



- Water Measurement and Reporting Regulation

www.waterboards.ca.gov/waterrights/water_issues/programs/diversion_use/water_measurement.html



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4. Consequences of not reporting

The Action Plan requires an explanation of the consequences of not reporting subsurface diversions.

These could include:

- Investigation and Mgmt./Regulation (multiple agencies)
- Fines/Penalties (Administrative)
- Enforcement Actions (Including administrative and/or court proceedings)
- Lack of Notice of Possible Injury to Water Right

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5. Next Steps for Well Owners

32

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5. Next Steps for Well Owners in Above Narrows Alluvium Area

Alluvium Well Owners

Report to State Board and SYRWCD

Wells Deeper than 150 feet (CMA only)

Report to GSA and SYRWCD

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33

33



6. Public Q&A

34

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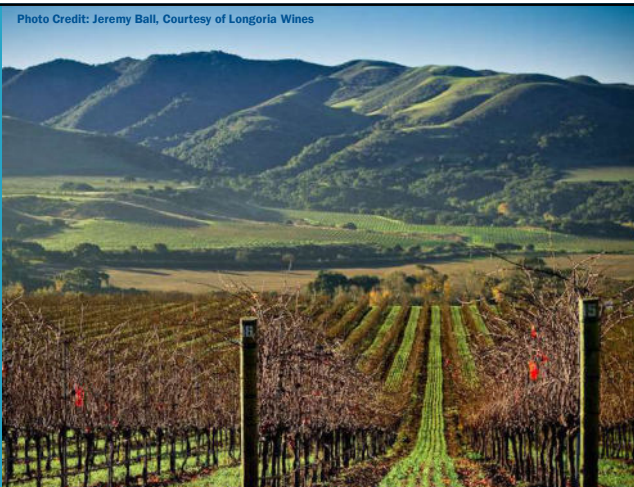
Thank you!

Tim Nicely
GSI Water Solutions, Inc.

Curtis Lawler
Stetson Engineers

Steve Torigiani
Young Wooldridge, LLP

Photo Credit: Jeremy Ball, Courtesy of Longoria Wines



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Section 5 – Basin Setting
Appendix 5-A:

Santa Ynez River Alluvium Underflow and Subterranean Stream
Report.

Prepared in Response to the April 14, 2023 Comments by State
Water Resources Control Board Staff regarding
Groundwater Sustainability Plans for the Santa Ynez River
Valley Groundwater Basin

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Santa Ynez River Alluvium Underflow and Subterranean Stream Report



**Prepared in Response to the April 14, 2023 Comments by
State Water Resources Control Board Staff
regarding Groundwater Sustainability Plans for the
Santa Ynez River Valley Groundwater Basin**



**Stetson Engineers
August 2023**

August 2023

Cover Photograph: Santa Ynez River alluvium and outcrop of underlying Monterey Formation. The photograph shows the surface boundary between the channel of alluvium and the relatively impermeable bed and banks. The photograph is along the Santa Ynez River in the Santa Rita Reach. Photograph taken by Miles McCammon, PG, CHG, on October 22, 2019.

EXECUTIVE SUMMARY

This report is submitted, along with geological data, historical documents (including State Water Board decisions), and other relevant information, as confirmation that the three Santa Ynez River Valley Ground Water Basin (SYRGB or Basin) Groundwater Sustainability Plans' (GSPs') characterization of subsurface water within the Santa Ynez River Alluvium upstream of the Lompoc Narrows as “underflow” and water that flows in a known and definite channel, is supported by substantial evidence, and, accordingly, such subsurface water is not “groundwater” as defined by the Sustainable Groundwater Management Act (SGMA) (Water Code, § 10721, subd. (g)).

The SYRGB is located within central Santa Barbara County in the central coast region of California. The California Department of Water Resources (DWR) identified the Basin as a medium-priority groundwater basin. The eight public water agencies within the SYRGB divided the Basin into three Management Areas (GSAs): the Western Management Area (WMA), Central Management Area (CMA), and Eastern Management Area (EMA). The three GSAs coordinated on developing three Groundwater Sustainability Plans (GSPs) to manage the groundwater in the Basin under SGMA.

In Bulletin 118, DWR derived the Basin boundaries based on a regional-scale historical geological map from 1959. To implement the mandate of SGMA in preparing their GSPs and using the best available information including the best available science,¹ the three GSAs investigated and identified the lateral basin boundaries, principal aquifers (including vertical and lateral extent, hydraulic conductivity, and storativity), aquitards, and surface water systems significant to the management of the Basin. The GSAs' investigation noted that a small portion of the DWR-identified boundaries included the younger alluvial² sediments prevalent along the Santa Ynez River. These are geologically young sediments deposited in and on top of a channel formed by historical river flows and bounded by much older, and relatively impermeable, formations that had been uplifted, rotated, compressed, bent, and eroded over geological time.

The GSAs through their consultants, including Stetson Engineers and GSI, conducted hydrogeological investigations for the GSPs using the best available science. Data reviewed included past geologic reports, geologic maps, well logs, aquifer tests, and new fieldwork. From this data, the scientists developed three-dimensional geological models for each GSP and then developed calibrated groundwater flow models. As directed by SGMA regulations (e.g., 23 CCR, § 354.14), the GSPs characterized the groundwater and surface water systems based on this effort. These investigations determined that subsurface water within

¹ Water Code section 113 states: “It is the policy of the state that groundwater resources be managed sustainably for long-term reliability and multiple economic, social, and environmental benefits for current and future beneficial uses. Sustainable groundwater management is best achieved locally through the development, implementation, and updating of plans and programs **based on the best available science.**” [Emphasis added.]

² Alluvial is a geological term that means the loose sediments that are deposited by running water. It comes from the Latin *alluvius*, from *alluere* “to wash against”.

August 2023

the Santa Ynez River Alluvium upstream of the Lompoc Narrows is water located and flowing within a known and definite channel. As a result, each of the three GSAs concluded in their GSPs that this alluvial area is part of the surface water system and did not meet the SGMA Water Code definition of “groundwater.”³

As discussed in detail below, the GSPs also identified that past and current management of the Santa Ynez River has consistently treated water flowing (aka underflow) in this subsurface channel as part of overall Santa Ynez River flows, treating those subsurface flows as part of the surface flows of the river. The three GSAs included a Technical Memorandum regarding the “Hydrogeological Basis for Characterization of Water with the Santa Ynez River Alluvium Upstream of the Lompoc Narrows as Underflow of the River in a Known and Definite Channel” (the 2021 Stetson Technical Memorandum), as an appendix to each of their GSPs: WMA Appendix 1d-B, CMA Appendix 1d-B, and EMA Appendix K.

The 2021 Stetson Technical Memorandum references the California State Water Resources Control Board (“SWRCB” or “State Water Board”) characterization and treatment of subsurface water in the lower Santa Ynez River area alluvium (downstream of Bradbury Dam to the Lompoc Narrows) as “underflow.” The information in this report regarding Santa Ynez River Alluvium and underflow supplements the information provided in the 2021 Stetson Technical Memorandum and confirms that the GSPs appropriately characterized the subsurface water within the alluvium in this part of the watershed as water flowing in a known and definite channel. This report further documents that in at least ten (10) independent permitting or other decisions, the SWRCB has explicitly or implicitly determined that diversions from wells along the Santa Ynez River from the Lompoc Narrows up to Bradbury Dam produce water from alluvium underflow. The most recent SWRCB order (2019-0148) relating to the Cachuma Project and requiring releases from Bradbury Dam to replenish the downstream Santa Ynez River Alluvium (also referred to as the Above Narrows area), and other downstream subsurface water in the Below Narrows area, summarizes the long history of SWRCB regulation of river flows for alluvium replenishment and permitting/licensing of alluvium diversions.

The GSAs solicited public comments on individual sections of the draft GSPs as they were each prepared, as well as the completed GSPs. The GSAs addressed all comments submitted and provided the adopted GSPs to DWR in January 2022. Following submission, DWR opened an additional 45-day comment period through April 2022. Approximately one year following the closure of the DWR comment period, in April of 2023, SWRCB staff submitted a comment letter (“SWRCB Staff Comments”) to suggest without evidence that water in the Santa Ynez River Alluvium from Bradbury Dam to the Lompoc Narrows is presumptively groundwater, despite the scientific analyses and conclusions in the GSPs. This report focuses on addressing and providing clarification and supplemental information regarding geologic and other relevant data supporting the GSPs’ determination that water within the Santa Ynez River Alluvium

³ Water Code Section 10721, subd. (g), states: “‘Groundwater’ means water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water, but **does not include water that flows in known and definite channels** unless included pursuant to Section 10722.5.” [Emphasis added.]

August 2023

is flowing in a known and definite channel. Although briefly described below as necessary for context, the legal issues raised in the SWRCB Staff Comments, and the legal standards applied in this report, are more fully addressed in the transmittal letter to which this report is appended.

The April 2023 SWRCB Staff Comments do not consider the full scientific and administrative record used by the GSAs as specifically authorized by SGMA to characterize water flowing in the Santa Ynez River Alluvium. For example, the SWRCB Staff Comments did not review or discuss water levels or any other data described in the GSPs or in the annual reports for the Basin. They also do not address any of the data and analysis provided by the 2021 Stetson Technical Memorandum or GSP modeling. The Comments are inconsistent with nearly all the available geologic and hydrogeologic evidence, as well as past SWRCB actions and decisions in the Santa Ynez River watershed. In summary:

- 1) The areas in question (Santa Ynez River Alluvium) are where “water that flows in known and definite channels” is not groundwater as defined by SGMA (Water Code, § 10721, subd. (g)). The areas defined in the GSPs as underflow of the Santa Ynez River Alluvium flowing through known and definite channels are supported by the GSAs’ and their qualified geologists’ and engineers’ substantial investigation and fact-gathering process, including the collection and review of geological maps, water level data, well completion reports, conducting studies with new geophysical data, development of a three-dimensional geological model, and development of a calibrated groundwater flow model. All this information is presented in the GSPs.
- 2) The SWRCB Staff Comments do not provide any scientific data or analysis relevant to hydrogeologic or other conditions prevailing in the Santa Ynez River Alluvium that is contrary to the conclusions in the 2021 Stetson Technical Memorandum. The Comments purport to characterize the entire Santa Ynez River (discussed in the WMA, CMA, and EMA GSPs). In fact, however, the Comments only refer to geological conditions within a small reach of the Santa Ynez River Alluvium near the City of Buellton. As explained below, the Comments do not include any technical information that is contrary to the GSPs’ conclusion that subsurface water within the alluvium in the Buellton Reach⁴ is underflow or water flowing within a known and definite channel. This Report further addresses the hydrogeologic evidence related to all reaches of the Santa Ynez River.
- 3) The SWRCB Staff Comments make general statements about consolidation and permeability in the Santa Ynez River Alluvium in the Buellton Reach to assert that a finding that the alluvium is “relatively impermeable” cannot be made; yet those statements are scientifically incomplete. Indeed, the Comments do not address that the alluvium in the Buellton Reach is 40 to 800 times higher permeability and is relatively unconsolidated, as compared to the geologic materials that underlay the bed and banks of the underflow deposits. Accordingly, the best available science shows that, even if the underflow conditions were not present, the bed and banks are “relatively

⁴ The Buellton Reach is the area near the City of Buellton and located almost entirely within the CMA. A small portion extends into the EMA (downstream of the City of Solvang). Figure 2 shows the extent of this area.

impermeable”⁵ throughout the Santa Ynez River above the Lompoc Narrows, including in the Buellton Reach. The Buellton Reach also needs to be put in the context of the entire underflow channel from Bradbury Dam to the Lompoc Narrows, where the difference between the river alluvium and less permeable adjacent formations is even greater than in this small reach of the entire alluvial channel.

- 4) SWRCB determinations and orders issued in the Santa Ynez River watershed over the last 75 years have consistently described extractions from the alluvial portion of the Santa Ynez River as “underflow.” The SWRCB has continued to use this language in recent (post-2000) determinations and orders, including Water Rights Order No. 2019-0148 and its supporting Environmental Impact Review (EIR, e.g. Appendix B). As described in the accompanying cover letter, the courts and SWRCB have consistently described “underflow” as subsurface flow that is in contact with and flows in the same direction as the associated surface water. And, consistent with these SWRCB and court findings, the hydrogeological evidence and analyses contained in the GSPs for the Basin show that production of water from the Santa Ynez River Alluvium is underflow.

This report confirms the hydrogeologic conditions along the reaches of the Santa Ynez River within the Basin boundaries including the GSPs’ characterization of the surface and groundwater systems based on best available science as required by SGMA. In short, based on the GSAs’ investigation, the subsurface water flowing with the above the Lompoc Narrows alluvium of the Santa Ynez River is water that flows in a known and definite because it is “underflow,” which is not subject to the relative impermeability requirement of the Garrapata Test. However, even if this subsurface water were not underflow, all the physical conditions of the Garrapata Test for underground water to be classified as a subterranean stream flowing in a known and definite channel nevertheless exist in the alluvium above the Lompoc Narrows.

⁵ “Relatively impermeable” bed and banks is one condition or element of the four-part test (“Garrapata Test”) set forth in the 1999 SWRCB Decision 1639 (In the Matter of Garrapata Water Company: Extraction of Water by Garrapata Water Company From the Alluvium of the Valley of Garrapata Creek, etc.), hereafter the “*Garrapata Creek Decision*.” In contrast, as explained below, the relatively impermeable condition is not part of the underflow test, and the subsurface water in the alluvium meets the elements of the underflow test.

PREPARERS

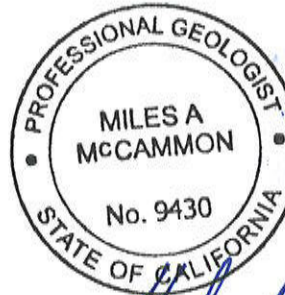
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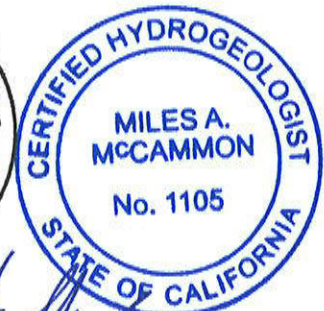
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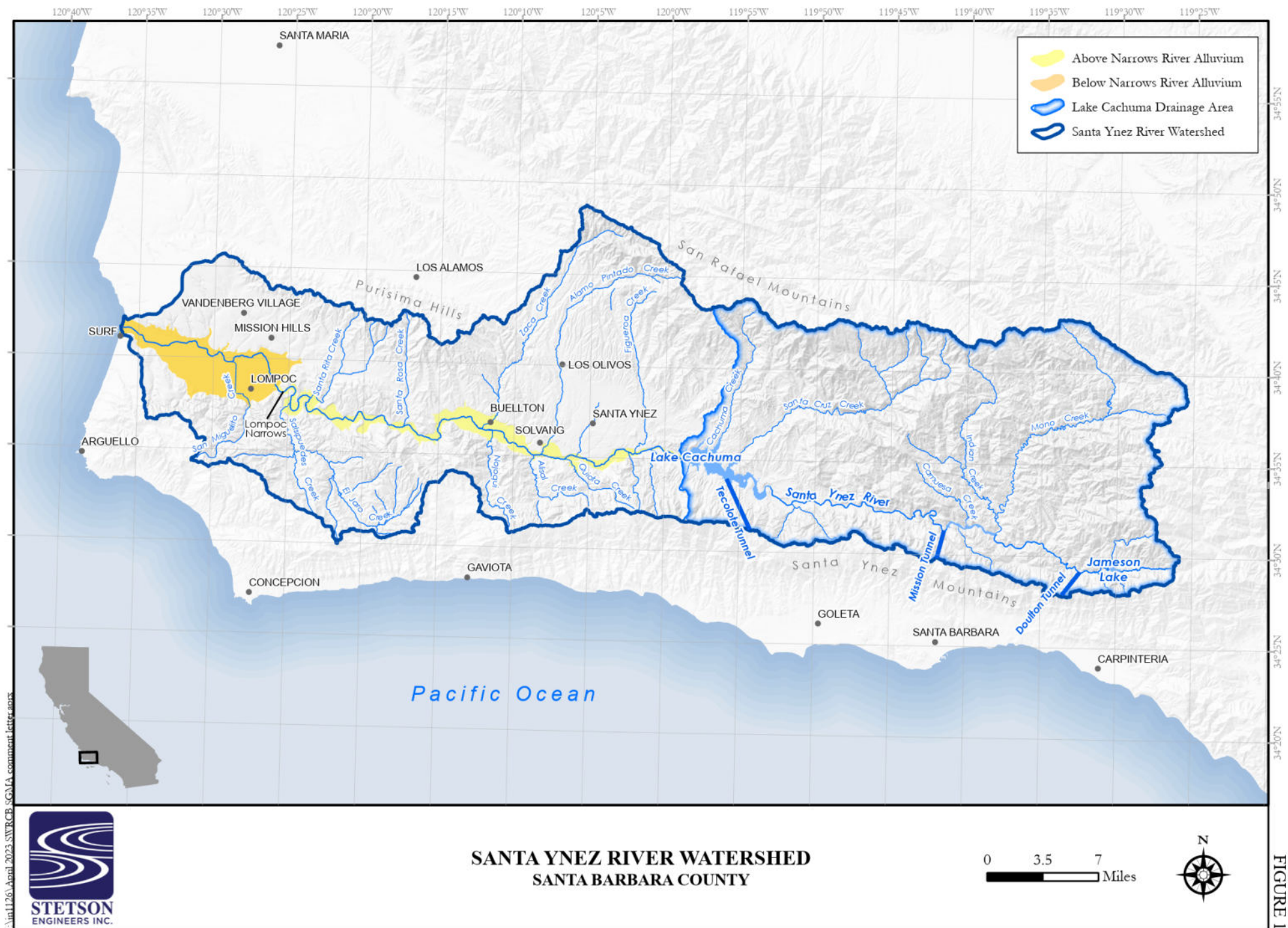
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1 INTRODUCTION AND AREA OF INTEREST

Figure 1 is a map of the entire Santa Ynez River watershed showing the major reservoirs and diversions through the Doulton Tunnel, Mission Tunnel, and Tecolote Tunnel. The Lake Cachuma Drainage area includes the areas of the Santa Ynez watershed with the highest annual rainfall rates and represents most of the water that could flow in the Santa Ynez River. The downstream area depleted by Lake Cachuma includes a disadvantaged community (City of Lompoc) and a federally recognized Native American tribe (Santa Ynez Band of Chumash Mission Indians of the Santa Ynez Reservation). Reservoirs and the diversions from these reservoirs to the South Coast have affected water users along the Santa Ynez River since they began. This included the Gibraltar Reservoir in 1920 and Jameson Lake in 1930; and Cachuma Reservoir in 1952.

Owners of riparian⁶ land, municipal purveyors, and others access Santa Ynez River surface or subsurface (aka, underflow) water through wells drilled in the Santa Ynez River Alluvium, as depicted in yellow in **Figure 2** (and Figure 1 of the 2021 Stetson Technical Memorandum appended to the GSPs). For more than half of a century, the State Water Resources Control Board (“SWRCB” or “State Water Board”) has consistently described subsurface water in the alluvial sediments as Santa Ynez River “underflow” and considered the water legally part of the above surface flows of the Santa Ynez River, dating back at least since the SWRCB Cachuma Water Rights hearings in the 1950s (SWRCB Decision 886), if not earlier. The SWRCB has issued surface water appropriate permits and licenses for wells extracting water from the alluvium, including to the City of Solvang, City of Buellton, and Improvement District No. 1. The SWRCB has also recognized many riparian diverters pumping water from the alluvium. (E.g., Cachuma Project Water Rights Hearing Final EIR (December 2011), pp. 3.0-2, 3.0-3 [Table 3-1a], 3.0-4 to 3.0-7, 4.4-1 [4.4 Above Narrows Alluvial Aquifer], Appendix B.)

⁶ Riparian describes the interface between land and a stream. It comes from the Latin *ripa*, meaning ‘river bank.’



1.1 LOWER SANTA YNEZ RIVER REACHES

The alluvium along the lower Santa Ynez River (downstream of Bradbury Dam to the Lompoc Narrows) is, from a technical analysis perspective, most conveniently described by dividing the river into reaches based on the geographic and geologic setting. Conditions that apply and describe any one reach may not be present along the entire river. For this report, we divide the lower Santa Ynez River into five reaches, summarized in **Table 1**. These reaches are based primarily on a description from 1958 SWRCB Decision 886. **Figure 2** is a map showing these areas' general extent and location. The stretch upstream of the Lompoc Narrows to Bradbury Dam, as shown in yellow in **Figure 2**, is the area of interest that the GSPs characterized as constituting water flowing in a known and definite channel. The area is hereinafter referred to as the "Santa Ynez River Alluvium" or "alluvium." **Figure 3** is geologic cross section B-B' from the CMA GSP, typical of the alluvium upstream of the Lompoc Narrows. Additional annotations were added to show and distinguish between the groundwater aquifer formations and the river alluvium. As shown in **Figure 3**, the Santa Ynez River Alluvium's bed and banks are underlain by non-water bearing Miocene and older formations. This is the typical geological structure for the majority of the bed and banks along the Santa Ynez River in the WMA, CMA, and EMA.

Approximately 29 of the 36 river miles above the Lompoc Narrows are a channel of alluvium bounded on all sides by non-water bearing geological units, with no direct interface with the groundwater aquifer (e.g., **Figure 3**). In most places, the Monterey formation is the non-water bearing geologic unit along and underneath the Santa Ynez River. This reports' cover photograph shows a typical example of this geological contact. From a technical standpoint, the April 2023 SWRCB Staff Comments focus exclusively on a small area of the Basin where both the Careaga Sandstone and Paso Robles Formation partly underlie the Santa Ynez River. Based on the geological maps (discussed in Section 3.1), this characteristic only occurs within the Buellton Reach of the river (**Table 1** and **Figure 2**). Thus, any suggestion by the Comments that the characteristics of the Buellton Reach apply to any other reach is not supportable.

The Buellton Reach is a seven-mile reach of the river that is almost entirely within the CMA. The CMA GSP specifically recognized the Buellton Reach as an area where the groundwater aquifer extended below the Santa Ynez River alluvium. Accordingly, that GSP expressly sets forth an ongoing monitoring program to ensure that the sustainability goals are met for any interconnection of groundwater and surface water and groundwater dependent ecosystems in this area due to potential aquifer seepage into the underflow alluvium channel (e.g., CMA GSP, **Figure 3a.3-3**). The CMA SGMA annual reporting to date has included the monitoring of the Buellton Reach, which indicates that there are no undesirable results to the surface water and groundwater dependent ecosystems in this reach.

The April 2023 SWRCB Staff Comments were addressed to all three GSPs' management areas, so the entire lower Santa Ynez River is shown in **Table 1** and **Figure 2**. The underflow channel is one subterranean stream that flows across the entire reach upstream of the Lompoc Narrows (the Headwater, Santa Ynez, Buellton, and Santa Rita reaches in **Table 1**).

TABLE 1
SUMMARY OF SANTA YNEZ RIVER ALLUVIUM REACHES

Santa Ynez River Reach	Length	Lower Boundary		Management Area	Alluvium Description		
	River Miles	Feature	River Mile ^A		GSP	Typical Width	Description
Headwater	3	San Lucas Creek Bridge (Highway 154 Crossing)	3	EMA	Underflow	500 ft	Thin and underlying by consolidated and essentially non-water-bearing rocks.
Santa Ynez	8.5	2/3 Mile below Alisal Road Bridge	11.5	EMA	Underflow	2,000 ft	Almost completely enclosed by non-water bearing consolidated rocks.
Buellton ^B	7	Buellton Bend	18.5	CMA	Underflow	5,000 ft	Overlies non-water bearing older rocks to the south of the river and Careaga Sandstone to the north.
Santa Rita	17.25	Lompoc Narrows	35.75	CMA / WMA	Underflow	2,500 ft	Enclosed by non-water bearing consolidated rocks.
Lompoc	14	Pacific Ocean ^C	49.75	WMA	SGMA Managed Groundwater Aquifer	15,000 ft	Broad plain, crossing over underlying Careaga Sandstone.

^A Distance in miles along Santa Ynez River downstream of Lake Cachuma (Bradbury Dam).

^B The April 2023 SWRCB Staff Comments only discuss where “alluvial deposits are underlain by both the Paso Robles Formation and the Careaga Sandstone [...]”. The Paso Robles Formation is not extensively present under the alluvium. Where both the Paso Robles Formation and the Careaga Sandstone are present describes only a small portion of the Buellton Reach entirely within the CMA. Upstream of the Lompoc Narrows, the Buellton Reach described above is inclusive of all areas where either formation is present.

^C The far downstream estuary area within the Vandenberg Space Force Base (formerly Air Force Base) is geologically similar to the Santa Rita Subarea. We include the estuary area in the Lompoc reach for consistency with past studies.

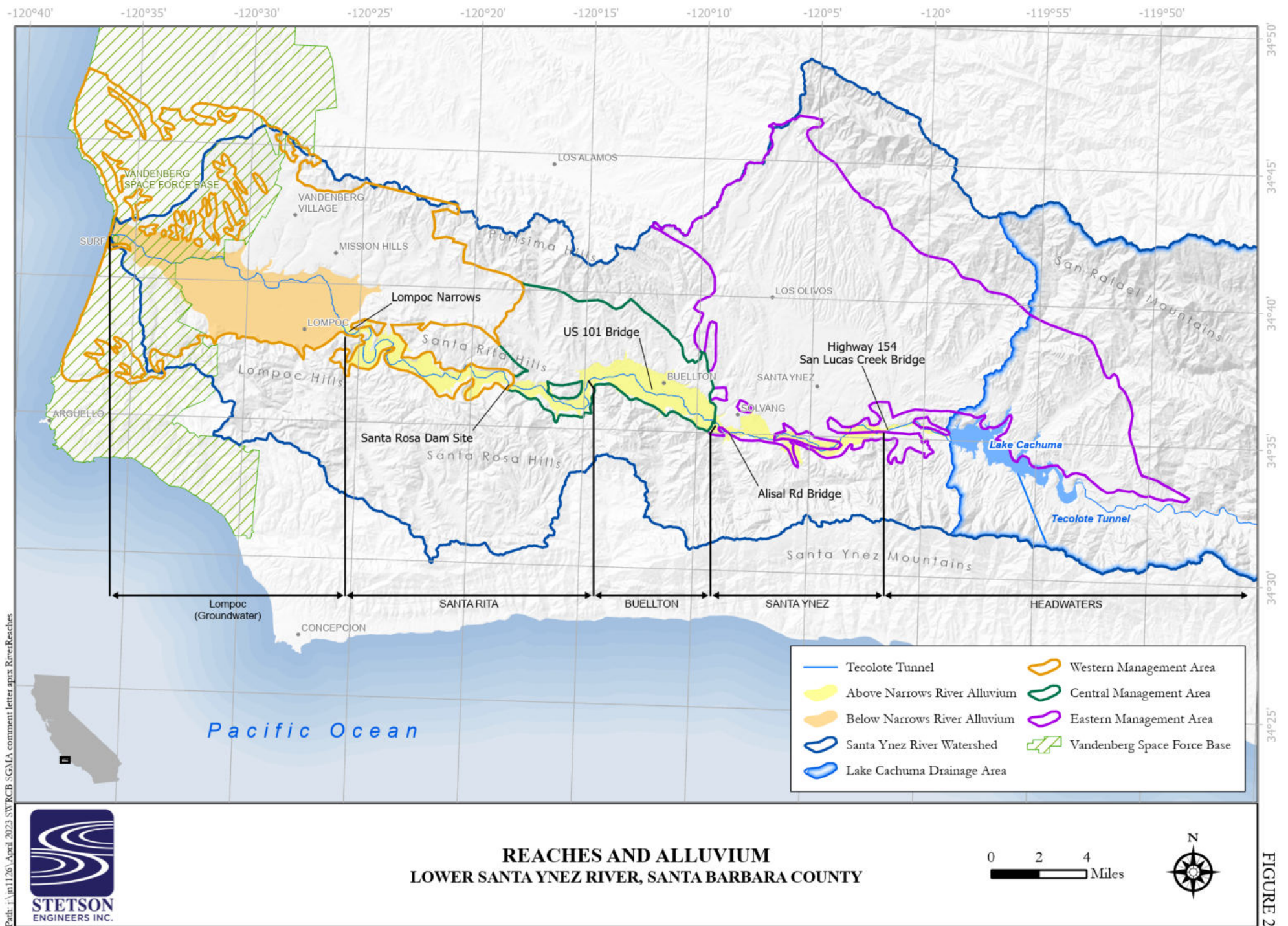
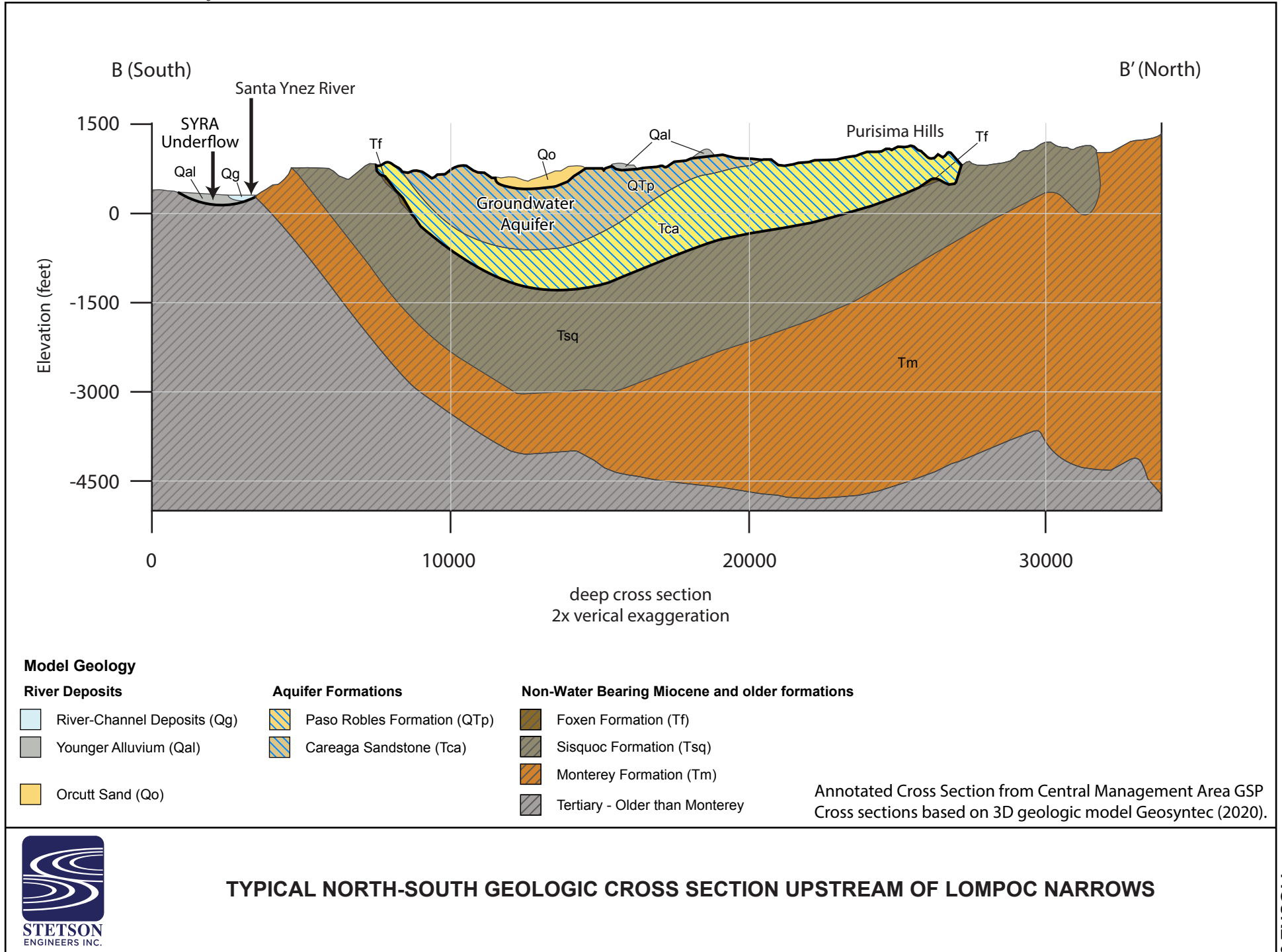


FIGURE 2



2 GROUNDWATER, SUBTERRANEAN STREAM, AND UNDERFLOW

This section of the report summarizes the status of subsurface water in the lower Santa Ynez River alluvium above the Lompoc Narrows using the following:

- Criteria for groundwater under SGMA, as defined by California Water Code section 10721,
- The four-part test for subterranean streams flowing in known and definite channels based on the SWRCB's 1999 *Garrapata Creek* Decision, and
- The three-part test for underflow based on the SWRCB's 1999 *Garrapata Creek* Decision which relied on the 1899 *Los Angeles v. Pomeroy* case.

2.1 GROUNDWATER (SGMA STATUTE)

For implementing SGMA, including characterizing surface and groundwater systems, it is essential to understand the specific definition of groundwater⁷ the Legislature decided to use for purposes of SGMA which it enacted in 2014. For SGMA, California Water Code section 10721, subdivision (g), defines groundwater as follows:

““Groundwater” means water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water, **but does not include water that flows in known and definite channels...**”.

(Water Code, § 10721, subd. (g), emphasis added)

SGMA does not cover all potential groundwater that could be accessed from wells. Most of California's subsurface geology does not contain groundwater within an aquifer managed under SGMA. A high proportion of subsurface geology is relatively impermeable, and another high percentage of permeable material consists of streambeds or is otherwise in a known and definite channel. A further high proportion of the geology contains water that is brine or otherwise non-potable. Of the remaining potable groundwater sources, less than 20% of the 515 groundwater basins identified by DWR⁸ require a SGMA GSP (DWR 2020).

Because SGMA defined “groundwater” does not include water that flows in a known and definite channel, the GSAs were necessarily required to conduct a systematic investigation of groundwater and surface water systems in their GSPs to differentiate between the two. SGMA explicitly required the GSAs to

⁷ This report uses the strict SGMA definition of groundwater whenever possible. We note, however, that certain pre-SGMA documents cited in this report (including the *Garrapata Creek* Decision) sometimes use the term “groundwater” in a less specific sense to mean any water that is located under the surface of the earth including water that is subterranean streamflow.

⁸ DWR's SGMA 2019 Basin Prioritization identified 515 groundwater basins in California, of which 94 were in the medium or high priority categories requiring SGMA regulation (DWR 2020).

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identify the subsurface boundaries, extents, hydrogeologic properties, and flow.⁹ Using “best available science,”¹⁰ the GSAs properly investigated and determined which water within the Basin constituted groundwater (as opposed to surface water) based on direction and authorities provided by SGMA. The Hydrogeologic Conceptual Model chapter of the respective GSPs includes a summary description of the findings for each topic and supports the GSPs’ characterization of the subsurface water in the alluvium as water that flows in a known and definite channel.

Flow and the presence of a known and definite underground channel following the course of the river are described at length as part of the discussion under the subterranean stream Garrapata Test (see below, Section 2.2) and underflow identification (Section 2.3). Flow is confirmed by measurements of water levels in wells constructed in the alluvium (Section 2.2.4 and **Appendix A**). The channel is identified by the extent of the alluvium (see Section 2.2.1) which clearly identifies the general course of subsurface flow (see Section 2.2.3), indicating that the channel is known and definite. Evidence shows that subsurface water conditions throughout the alluvial channel upstream of the Lompoc Narrows are correlated to surface flows in the Santa Ynez River and are characteristically different than what is observed in wells located in the groundwater aquifer system outside of the underflow channel.

2.2 SUBTERRANEAN STREAM FLOWING IN A KNOWN AND DEFINITE CHANNEL (*GARRAPATA CREEK* DECISION)

The four-part Garrapata Test referred to in the Comments is derived from the SWRCB’s *Garrapata Creek* Decision, which discussed the requisite conditions to establish a “subterranean stream” for purposes of asserting SWRCB jurisdiction over post-1914 appropriative surface water diversions. As explained herein, underflow is a subset of a subterranean stream, and this report confirms that the necessary physical conditions exist to demonstrate that the Santa Ynez River alluvium above the Lompoc Narrows constitutes underflow a subterranean stream as analyzed and concluded in the three GSPs for the Basin.

⁹ See 23 CCR sections 354.14(a), 354.18(a), (b), (e).

¹⁰ Water Code Section 113 states: “It is the policy of the state that groundwater resources be managed sustainably for long-term reliability and multiple economic, social, and environmental benefits for current and future beneficial uses. Sustainable groundwater management is best achieved locally through the development, implementation, and updating of plans and programs **based on the best available science.**” [Emphasis added.]

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According to the *Garrapata Creek* Decision:

“In summary, for groundwater to be classified as a subterranean stream flowing through a known and definite channel, the following physical conditions must exist:

1. A subsurface channel must be present.
2. The channel must have relatively impermeable bed and banks.
3. The course of the channel must be known or capable of being determined by reasonable inference.
4. Groundwater must be flowing in the channel.”

(*Garrapata Creek* Decision, p. 4)

The California Court of Appeal has upheld the use of this four-part Garrapata Test to characterize subsurface water as a subterranean stream flowing in a known and definite channel for purposes of Water Code section 1200 (See, *North Gualala Water Co. v. State Water Resources Control Bd. (North Gualala)* (2006) 139 Cal.App.4th 1577). **Table 2** summarizes the four Garrapata Test parts for each Santa Ynez River reach. The following subsections discuss the four-part Garrapata Test in detail.

TABLE 2
ALLUVIUM UPSTREAM OF LOMPOC NARROWS
VS SUBTERRANEAN STREAM (GARRAPATA TEST CONDITIONS)

Management Area	Santa Ynez River Reach / Alluvium	Subterranean Stream Garrapata Test				Subterranean Stream
		Subsurface Channel	Relatively Impermeable Bed and Banks	Course of Channel Known	Groundwater Flowing	
EMA	Headwater	Y	Y	Y	Y	Y
EMA	Santa Ynez	Y	Y	Y	Y	Y
CMA	Buellton	Y	Y	Y	Y	Y
CMA / WMA	Santa Rita	Y	Y	Y	Y	Y

2.2.1 A Subsurface Channel Is Present

Geology defines the presence of a subsurface channel along the Santa Ynez River, which is a channel eroded by past flows of the Santa Ynez River into the uplifted older geological formations. The geological history, below, describes how the channel developed relative to the bed and banks. Surface mapping identifies the presence of older geological units on both sides of the alluvium. Depth and conditions beneath the current alluvium come from geophysical data over wide areas, and from direct observations of well cuttings (see the Geological Modeling, Section 3.1). Finally, observations of the response of wells in the channel to flow in the river indicate that the channel is not only a geologic feature but a hydrogeologic constraining feature.

The recent geological history of the Santa Ynez River and adjacent geological formations explain the presence of the channel and the alluvium within it. This information is included in the hydrogeologic conceptual model sections of each of the three GSPs (Section 2a.1 in the WMA GSP; Section 2a.1 in the CMA GSP, and Section 3.1.3 in the EMA GSP). Additional discussion of the geological modeling done to develop these sections of the GSPs is in Section 3.

The Santa Ynez River Valley is in a tectonically active area along the margin of the Pacific Plate. **Figure 4** is the geological unit legend from the WMA and CMA GSPs showing the age and name of the geological formations on the near surface. During the Miocene¹¹ and early Pliocene,¹² the Monterey, Sisquoc, and Foxen were deposited in marine environments. These marine sediments consist of non-water-bearing units of multiple compositions, including claystone, siltstone, or mudstone. After a period of erosion, during the Pliocene, water-bearing aquifer units of the Careaga Sandstone and Paso Robles Formation were deposited. Another period of tectonic uplift and erosion occurred, including tremendous compression resulting in geological folding, followed by the Pleistocene¹³ deposition of the Orcutt Sand. This was followed by additional uplift and erosion. The Careaga Sandstone and the Paso Robles

¹¹ Miocene Corresponds to 23 to 5.3 million years ago (mya)

¹² Pliocene Corresponds to 5.3 to 2.6 mya.

¹³ Pleistocene Corresponds to 2.6 mya to 11 thousand years ago (kya)

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Formation, which make up the aquifer units, are described as “poorly consolidated to unconsolidated” based on reports by the USGS (Geosyntec, 2020).

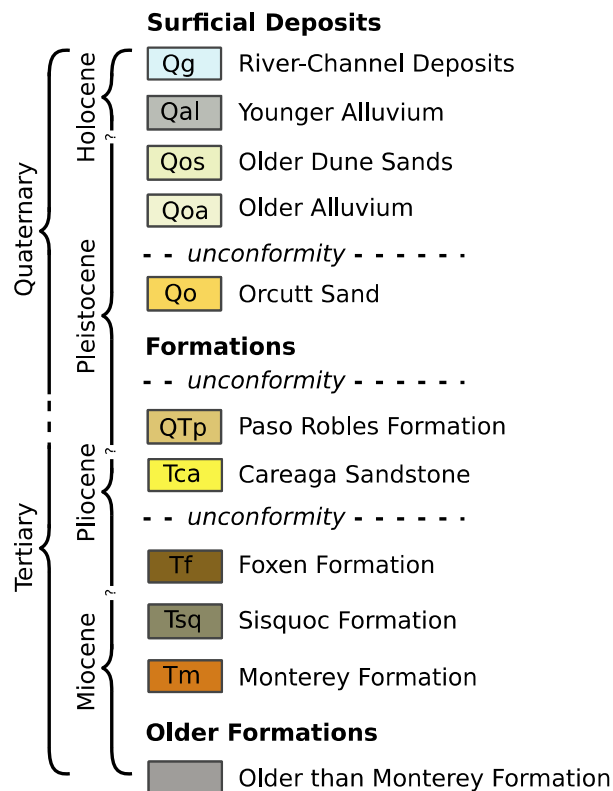


FIGURE 4
SUMMARY OF YOUNGER LOWER SANTA YNEZ RIVER
GEOLOGICAL FORMATIONS AND AGES

The Pliocene and Pleistocene are notable as a period of intense glaciation and erosion across North America. Over these millions of years of uplift and erosion during the Pleistocene, the paleo-Santa Ynez River cut its paleochannel. This included cutting into the relatively resistant Monterey formation in several places, including Santa Rita Hills and through the estuary out to the Pacific Ocean. In contrast, the vast Lompoc Plain below the Lompoc Narrows is six times wider, probably due to the paleo-Santa Ynez River cutting the relatively soft Careaga Sand rather than the resistant Miocene formations. Over time, the river dynamics changed due to changes in global climate, including the ending of widespread North American glaciation, resulting in increased sedimentation and deposition of the current river alluvium within this channel. As expected of recently deposited sediments, the USGS described the alluvium as “unconsolidated” without qualifiers (Geosyntec, 2020).

The fact that this geologic channel is present and relevant as a hydrogeologic feature is confirmed through observations of water levels. Water moves through the alluvium in this channel much easier (relatively

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high permeability) than outside the channel. The water levels in wells within this channel rapidly respond to increases in the above-ground flows. Commonly during dry years, water is released from storage in Lake Cachuma for downstream water rights uses (pursuant to SWRCB D886 and subsequent orders including the recent order, Order 2019-0148), and over the last century there have been multiple examples of this occurring. Reclamation first observed this relationship during a 1957 test conducted after impoundment of the Santa Ynez River above Bradbury Dam (Reclamation, 1970):

"The Santa Ynez River channel had been dry for about three months prior to the 1957 test releases. During the test period water was released from Cachuma Dam at a rate of 250 cfs... Approximately 100 wells and piezometer pipes were observed for water level data. These observations consisted of depth to groundwater readings taken a few days before the test releases started and observations at least daily from September 25 through October 4 as water progressed downstream.... The test illustrated that on the dry streambed the first flows would percolate at an extremely high rate until continuity was established. The percolation rate then gradually decreased as the groundwater basins become recharge eventually decreasing to zero."

(Reclamation, 1970, p. 27) [Emphasis added.]

The relationship between the wells located in the known and defined channel within all reaches (Table 3), including the Buellton Reach, and water releases from Lake Cachuma into the Santa Ynez River was also found in the calibrated groundwater flow model of the area (see Section 3.2). In contrast, the water levels in wells located outside the underflow channel do not show this same response to water released from Lake Cachuma.

2.2.2 The Channel Has a Relatively Impermeable Bed and Banks

The relative impermeability is supported by the geology summarized above for all reaches of the alluvium (Section 2.2.1). In the Headwater, Santa Ynez, and Santa Rita reaches of the Santa Ynez River,¹⁴ the alluvium is in a channel over entirely non-water bearing formations and are thus relatively impermeable (Upson and Thomasson, 1951). The Headwater, Santa Ynez, and Santa Rita reaches constitute the majority of the subterranean stream in the Basin, approximately 29 of the 36 river miles above the Lompoc Narrows (Table 1). In most places, this underlying formation is the Monterey Formation. Some other volcanic and shale formations are present, such as underneath the Buellton Bend area of the Santa Rita reach. Along the entire reach above the Lompoc Narrows, the geological formations along and below the Santa Ynez River alluvium are significantly older than the Holocene deposits (Figure 4), and have undergone significant tectonic compression, as indicated by syncline and anticline geologic fold structures. Geological folding occurs because of significant tectonic compression. Compared to the alluvium age,¹⁵ the bed and banks formations are millions of years older. With age and compression comes a degree of consolidation and significantly reduced permeability.

¹⁴ The Headwater and Santa Ynez reaches are in the EMA. The Santa Rita reach is primarily in the WMA and partly in the CMA (Figure 2).

¹⁵ The most recent USGS map (USGS, 2021) maps the Santa Ynez River alluvium as Holocene, at most 11,700 years old.

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As noted above, the SWRCB Staff Comments are directed or focused on the relative impermeability or permeability¹⁶ of the Buellton Reach. The Buellton Reach represents a small portion (less than twenty percent) of the length of the Santa Ynez River alluvium which forms a continuous subterranean stream from Bradbury Dam on Lake Cachuma to the Lompoc Narrows. The Comments acknowledge various SWRCB permitting decisions and memoranda that conclude the subsurface water within the alluvium in the Buellton reach is “underflow,” sufficient to support the board’s permitting and enforcement jurisdiction over the pumping of such underflow. The Comments do not cite contrary evidence or otherwise dispute that the subsurface flow within the alluvium is underflow. Nor do the Comments recognize that underflow is a subset of a subterranean stream flowing in a known and definite channel.

As indicated by the SWRCB Staff Comments, the Buellton Reach is where the river alluvium is partly located over the Buellton Aquifer's percolating water-bearing formations: the Careaga Sandstone and Paso Robles Formation. However, as described above, these formations have undergone significant tectonic compression resulting in a large syncline fold. This was considered by the three GSAs in developing the three GSPs and is not new data.

The relative permeability of the channel and bed and banks in the Buellton Reach has been assessed using several different methods, including pump tests, literature review, and groundwater modeling. Historical groundwater level observations also denote a distinct geologic difference between the river underflow deposits and the Buellton Aquifer in this region, corresponding to this relative difference in permeability. All methods indicate that the Careaga Sandstone and Paso Robles Formation in the Buellton Reach form a relatively impermeable bed and banks compared to the channel of alluvium.

The CMA GSP reviewed pump tests in the alluvium and in the Buellton aquifer and found the typical alluvial hydraulic conductivity in the alluvium was forty times (40x) greater than Buellton Aquifer.¹⁷ Upson and Thomasson (1951) measurements of samples found the “underflow” had a hydraulic conductivity typically sixty times (60x) greater than Careaga Sand.¹⁸ Finally, the calibration of the groundwater model (see Section 3.2) identified a range of hydraulic conductivity of the river alluvium from 40x to 800x greater than the Buellton Aquifer as consistent with the groundwater flow conditions. By comparison, the physical condition at issue in the *Garrapata Creek* Decision was such that it had approximately 40x greater hydraulic conductivity in the “alluvium” than bed and banks.¹⁹ These analyses and data indicate that the

¹⁶ Although the *Garrapata* Test asks whether the bed and banks are “relatively impermeable,” the SWRCB Staff Comments argue that “relatively permeable” underlying units (e.g., the Careaga Sand) negates the possibility of satisfying the bed and banks criterion of the *Garrapata* Test.

¹⁷ Mean of 400 ft/day for alluvium and 10 ft/day for Buellton Aquifer (CMA GSP, p 2a-44).

¹⁸ Based on the typical values of 4,000 gallons per day per square foot (g.p.d. per sq. ft.) (Upson and Thomasson (1951), Figure 3, Page 75) for underflow and 70 g.p.d. per sq. ft. (Page 33 and 34) for Careaga Sand. The Careaga Sand was from samples from the Lompoc Plain.

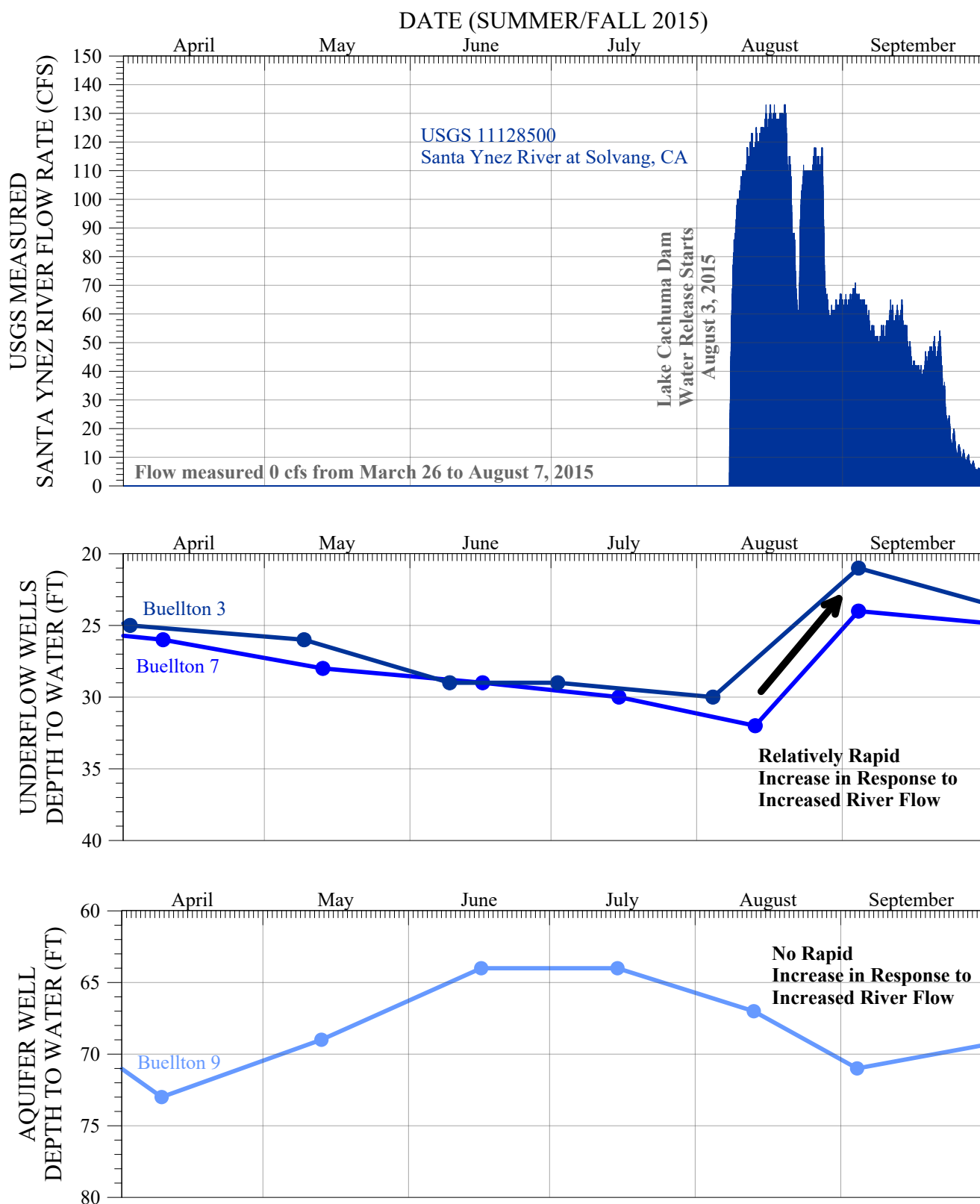
¹⁹ *Garrapata Creek* Decision includes testimony that the “alluvium” has a hydraulic conductivity of 1 to 200 feet per day (ft/day) and “weathered bedrock and fractured bedrock” has a hydraulic conductivity of 0.01 to 5 ft/day. (*Garrapata Creek* Decision, p. 15.) There is a 40x multiplier between 200 ft/day and 5 ft/day.

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Careaga Sandstone and Paso Robles Formation in the Buellton reach form a relatively impermeable bed and banks compared to the channel of alluvium.

The relative impermeability of the bed and banks is further demonstrated by comparing how the changes in river conditions affect wells screened in the underflow versus a nearby well screened in the Careaga Sandstone and Paso Robles Formation aquifer underlying the alluvium (collectively, the Buellton Aquifer). If there were a similar level of permeability, all wells would respond similarly to the same conditions. **Figure 5** compares three wells in the Buellton reach. The two underflow wells screened in the alluvium show a similar pattern of water levels responding to the surface flow that is not observed in the aquifer well. As shown in **Figure 5**, after release of water from Lake Cachuma, the two wells in the underflow in the Buellton reach show a rapid response and increase in water level, but this does not occur in the well screened in the underlying groundwater aquifer. This indicates that the bed and banks in the Buellton Reach are relatively impermeable, which is the same area questioned in the SWRCB Staff Comments.

For the above reasons, the underlying units of Careaga Sandstone and Paso Robles Formation in the Buellton Reach do not negate the relative impermeability between alluvium and bed and banks of the channel. The Buellton Reach, which includes the only geology mentioned in the SWRCB Staff Comments, is a small reach within a longer underflow channel extending from Bradbury Dam to the Lompoc Narrows (Figure 2). Non-water bearing consolidated rock constitutes the bed and banks for the larger portion of this reach, and, as explained below, the evidence is that subsurface water is constantly flowing across the entire reach of the underground channel.



**COMPARISON OF WATER LEVELS IN NEARBY WELLS
TO CHANGES IN SANTA YNEZ RIVER FLOW
UNDERFLOW SCREENED WELLS VS AQUIFER SCREENED WELL
BUELLTON REACH**



2.2.3 The Course of the Channel Is Known or Capable of Being Determined by Reasonable Inference

A reasonable inference of the course of the channel is the extent of the alluvium, which is a continuous and single unit from Bradbury Dam (Lake Cachuma) to the Lompoc Narrows. As described above, the alluvium is recently deposited, unconsolidated material, with much higher permeability than the surrounding formations. Upstream of the Lompoc Narrows for 28 river miles²⁰ on both sides of the river, the alluvium is underlain by Miocene and older non-water bearing sediments. Along most stretches of the river, this bounding unit is the Monterey Formation, which was deposited in marine conditions. The Buellton Reach area, about 7 river miles in length (**Table 1**), is partially underlain by the Careaga Sandstone and Paso Robles Formation along the north flank and by shale deposits along the south. These formations are much older and relatively impermeable compared to the overlying alluvial sediments. The cover photograph of this report is of the contact between the alluvium and the Monterey formation, which in part shows how this boundary can be recognized in the field.

In addition, as part of fulfilling the requirements of SGMA, the GSAs developed three-dimensional geological models of the area used in the GSPs (see Section 2a.1 in the WMA GSP; Section 2a.1 in the CMA GSP, and Section 3.1.3 in the EMA GSP), which in detail mapped out the three-dimensional shape of the course of this channel using the best available scientific information. The course of this channel is well known to run from Bradbury Dam to the Lompoc Narrows, and the course of the alluvium has also been recognized by the SWRCB, including in its Order 2019-0148 (**Figure 2** of this report is comparable to Figure 3 of Order 2019-0148).

2.2.4 Groundwater Is Flowing in a Channel

Subsurface flow can be determined using multiple methods. One approach is plotting groundwater elevations and groundwater contours. Water flows perpendicular to water elevation contours. The presence of multiple contours indicates that water is flowing in the channel.

Subsurface water elevation contour maps are drawn up based on observations of water levels at wells. Flow is perpendicular to the contour lines. **Table 3** lists the subsurface water elevation contour maps in GSPs and Annual Reports for water year 2021 and water year 2022 that include contours for the underflow of the Santa Ynez River. **Appendix A** is a subsurface water contour map from Reclamation for Spring 1969, which includes the EMA and shows a similar pattern. All these maps indicate a pattern of subsurface water flowing through the channel, generally parallel to the surface flow of the Santa Ynez River.

²⁰ Including the Headwater, Santa Ynez, and Santa Rita reaches (see Table 1).

TABLE 3
WATER ELEVATION CONTOUR MAPS
OF SANTA YNEZ RIVER UNDERFLOW
IN GSA PLANS AND ANNUAL REPORTS

Year	Season	WMA	CMA	
		Santa Rita Reach (WMA)	Santa Rita Reach (CMA)	Buellton Reach
2019	Fall	WMA GSP Figure 2b.1-2	CMA GSP Figure 2b.1-2	
2020	Spring	WMA GSP Figure 2b.1-1	CMA GSP Figure 2b.1-1	
2021	Spring	WMA Annual Report WY2021 Figure 3-2	CMA Annual Report WY2021 Figure 3-2	
	Fall	WMA Annual Report WY2021 Figure 3-3	CMA Annual Report WY2021 Figure 3-3	
2022	Spring	WMA Annual Report WY2022 Figure 3-2	CMA Annual Report WY2022 Figure 3-2	
	Fall	WMA Annual Report WY2022 Figure 3-3	CMA Annual Report WY2022 Figure 3-3	

2.3 UNDERFLOW (POMEROY TEST - GARRAPATA CREEK DECISION)

The term “underflow”²¹ has been used deliberately in administrative and judicial rulings. Underflow is more narrowly defined than water flowing in subterranean streams. Citing *Los Angeles v. Pomeroy*, the *Garrapata Creek* Decision defines underflow as follows:

“Underflow was defined in *Los Angeles v. Pomeroy* as having the following physical characteristics:

1. Underflow must be in connection with a surface stream;
2. Underflow must be flowing in the same general direction as the surface stream; and
3. Underflow must be flowing in a watercourse and within a space reasonably well defined.
(Pomeroy, 124 Cal. at 624 [57 P. at 5941].)

The relationship between subterranean streams and underflow is that both must flow in a watercourse. A watercourse must consist of bed, banks or sides, and water flowing in a defined channel. (M. at 626 [57 P. at 5951.]) Thus, underflow is a subset of a subterranean stream flowing in known and definite channels. While a subterranean stream includes underflow, it is not necessary that groundwater be under-flow to establish the existence of a subterranean stream flowing through a known and definite channel.”

(Garrapata Creek Decision, p. 7)

²¹ The words “underflow” or “subflow” are not located or discussed in either the SGMA statute or regulations. As explained in the companion transmittal letter, cases such as *Los Angeles v. Pomeroy* as well as the *Garrapata Creek* Decision have legally recognized “underflow” as a subset of subterranean flow in a known and definite channel.

Table 4 summarizes which Santa Ynez River reaches meet the *Pomeroy* Test for “underflow.” All the areas along the Santa Ynez River which meet the four-part Garrapata Test as a subterranean stream also meet the Pomeroy Test to be characterized as Santa Ynez River underflow. In all these reaches of the Santa Ynez River, water beneath the surface is in connection with the above-ground surface flows of the Santa Ynez River.

TABLE 4
ALLUVIUM UPSTREAM OF LOMPOC NARROWS
VS. UNDERFLOW (POMEROY TEST)

Management Area	Santa Ynez River Reach / Alluvium	Subterranean Stream Garrapata Test	Underflow of Surface Stream (Los Angeles v. Pomeroy)			River Underflow
		Subterranean Stream	Connection with Surface stream	Flow along Stream	Flow in a Watercourse Reasonably Well Defined	
EMA	Headwater	Y	Y*	Y	Y	Y
EMA	Santa Ynez	Y	Y*	Y	Y	Y
CMA	Buellton	Y	Y*	Y	Y	Y
CMA / WMA	Santa Rita	Y	Y*	Y	Y	Y

* Seasonal presence of water; typically, during dry years surface stream flow diminishes during parts of the year.

SWRCB permitting decisions and orders examining the subsurface water within the alluvium have characterized the water as underflow of the River, which is a subset of a subterranean stream flowing in a known and definite channel (see Section 4.1).

For example, in Decision 1338 (In the Matter of Application 224233 of Solvang Municipal Improvement District to Appropriate from Santa Ynez River Underflow, [...] , and Application 22516 of Buellton Community Services District to Appropriate from Santa Ynez River Underflow, in Santa Barbara County), the SWRCB characterized the subsurface flow within the Santa Ynez and Buellton reaches of the alluvium as “underflow,” and based on such characterization, issued permits for wells pumping water from the alluvium in those reaches. Decision 1338 includes, for example, the following findings in this regard (emphasis added):

“5.The Santa Ynez River in the reach between Cachuma Dam and Robinson Bridge, where it enters the Lompoc subarea, flows over recent river channel deposits and the younger alluvium that range in width from a few hundred feet to about one mile and in thickness from 40 to 185 feet. The **underflow** of the river moves slowly through these deposits [compared to surface flows]. Because of the nature of these alluvial deposits, pumping during the summer season generally lowers the water table throughout the valley between Cachuma Dam and the Lompoc plain. However, a winter season of average precipitation and streamflow replenishes the unwatered gravels.

6.The Solvang Municipal Improvement District (Solvang) proposes to divert water from the **underflow** of the Santa Ynez River within the Santa Ynez subarea. Two wells are presently installed. The Petan Company (Petan) proposes to store water in a reservoir to be constructed on Alisal Creek,

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a tributary which joins the Santa Ynez River in the same subarea. The **underflow** of the river within the subarea is almost completely enclosed in the recent river channel deposits along the river.

The Buellton Community Services District (Buellton) diverts water by means of a well which is in the underflow of the Santa Ynez River in the Buellton subarea; in this subarea the river channel deposits lie along the river course and are nearly everywhere flanked by bodies of the younger alluvium.

12. The quality of the water contained in the gravels of the Santa Ynez River and the younger alluvium becomes progressively poorer as the **underflow** moves downstream, as indicated by an increase in total dissolved solids (tds) in the water with distance downstream from Cachuma Dam. Although salt balance studies have not been made of the underflow of the river upstream from the Lompoc Plain, the use and reuse of this water in storage to the point where it would be unusable by downstream entities. However, recharge to the **underflow** from precipitation and surface flow is of good quality, and the resulting dilution of the underflow may maintain a satisfactory water quality.”

(D 1338, pp. 3-4, 12 [emphasis added].)

The County of Santa Barbara has also characterized the alluvium upstream of the Lompoc Narrows as being in direct hydraulic communication with the river’s surface flow. As a result, the County has never developed as safe yield for the underflow alluvium as it has for groundwater basins. The General Plan for the County states:

“The riparian basin cannot be assessed for a perennial yield in the manner of the nonriparian basins in Santa Barbara County. Rather than having a fixed maximum yield determined by net natural recharge and imports (if any), the yield is a direct function of their demand. This is because an obligation exists for replenishment through releases from Lake Cachuma to satisfy prior rights, unless Lake Cachuma is spilling. Hydrologically, the riparian basin is not subject to overdraft because a long-term progressive drop in water levels cannot be accomplished because the average annual flow in the river (i.e. potential...recharge) is greater than the storage volume of the basin.”

(County, 2009, Conservation Element – Groundwater Resources Section, p. 41-42)

The summary above shows that several agencies have determined that the paleochannel of the Santa Ynez River Alluvium upstream of the Lompoc Narrows is a known and definite channel containing underflow of the Santa Ynez River.

2.4 SUMMARY

A longstanding technical and administrative record developed primarily during the public hearings and water rights decisions and orders of the SWRCB identifies the Santa Ynez River Alluvium above the Lompoc Narrows as “underflow,” a subset of a subterranean stream. As authorized by SGMA, the GSAs’ GSPs thoroughly investigated and characterized the subsurface water flowing in the alluvium along the reaches of the Santa Ynez River upstream of the Lompoc Narrows (collectively, Santa Ynez River Alluvium) as being part of the surface water system and not meeting the SGMA definition of “groundwater” because this subsurface water flows in a known and definite channel. Applying the test for underflow, a legal subset of a subterranean stream, it is apparent that the subsurface water in all reaches of the alluvium meets the

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definition of underflow. Applying the Garrapata Test, the same alluvial reaches of the Santa Ynez River meet the standard of a “subterranean stream” flowing in a known and definite channel. While these alluvial reaches connect with a surface stream and, as a result, water flowing through the Santa Ynez River alluvium is more precisely called “underflow,” the Garrapata Test conditions also exist. In either event, the result is the same: based on best available science and information, the GSPs reasonably concluded that the subsurface flow in the alluvium is not “groundwater” as the Legislature defined that term for purposes of SGMA groundwater management.

3 ADDITIONAL GSA DATA COLLECTION AND ANALYSIS SUPPORTING ALLUVIUM SUBSURFACE WATER AS UNDERFLOW AND WATER FLOWING IN A KNOWN AND DEFINITE CHANNEL

Historical studies in the 1970s and earlier provide geological data and other information that supports the GSPs' conclusion that water in Santa Ynez River Alluvium is not groundwater under the SGMA definition and meets the applicable tests for subterranean stream and underflow of a river. Examples of these historical studies include USGS Water Supply Papers 1107 (from 1951) and 1467 (from 1959).

However, as part of developing the GSPs, the GSAs gathered additional data and information and made further analyses which are higher resolution and more detailed than this historical data and information. These recent studies conducted by the GSAs and others additionally support the GSPs' conclusions regarding the existence of a known and definite channel and that the beds and banks of the channel are relatively impermeable.

3.1 GEOLOGICAL MODELING

Geological modeling identifies the three-dimensional extents of the subject geological formations. Regarding the four-part Garrapata Test, the geological model identifies subsurface channels, and the course of the subsurface channels. The geological model also identifies the geological material outside of the channel that make up the bed and banks.

The three GSAs conducted detailed, three-dimensional subsurface models of the geologic units and structures comprising the basin aquifer units and immediately adjacent non-water bearing units. The GSAs developed two model domains: one for the EMA and one for the WMA and CMA. The GSAs modeled both domains in Seequent's Leapfrog™ geological modeling program. Combined, these two domains cover the entire Basin. Geosyntec modeled the WMA and CMA, and GSI modeled the EMA. Both teams coordinated, as required by SGMA, focusing on the areas where the two model domains met.

The modeling effort included merging existing publicly available reports, data abstracted from well-completion reports, and new geophysical survey data. Ground surface elevations were defined using publicly available digital elevation models (DEM). Next, quantitative measurements for geologic units exposed at the ground surface were imported using existing literature and publicly available geologic maps. Contacts between those geologic units (surface between two different rock types) were defined as erosional or depositional, as the designation augments the model assumptions and subsurface interpolations. Once the contacts were defined, the volume between those contacts was filled according to the depositional environment, age of the geologic unit, and localized structure to form a complete geologic model. Filling out the full three-dimensional shapes of each geological layer in some places

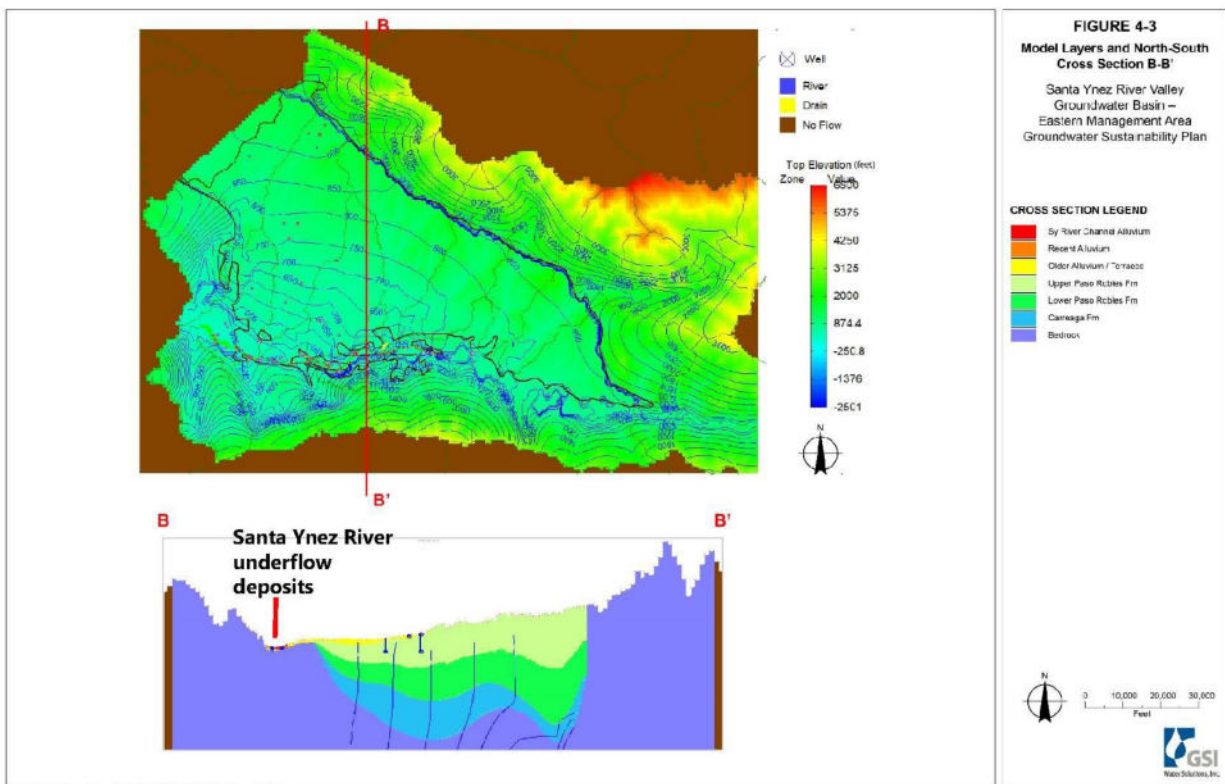
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required geological interpretation based on Leapfrog's interpolation algorithm and manual manipulation according to professional judgment by the team of geologists and geophysicists.

The source of surface geological mapping data was the mapping by Thomas Dibblee Jr. of the entire Santa Ynez Valley, published at 1:24,000 scale by the Santa Barbara Museum of Natural History. Other geological sources reviewed and included the 1992 USGS "Preliminary geologic map of Santa Maria 30' by 60' quadrangle, California" which is a regional map at 1:100,000 scale, and the 2014 USGS "Gravity, aeromagnetic and rock-property data of the central California Coast Ranges" regional geophysical survey. In August 2021, the USGS published an updated regional (1:100,000 scale) map, which the GSAs reviewed to ensure no significant differences in interpretation before the final GSPs were published.

The GSAs also conducted geophysical surveys to collect additional data about the subsurface. The EMA conducted a towed Transient Electro Magnetics (TEM) survey of the riverbed of the Santa Ynez River over August 18-19, 2020. In November 2020, the three GSAs conducted a larger regional aerial electromagnetic (AEM) survey of the entire Basin (see 3.1.3 below). The EMA received results from both studies and included them in the initial model in 2021, and the WMA and CMA used these results to update the geological model in the summer of 2022.

This effort resulted in developing a complete three-dimensional model of the entire area included in the DWR boundaries of the groundwater basin and the immediate surroundings. From this model, any number of cross-sections of the geology can be drawn, including the areas along the Santa Ynez River. **Figure 6** is an example cross-section from the EMA that shows the predominant relationship of the Santa Ynez River, younger alluvium, and the regional groundwater aquifers of the Careaga Sandstone and Paso Robles Formation in this location (described as the Santa Ynez reach in the earlier Section 1). As the example of Figure 6 shows, the younger alluvial deposits are within a well-constrained "known and definite" channel.



3.1.1 Well Log and Well Completion Reports

Part of developing the three-dimensional geological model of the Basin was the compilation of well logs and well completion reports noted below. This was a sizable data collection effort bringing together multiple sources of data. The sources of well logs or well completion reports data were combined and considered in the development of the geological model, and further, in part, helped the GSAs' understanding of the geology and hydrology of the river alluvium.

- Well logs or well completion reports by the participating GSA member agencies.
- Department of Water Resources well completion reports. These were primarily for water wells.
- County of Santa Barbara well completion reports filed as part of local permitting. These were primarily for water wells. These were stored as physical hard copies. The GSAs had these well logs scanned and digitized.
- Petroleum and gas well logs are stored by Geologic Energy Management Division. This was formerly the Division of Oil, Gas, and Geothermal Resources (DOGGR).

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- Additional well logs were reported in USGS publications.

The result was data for the WMA and CMA from over 2,000 unique well borehole locations, which was used to develop the geological model, with more in the EMA. As a result of this work, the GSAs considered the best available science and information about groundwater and hydrogeology concerning the Santa Ynez River, including characterization of the alluvium.

3.1.2 2021 USGS Regional Geological Map

Late in the development process of the GSPs, the USGS August 2021 (USGS, 2021) released a new regional scale (1:100,000) map that covered the Santa Maria 30' by 60' quadrangle that revised and superseded the earlier 1992 1:100,000 USGS map. The GSAs were able to review this map before publishing the GSPs in January 2022 and found that this geologic map (USGS, 2021) confirmed the hydrogeologic conceptual models in each of the GSPs.

3.1.3 SkyTEM Survey and Model Updates

The three GSAs conducted a larger regional airborne electromagnetic (AEM) survey of the entire Basin using a helicopter borne method by the SkyTEM company. This regional geophysical survey collects electromagnetic data on the ground's resistivity and a magnetic field's strength. These measured properties can be related to the three-dimensional geologic structure and hydrogeology.

The AEM method uses a helicopter towing a hexagonal transmitter loop frame. This transmits at two frequencies (210 Hz and 15 Hz) and measures the response. This combination allows for measurement resistivity to depths of up to 1,000 ft (300 m). Other sensors include measuring the distance to ground, roll, and pitch. Many parallel flight lines were used to provide coverage of the Basin, spacing between the flight lines was generally 820 ft (250 m). Between November 15 to 28, 2020, the GSAs flew approximately 766 miles of AEM lines. Most of the flights were in WMA and CMA, which was 709 miles (1,141 km), with the remaining 57 miles (91.2 km) in the EMA.²² The flights excluded most parts of the sensitive Vandenberg Space Force Base and built-up areas, including the cities of Solvang, Buellton, and Lompoc.

The results of the AEM surveys were not available for the GSAs at the time of their GSP preparation and those results will be incorporated in the 5-year updates. However, the geophysical consultant, Ramboll, converted the AEM data to resistivity models and presented interpretations of the geophysical data as horizontal slices, depth slices, vertical sections, and borehole information (Ramboll, 2022). Based on this new AEM data (Ramboll, 2022), Geosyntec updated the geologic model elevation data for the CMA and WMA in August 2022, and Stetson updated the MODFLOW Model. This new geophysical data confirms the conclusions from the hydrological conceptual model in the GSPs.

²² This includes 5.6 miles of repeated lines.

3.2 CALIBRATED GROUNDWATER FLOW MODELING

Groundwater modeling estimates the hydrogeologic properties of the aquifer, and the three-dimensional flow of water. In terms of the Garrapata Test, the groundwater flow model primarily provides information about the relative permeability (or impermeability) of the channel and the bed and banks, and if groundwater is flowing in the channel.

Following the requirements of SGMA and the SGMA Regulations, along with DWR guidance and best practices, the GSAs developed calibrated groundwater flow models for the Basin to inform the water budget.

Three-dimensional groundwater flow modeling tracks how water moves through the subsurface. This modeling incorporates the geological model for the layering and extents and then applies hydrogeologic properties for routing flow. Calibration of the model is a process to ensure that the model can accurately represent the hydrogeologic properties. During calibration, historical inflow data (such as precipitation and streamflow) is fed into the model, and the resulting model water levels are compared against historical water levels. A calibrated model can reproduce the observations, indicating that the model's hydrogeologic properties represent the real world. The calibrated groundwater flow model can then be used to predict the results of future scenarios in the Basin.

The GSAs' modeling used two groundwater flow model domains: a WMA and CMA model domain and an EMA model domain. Both models used versions of the USGS Modular Groundwater Flow (MODFLOW) underlying software code. Both models used the unstructured grid groundwater flow model (MODFLOW-USG). This divides the volume of the Basin into smaller volumes. For each time step, the model calculates the flow between the faces of all adjacent volumes. Each small volume has aquifer properties that describe how flow occurs. This approach conserves the total volume of water in the model. Geology and other vertical changes in hydrogeologic properties are represented using multiple layers.

Groundwater flow modeling required calibration of the permeability of both the Santa Ynez River's younger alluvial deposits and nearby aquifer formations. Water levels for wells in the presumed underflow required high permeability during the calibration process. Furthermore, water level calibration in the Santa Ynez River upstream of the Narrows was extremely sensitive to have an accurate streamflow thalweg²³ elevation. This sensitivity illustrates scientifically that the Santa Ynez River surface flow and underflow act directly in concert. Because of the high permeability of the river alluvium, there is a direct hydraulic connection between the River-channel Deposits and the Younger Alluvium and the surface flow in the Santa Ynez River upstream of the Lompoc Narrows, evidenced by responses in water levels in wells adjacent to the river during surface flows. The permeability of the river gravel deposits along the Santa

²³ Thalweg is the deepest part of a river or stream bed.

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Ynez River ranges from 134 to 600 feet per day, with typical values of about 535 feet per day (Upson and Thomasson 1951).²⁴

In contrast, the permeability of the clays and shales that form the bed and banks for the majority (approximately 80-90%) of the subsurface channel was calibrated with less than 0.01 feet per day based on the hydrogeologic properties of clays and shales. In the Buellton Reach, between Solvang and the Buellton Bend, the subsurface channel River-channel Deposits and the Younger Alluvium are in contact with the older formations of Careaga Sandstone and Paso Robles Formation in a limited reach, and the permeability of the bed and banks along the north flank is estimated to range from 0.1 to 10 feet per day. This permeability is 40x to 800x smaller than the permeability of the River-channel Deposits and the Younger Alluvium in the subsurface channel in this reach and thus relatively impermeable. Historical groundwater level observations also denote a distinct difference between the river underflow deposits and the Buellton (Groundwater) Aquifer in this region, corresponding to the *relative impermeability* between the sediments that are only around ten thousand years old cut in a defined channel next to the current riverbed and the deposits that are millions of years old that have been folded (i.e., compressed) in a vast regional aquifer.

3.3 SUMMARY

The three GSAs conducted substantial investigations as part of developing the GSPs and, as authorized by SGMA, concluded that the subsurface water within the Santa Ynez River Alluvium is water flowing in a known and defined channel. This investigation used the best available information and science, including reviewing and incorporating past geologic reports, compiling well logs, aquifer tests, new fieldwork, geologic, and hydrogeologic modeling tools, and consideration of most current scientific information about the pertinent hydrogeology to characterize the groundwater and surface water systems including the alluvium. While much of this information was included or summarized in the three GSPs, the SWRCB Staff Comments do not discuss or address this information. The GSPs' conclusions, including that water in the alluvium does not qualify as SGMA-defined groundwater, are also consistent with and supported by legal history including previous State Water Board permitting decisions where the board concluded that the alluvium contains river underflow, as described above and in more detail in the next section.

²⁴ Hydraulic conductivity is the flow out through cross sectional area with a hydraulic gradient during a period:

$$\frac{[\Delta \text{Volume}] \times [\text{Height}]}{[\Delta \text{Time}] \times [\text{Area}] \times [\text{Distance}]}$$

If a common base unit of length is used, this becomes $\left(\frac{[\text{Length}]^3 \times [\text{Length}]}{[\text{Time}] \times [\text{Length}]^2 \times [\text{Length}]}\right)$, simplified to $\left(\frac{[\text{Length}]}{[\text{Time}]}\right)$, such as feet per day.

4 REGULATORY HISTORY AND CHARACTERIZATION OF SUBSURFACE WATER IN THE SANTA YNEZ RIVER ALLUVIUM AS UNDERFLOW OR SUBTERRANEAN STREAMFLOW

Water within the Santa Ynez River Alluvium adjacent to the Santa Ynez River historically and consistently has been determined and regulated as “underflow.” The use of the term “underflow” by the agencies described in this section further illustrates the status of the alluvium as a subterranean stream in a known and definite channel as used by the SWRCB in the *Garrapata Creek* Decision²⁵ (see Section 2). The genesis of the underflow categorization of the Santa Ynez River is from the USGS Water Supply Paper 1107, which was utilized in SWRCB Decision 886 (described below).

4.1 STATE WATER RESOURCES CONTROL BOARD

Prior SWRCB actions have determined that the Santa Ynez River contains underflow (a type of subterranean stream), and on that basis the SWRCB asserted jurisdiction over and issued permits and licenses for pumping of River “underflow”²⁶. Because the evidence of a subsurface underflow channel consisting of River-channel Deposits and the Younger Alluvium along the Santa Ynez River upstream of the Lompoc Narrows based on the USGS Water Supply Paper 1107 is so substantial, the status of the underflow has been consistently reaffirmed and utilized by the SWRCB as described below.

TABLE 5
SUMMARY OF SWRCB DOCUMENTS
ADDRESSING UNDERFLOW ALONG SANTA YNEZ RIVER

Year	Underflow	Document	Selected Quote or Description
1958	Yes	Decision 886	“The flow and underflow of the Santa Ynez River is for all practical purposes confined to the shallow channel deposits and thin elongated bodies of alluvium along the river.”

²⁵ SWRCB (*Garrapata Creek*) Decision 1639, pg. 7: “Thus, underflow is a subset of a subterranean stream flowing in known and definite channels. While a subterranean stream includes underflow, it is not necessary that groundwater be underflow to establish the existence of a subterranean stream flowing through a known and definite channel.”

²⁶ The SWRCB Staff Comments (April 2023) refer to only one of these previous determinations of underflow by the SWRCB (Decision 1338). In Decision 1338, the SWRCB permitted wells in the same Buellton subarea of the alluvium that the Comments suggest the Garrapata Test is not satisfied, and, in doing so, contrary to Decision 1639, suggests underflow is not a subset of a subterranean stream flowing in known and definite channels. To our knowledge, the SWRCB water rights division is still asserting permitting jurisdiction over wells in that area of the underflow (and others).

Year	Underflow	Document	Selected Quote or Description
1969	Yes	Decision 1338	"The Buellton Community Services District (Buellton) diverts water by means of a well which is in the underflow of the Santa Ynez River in the Buellton subarea"
1973	Yes	WRO 73-37	Defined the Santa Ynez River "Above Narrows" alluvial deposits as underflow.
1978	Yes	Decision 1486	"Bureau's permits did not entitle it to object to the proposed appropriations from the underflow of the Santa Ynez River but later appropriations from the surface flow would be junior to that the water right entitlements for the Cachuma Project." Underflow and surface flow are intended equally.
1989	Yes	WRO 89-18	Water shall be released "to supply downstream diversions of the surface flow". There are no direct diversions of surface flow downstream, only pumping of underflow (intended equality).
2003	Yes	Draft Environmental Impact Report Cover Letter	"Maximum diversion of 5 cfs for municipal and industrial purposes from Santa Ynez River underflow."
2011	Yes	Final Environmental Impact Report	Same as above. Describes pumping from wells as "Santa Ynez River Underflow" diversions (FEIR Section 3.1.2 Downstream Water Rights).
2012	Yes	Licenses for Underflow	Appropriative Licenses 13869 and 13870 issued to the Santa Ynez River Water Conservation District, Improvement District No. 1 for pumping from the 4-cfs and 6-cfs well fields for "a right to the use of the waters of Santa Ynez River Underflow."
2019	Yes	SWRCB Staff Memo dated 2/6/2019	"Division staff performed analysis of current and historical photos in the areas adjacent to the subject well and observed two saturated pools north and south of the Santa Ynez River that fluctuate with the level of the river, indicating surface and subsurface connectivity. Therefore, water flowing within the alluvium meets the criteria of a subterranean stream."
2019	Yes	WRO 2019-0148	The environmental documentation references the Santa Ynez surface flow and its "subterranean stream." The Santa Ynez

Year	Underflow	Document	Selected Quote or Description
			River Hydrology Model utilized in the SWRCB Hearings confirms the underflow characteristics of the alluvium representing the Above Narrows Account and its relation to a live stream status along the Santa Ynez River.

4.1.1 Underflow Defined in SWRCB Decision 886 and Later Water Rights Orders for the Cachuma Project

4.1.1.1 SWRCB Decision 886

On March 25, 1946, the Bureau of Reclamation filed Applications 11331 and 11332 for appropriative direct diversion and storage of Santa Ynez River water for the Cachuma Project. The SWRCB's Decision (D) 886 ordered the issuance of these permits on February 28, 1958.

The evidentiary record for D886 relies heavily on the 1951 United States Geological Survey (USGS) Report, *"Geology and Water Resources of the Santa Ynez River Basin, Santa Barbara County, California"*, which set a precedent for the understanding of the underflow along the Santa Ynez River. This report considers the underflow above the Lompoc Narrows the equivalent of the surface water resources. The Santa Ynez River valley between Lake Cachuma and Lompoc was described as follows (USGS, 1951):

"The unconsolidated deposits beneath and adjacent to the river transmit a certain amount of underflow which is not measured at the successive gaging stations. Obviously, however, this underflow is an integral part of the water resources of the river valley."

(USGS, 1951 p. 71)

D886 acknowledges the existence of an underflow of the river. For example, D886 on page 5 regarding the protestants' diversions states "that approximately 4,100 acres have been irrigated for more than five years last past which are dependent upon the surface flow and underflow of Santa Ynez River" (D886, pg. 5, underline added for emphasis).

The underflow of the Santa Ynez, Buellton, and Santa Rita subareas (Figure 3) is also described in D886 using the criteria of a subterranean stream in a known and defined channel and the additional criteria for underflow of a direct connection with the surface flow. For example, each subarea is described below in an excerpt from D886 (underlines added for emphasis):

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Santa Ynez subarea:

“The flow and underflow of the Santa Ynez River within this subarea is almost completely enclosed in the shallow aquifers by consolidated rocks.”

(Decision No. D 886 p. 18)

Buellton subarea:

“In the subarea as a whole the chief water bearing formations are the relatively shallow river channel deposits and deposits confluent with the water of the river.”

(Decision No. D 886 p. 18)

Santa Rita subarea:

“The river then flows westward through a deep winding broad valley enclosed laterally by impermeable consolidated rocks, with the exception of Salsipuedes Creek drainage basin on the south, to the gap known as the Narrows. Along the Santa Ynez River, groundwater occurs in the deposits in and lying along the river, and the static level is in large part determined by the river stage.”

(Decision No. D 886 p. 19)

Each of these descriptions of the subsurface water along the Santa Ynez River above the Lompoc Narrows is consistent with criteria established later by the SWRCB for subterranean streams and underflow as stated in the 1999 *Garrapata Creek* Decision (Section 2).

4.1.1.2 SWRCB Water Rights Order 73-37

An extensive evidentiary record was developed for SWRCB Water Rights Order 73-37. During these SWRCB hearings, the boundary of the underflow above the Lompoc Narrows was established for Reclamation’s permit for the Cachuma Project (see Appendix A). Touns Engineers specifically submitted evidence during the SWRCB hearings leading up to Order 73-37 (Touns, 1972) on the characteristics of the underflow of the Santa Ynez River, which is summarized by Stetson (1977 and 1992) as follows:

1. The Santa Ynez River replenishes the River-channel Deposits and Younger Alluvium.
2. Older impermeable formations along the south side of the river form the underflow channel limits on that side. The older formations rise steeply to the south where more rainfall and runoff typically occurs due to the higher elevations and orographic effects.
3. Older impermeable formations along the north side of the river form underflow channel limits on that side. These formations form a bedrock lip that separates older less permeable formations (Careaga Sandstone and Paso Robles Formation) from the River-channel Deposits and Younger Alluvium adjacent to the Santa Ynez River. There are some additional permeable depositions to

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the north along tributaries, however the bottom elevations of those depositions are higher than the top of the river channel basin.

4. In the Buellton Reach, there is limited hydrologic continuity between the Younger Alluvium and the older less permeable formations (Careaga and Paso Robles) which are exposed to the base of the Younger Alluvium. There are extensive clay zones in the upper portion of this area. This relative impermeability of the Careaga Sandstone and Paso Robles Formation in this area of the Buellton reach significantly restricts the hydrologic continuity of Santa Ynez River underflow to the deeper aquifer.

Again, these descriptions of the subsurface water in 1972 along the Santa Ynez River above the Lompoc Narrows are consistent with meeting criteria established later by the SWRCB for subterranean streams and underflow as stated in the 1999 *Garrapata Creek* Decision (Section 2). Accordingly, SWRCB WRO 73-37 established the Above Narrows area, which is demarcated by the underflow deposits above the Lompoc Narrows, whose storage levels are directly dependent on the surface flow of the Santa Ynez River. As explained below, the criteria for the making of downstream releases from the Cachuma Project to replenish the entire alluvium area (Above Narrows Area) (WRO 73-37, as modified by WRO 89-18 and 2019-0148) necessarily depend on the existence of a close connection between the river surface and subsurface flow and relative impermeability of the bed and banks of the underlying channel.

4.1.1.3 SWRCB Water Rights Order 89-18 and 2019-0148

Importantly, the latest water rights order for the Cachuma Project, WRO 2019-0148, distinguishes the subsurface water along the Santa Ynez River into Above Narrows (underflow) and Below Narrows (percolating) basins (Figure 2) based in part on the legal surface verses groundwater distinctions as presented by downstream protestants and understood by the SWRCB in the evidentiary hearings leading up to the decisions. The WRO 73-37, as amended by WRO 89-18 and incorporated in WRO 2019-0148, states that water shall be released “from Lake Cachuma in such amounts and at such times and rates as (a) will be sufficient, together with inflow from downstream tributary sources, to supply downstream diversions of the surface flow under vested prior rights to the extent water would have been available for such diversions from unregulated flow” (Paragraph 5, [emphasis added]). As presented by the downstream parties during the SWRCB Cachuma water rights hearings, all diversions by prior rights (riparian and appropriative) are made by wells from the underflow of the Santa Ynez River within the boundary of its alluvium. D886 and subsequent orders on the Cachuma Project also acknowledge separate overlying rights, which would be from percolating groundwater (i.e., below the Lompoc Narrows). For example, page 8 from WRO 2019-0148 states:

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“Water rights downstream of Bradbury Dam consist of appropriative and riparian rights to divert water from the Santa Ynez River and overlying and appropriative rights to divert groundwater from groundwater basins that, under natural conditions, the river would recharge.”⁵

Footnote 5: The Final Environmental Impact Report, prepared in connection with this order, lists known water right holders in Table 3-1a. (FEIR, Vol. II, p. 3.0-3.)”

(WRO 2019-0148 p. 8)

Again, as related to the river area above the Lompoc Narrows, there are no direct surface flow diversions from the Santa Ynez River; only by wells pumping river underflow out of the alluvium. So, when the latest WRO 2019-0148 discusses diverting water from the Santa Ynez River, the SWRCB is necessarily referring to the underflows of the Santa Ynez River. This is clear from footnote 5 of WRO 2019-0148, which refers to Table 3-1a of the SWRCB’s 2011 Final Environmental Impact Report for the Cachuma Project hearings. Table 3-1a explicitly refers to the Santa Ynez River “underflow” and distinguishes water within the alluvium from “groundwater” pumpers in the Lompoc Basin downstream of the Narrows.

The SWRCB’s 2011 Final EIR for the project described in WRO 2019-0148 references the Santa Ynez surface and its “subterranean stream” in relation to the permits and licenses issued on the Santa Ynez River Alluvium (**Appendix B**). Regarding the extent of the subterranean stream, the attached excerpts from the 2011 Final EIR for the Cachuma Project indicate that the underflow throughout all Subareas of the “Santa Ynez River Alluvial Basin” [2019-0148, Figure 3 (green), p. 150] (Santa Ynez, Buellton, Santa Rita) above the Lompoc Narrows include a “subterranean stream” and, accordingly, the SWRCB has issued permits and licenses to pump the underflow within all such Subareas. The 2011 Final EIR also distinguishes such underflow of the River within the Alluvial Basin from pumpers of “Groundwater” from the Lompoc Basin and upland basins.

4.1.2 Appropriative Water Rights Permits for Underflow

Post-1914 appropriative diversions from a subterranean stream or underflow, flowing in a known and defined channel, require a water rights permit or license from the SWRCB (Water Code section 1200). Conversely, pumping percolating groundwater does not require a permit from the SWRCB. Thus, the jurisdiction and issuance of appropriative water rights permits by the SWRCB for alluvium wells indicates that subsurface water flows in a known and defined channel. The attached table (Appendix B) lists examples of where the SWRCB has issued permits or licenses for pumping alluvium underflow. This table is from the 2011 Final EIR for the Cachuma project that is the subject of the SWRCB’s recent WRO 2019-0148. Further discussions on these orders, permits, and licenses related to the underflow of the Santa Ynez River are discussed below.

4.1.3 SWRCB Decision 1338

In 1966, the City of Solvang, the City of Buellton, and the Petan Company submitted applications for the right to appropriate water from the Santa Ynez River watershed. After the hearings in Decision 1338,

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SWRCB approved these applications in 1969. The title of SWRCB Decision 1338 explicitly calls out underflows as listed below (underline added for emphasis), with the term underflow appearing 12 times throughout the document.

“In the Matter of Application 22423 of Solvang Municipal Improvement District to Appropriate from Santa Ynez River Underflow, Application 22454, of Petan Company to Appropriate from Alisal Creek, and Application 22516 of Buellton Community Services District to Appropriate from Santa Ynez River Underflow, in Santa Barbara County”

Please see Section 2.3 for additional citations.

4.1.4 SWRCB Decision 1486

In 1974, the Santa Ynez River Water Conservation District, Improvement District No. 1. submitted applications for the right to appropriate underflow of the Santa Ynez River. After hearings in Decision 1486, SWRCB approved these applications in 1978. Like Decision 1338, the title of SWRCB Decision 1486 specifically calls out underflow, with the term underflow appearing 19 times throughout the document with reference to the source of water to be diverted.

4.1.5 2015 SB-88

In 2015 the legislature passed Senate Bill (SB) SB-88,²⁷ requiring all but minimal **surface** water diverters to report the volume of diversions to the SWRCB. There are no direct surface water diversions. Along the lower Santa Ynez River all diversions are from the subsurface via well from the river underflow. Consistent with previous SWRCB decisions and orders on the Santa Ynez River, landowners in the Santa Ynez River Alluvium have received communications from the SWRCB on filing the SB-88 required information. SWRCB staff performed training services for SB-88 during local public meetings in 2019. In January 2022 as part of the SB-155 update²⁸, SWRCB mailed letters out to well owners pumping Santa Ynez River underflow who had previously been identified as surface water diverters. **Appendix C** contains a redacted copy of one of SWRCB’s letters sent to an alluvial well owner with instructions for SB-88 reporting.

4.1.6 2019 SWRCB Enforcement Memorandum

SWRB decisions, orders, and issuance of permits and licenses have remained consistent on the topic of Santa Ynez River underflow moving through River-channel deposits and younger alluvium upstream of the Lompoc Narrows, including in the Buellton reach. A recent SWRCB staff memorandum from February 6, 2019, prepared for enforcement purposes, treated the Santa Ynez River underflow in the Buellton Reach as surface water (**Appendix D**). The SWRCB memorandum applied the four-part Garrapata Test, identified

²⁷ Senate Bill No. 88. Water. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB88 (Accessed 2023-07-03)

²⁸ Senate Bill No. 155. Public resources trailer bill. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220SB155 (Accessed 2023-07-03)

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that all four parts were met, and concluded, “Groundwater being pumped from the subject well adjacent to the Santa Ynez River near the town of Buellton does meet the criteria of a subterranean stream.” The memorandum further concluded that, “Since the alluvium interval is screened, and the water flowing through the alluvium meets the criteria for a subterranean stream, as explained below, the water extracted from the subject well is, therefore, within the permitting authority of the State Water Board.” (Appendix D, p. 3.)

4.2 UNITED STATES BUREAU OF RECLAMATION AND DOWNSTREAM WATER RIGHTS RELEASES

The SWRCB decisions about the Santa Ynez River reference that Applications 11331 and 11332 were initially filed by United States of America through the Bureau of Reclamation, Regional Office, Region 2, Sacramento on March 25, 1946. As the permittee of the Cachuma Project water rights and participant in the SWRCB hearings for Decisions and Orders 1338, 1486, and 2019-0148, Reclamation has always been aware of underflow existing in the river channel deposits and the younger alluvium in the reach between Cachuma Dam and Robinson Bridge.

On October 7, 1949, Reclamation executed a water rights contract with the Santa Ynez River Water Conservation District regarding then planned Lake Cachuma. This contract obligated Reclamation to release a “live stream” from Lake Cachuma if water was flowing into Lake Cachuma (Reclamation, 1949). As described in the contract, a “live stream” meant visible surface flow at several points downstream along the Santa Ynez River (footnotes added):

“A live stream, as the term is used in this contract, shall be deemed to exist in the Santa Ynez River whenever there is a visible stream of water flowing on the surface of the river at San Lucas Bridge, at the Mission Bridge near Solvang,²⁹ at the U. S. Highway 101 Bridge near Buellton, at what is known as Santa Rosa damsite,³⁰ which is near the east end of what is known as Santa Rosa park, at Robinson’s Bridge, near Lompoc, and there is a surface flow in the river of not less than one cubic foot of water per second at the “H” Street Bridge, which is north of Lompoc.”

(Reclamation, 1949 p. 4)

The February 28, 1958 SWRCB Decision 886 (above, Section 4.1.1.1) ordered that these live stream releases through Lake Cachuma continue. The subsequent July 5, 1973 SWRCB Order WR 73-37 (above, Section 4.1.1.2) identified that “increased percolation and conservation of inflow to the Santa Ynez River downstream from the dam” would be better served by allowing water to be retained temporarily. That would allow releases to be timed based on when it would best benefit the downstream uses of the river. A concise description of this is found in a 1999 Reclamation report, as follows:

“These water rights and their associated releases from Lake Cachuma are principally structured by creating two accounts, and accruing credits (storing water) for the above and below Narrows areas, in Lake Cachuma. Releases from the Above Narrows Account (ANA) are made at Bradbury Dam for

²⁹ This is 0.75 mile upstream of the EMA/CMA boundary. This was a bridge, dismantled on August 23, 1953, at the location of what is now the Alisal Road bridge.

³⁰ This is the CMA/WMA boundary.

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the benefit of downstream water users between the dam and the Lompoc Narrows. Releases from the Below Narrows Account (BNA) are conveyed to the Narrows for the benefit of water users in the Lompoc basin. Carriage water used in delivering the BNA water from the Bradbury Dam to the Narrows is deducted from the ANA.”

(Reclamation, 1999 pp. 2-79)

Notably, Reclamation ties the release of ‘live stream’ surface water to monitoring wells in the Santa Ynez River alluvium. A 2010 Reclamation report, “Inventory of Wells for the Cachuma Project, Santa Barbara County, California – 2009,” includes a relatively recent map (see Figure 1 in that report) of the well locations used. That report contains nodal system boundaries, which are based on the same geology shown in Figure 2 of this report.

This water rights accounting approach relies on the existence of a subterranean stream with underflow. If the water released were flowing into and beyond the beds and banks of the subterranean channel, Reclamation, by practical necessity, would need to conduct additional accounting for this ‘loss.’ The nodal system describes a channel, with known extents, a course of flow, and subsurface flow. Since this subterranean stream is tied to a stream course, this is underflow. Reclamation has found that this is sufficiently well-defined to use it for making practical operational decisions about water rights for decades. Credits for the Above Narrows Account are based on observations of live stream, which recognizes the direct connection between the underflow deposits and the surface flow. This has been the case for over half a century.

4.3 SUMMARY

The SWRCB has consistently determined and regulated the Santa Ynez River Alluvium adjacent to the Santa Ynez River as “underflow.” SWRCB Finding #5 in Decision No 1338 provides the clearest definition by the SWRCB of the underflows as the “The Santa Ynez River in the reach between Cachuma Dam and Robinson Bridge” in the “recent river channel deposits and the younger alluvium”. The recent SWRCB Order 2019-0148 recognizes that water rights downstream of Bradbury Dam consist of appropriative and riparian rights to divert water from the Santa Ynez River above the Lompoc Narrows and overlying and appropriative rights to divert groundwater below the Narrows. The SWRCB FEIR recognizes water diversions from alluvium wells as occurring from subterranean flow and underflow. Indeed, there are no direct diversions of surface flow below Lake Cachuma, only pumping of subsurface underflow.

5 DISCUSSION AND CONCLUSIONS

The substantial scientific information relied upon by the GSPs to characterize Santa Ynez River Alluvium subsurface flow as part of the surface water system, and not SGMA-defined groundwater was not addressed or considered by the SWRCB Staff Comment Letter of April 2023. This report, including reference to the 2021 Stetson Technical Memorandum appended to each of the three GSPs, clarifies and supplements the body of substantial evidence relied upon by the GSPs to characterize the Basin's groundwater and surface water systems, including the Santa Ynez River Alluvium (underflow). Scientifically, per the underflow definition under *Los Angeles v. Pomeroy* and *Garrapata Creek*, this Report confirms that the water flowing in the alluvial deposits of the Santa Ynez River above the Lompoc Narrows is in a defined channel (Figure 2), which is connected to the river (Figure 5) and flowing in the same direction as the river (Table 4, Appendix A), and thus "underflow." This Report further confirms of the subsurface water within the alluvium along the Santa Ynez River upstream of Lompoc Narrows has always been regarded as underflow by the SWRCB (Table 6).

Although we have confirmed and conclude that the subsurface flow in all reaches of the alluvium above the Lompoc Narrows is underflow based on existence of all relevant physical conditions, this report also evaluates those conditions in light of the four-part Garrapata Test for all reaches of the Santa Ynez River above the Lompoc Narrows. The physical conditions for a "subterranean stream" flowing in a known and definite channel, as set forth in the *Garrapata Creek* Decision, exist within all reaches of the alluvium above the Lompoc Narrows. This combined with the substantial record of SWRCB decisions and orders regarding underflow along the Santa Ynez River supports the GSAs' conclusion that subsurface water within the Santa Ynez River Alluvium above the Lompoc Narrows is water flowing in a known and definite channel and, therefore, not groundwater as defined by the SGMA statute.

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Appendix A

EXCERPT FROM RECLAMATION 1970 REPORT SHOWING 1969 GROUNDWATER FLOW CONTOURS

Appendix B

EXCERPT FROM SWRCB FINAL EIR

VOLUME II - EDITED VERSION OF 2011 2ND RDEIR

**NOTE: ORIGINAL DOCUMENT INCLUDES STRIKEOUTS AND UNDERScores
INDICATING EDITS FROM 2ND RDEIR (APRIL 2011) TO DECEMBER 2011.**

Biological Opinion issued by NMFS (discussed in **subsection 2.4**, above), and the Lower Santa Ynez River Fish Management Plan (discussed in **subsection 2.5**, above). The proposed project entails potential modification of the releases required under Order WR 94-5, and potential imposition of other requirements, taking into consideration the requirements of the Biological Opinion and Fish Management Plan, and the instream flow requirements advocated by CalTrout (discussed in **subsection 3.2.2**, below).

Project Objectives

The *State CEQA Guidelines* (Sec. 15124(b)) indicate that the EIR, as part of the project description, should contain “a statement of objectives sought by the proposed project. A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.”

The objectives for the project are:

- Protecting public trust resources, including but not limited to steelhead, red-legged frog, tidewater goby, and wetlands, in the Santa Ynez River downstream of Bradbury Dam, to the extent feasible and in the public interest, taking into consideration: (1) the water supply impacts of measures designed to protect public trust resources, and (2) the extent to which any water supply impacts can be minimized through the implementation of water conservation measures;
- Protecting senior water right holders from injury due to changes in water quality resulting from operation of the Cachuma Project, including water quality effects in the Lompoc Plains groundwater basin that impair any senior water right holder’s ability to beneficially use water under prior rights; and
- Protecting senior water right holders from injury due to a reduction in the quantity of water available to serve prior rights.

3.1.2 Downstream Water Rights

Downstream water rights consist of appropriative and riparian rights to divert from the Santa Ynez River surface or subterranean stream, and groundwater diversion from groundwater basins that under natural conditions would be recharged by the river.

Known water right holders are listed below in **Table 3-1a, Existing and Claimed Water Rights and Diversions Along the Santa Ynez River**

Table 3-1a
Existing and Claimed Water Rights and Diversions along the Santa Ynez River

Location	Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amount	County	Source
Bradbury Dam to Alisal Bridge (Solvang)	S015195_01	-	-	Statement of Diversion and Use	Claimed	John V. Crawford	11/19/1999	1000 acre-ft/yr	Santa Barbara	Santa Ynez River
	S020791_01	-	-	Statement of Diversion and Use	Claimed	Palmer Gavit Jackson Trust	04/19/2011	778 acre-ft/yr	Santa Barbara	Santa Ynez River
	S020793_01	-	-	Statement of Diversion and Use	Claimed	Palmer Gavit Jackson Trust	04/19/2011	778 acre-ft/yr	Santa Barbara	Santa Ynez River
	A004007	1831	1261	Appropriative	Licensed	Anne V. Crawford-Hall	2/10/1933	1,219.90 acre-ft/yr	Santa Barbara	Santa Ynez River Underflow
	A012601	7436	10415	Appropriative	Licensed	Santa Ynez River Water Conservation District, ID No. 1	7/21/1948	515 acre-ft/yr	Santa Barbara	Santa Ynez River
	A011331	11308	-	Appropriative	Permitted	U.S. Bureau of Reclamation	3/19/1958	347,397.80 acre-ft/yr	Santa Barbara	Santa Ynez River
	A011332	11310	-	Appropriative	Permitted	U.S. Bureau of Reclamation	3/19/1958	311,198.90 acre-ft/yr	Santa Barbara	Santa Ynez River
	A022423_02	15878	-	Appropriative	Permitted	City of Solvang	03/15/1966	3600 acre-ft/yr	Santa Barbara	Santa Ynez River Underflow
	A024578_01	17733	-	Appropriative	Permitted	Santa Ynez River Water Conservation District, ID No. 1	03/22/1974	2220 acre-ft/yr	Santa Barbara	Santa Ynez River Underflow
	A024579_01	17734	-	Appropriative	Permitted	Santa Ynez River Water Conservation District, ID No. 1	02/28/2001	3400 acre-ft/yr	Santa Barbara	Santa Ynez River Underflow
	S008667			Statement of Diversion and Use	Inactive	Patricia Lee Myers	04/22/2009	0 acre-ft/yr	Santa Barbara	Santa Ynez River
Alisal Bridge to 101 Bridge (Buellton)	S020792_01	-	-	Statement of Diversion and Use	Claimed	Palmer Gavit Jackson Trust U/A 2/25/88	04/19/2011	778 acre-ft/yr	Santa Barbara	Santa Ynez River
	S020794_01	-	-	Statement of Diversion and Use	Claimed	Palmer Gavit Jackson Trust U/A 2/25/88	04/19/2011	778 acre-ft/yr	Santa Barbara	Santa Ynez River
101 Bridge to Pacific Ocean	S015121_01	-	-	Statement of Diversion and Use	Claimed	Mary Jane M. Edalatpour	11/02/1999	76 acre-ft/yr	Santa Barbara	Santa Ynez River
	S015229_01	-	-	Statement of Diversion and Use	Claimed	Alan H. Mercer	06/07/2000	50 acre-ft/yr	Santa Barbara	Santa Ynez River
	S016616_1	-	-	Statement of Diversion and Use	Claimed	Georgia S. Gammie Weister Trust	06/07/2010	1 acre-ft/yr	Santa Barbara	Santa Ynez River
	S016934_1	-	-	Statement of Diversion and Use	Claimed	Mary Jane M. Edalatpour	06/08/2010	3 acre-ft/yr	Santa Barbara	Santa Ynez River
	S016935_1	-	-	Statement of Diversion and Use	Claimed	Mary Jane M. Edalatpour	06/08/2010	118 acre-ft/yr	Santa Barbara	Santa Ynez River
	S016948_1	-	-	Statement of Diversion and Use	Claimed	Allison Gammie Hill, et. Al.	06/15/2010	1 acre-ft/yr	Santa Barbara	Santa Ynez River
	S016951_1	-	-	Statement of Diversion and Use	Claimed	John S. Hill	06/15/2010	8.6 acre-ft/yr	Santa Barbara	Santa Ynez River
	S017091_1	-	-	Statement of Diversion and Use	Claimed	Miller Merritt Trust	07/01/2010	11 acre-ft/yr	Santa Barbara	Santa Ynez River
	S017100	-	-	Statement of Diversion and Use	Claimed	Miller Merritt Trust	7/1/2010	7.5 acre-ft/yr	Santa Barbara	Santa Ynez River
	S017124_1	-	-	Statement of Diversion and Use	Claimed	Miller Merritt Trust	07/01/2010	162 acre-ft/yr	Santa Barbara	Santa Ynez River
	S017145_1	-	-	Statement of Diversion and Use	Claimed	Bruce A. Steele	07/01/2010	59 acre-ft/yr	Santa Barbara	Santa Ynez River
	S017151_1	-	-	Statement of Diversion and Use	Claimed	Bruce A. Steele	07/01/2010	0 acre-ft/yr	Santa Barbara	Santa Ynez River
	S020795_01	-	-	Statement of Diversion and Use	Claimed	Palmer Gavit Jackson Trust	04/19/2011	701 acre-ft/yr	Santa Barbara	Santa Ynez River
	A002394A	1276	001313A	Appropriative	Licensed	N Edalatpour	06/17/1921	53 acre-ft/yr	Santa Barbara	Santa Ynez River
	A002394B	1276	001313B	Appropriative	Licensed	Gene Shaw	1/23/1969	50 acre-ft/yr	Santa Barbara	Santa Ynez River
	A003927A	-	000932A	Appropriative	Licensed	Michael P. O’Brien	05/03/2002	146 acre-ft/yr	Santa Barbara	Santa Ynez River Underflow
	A003927B	-	000932B	Appropriative	Licensed	John M. Sundheim	05/03/2002	36 acre-ft/yr	Santa Barbara	Santa Ynez River Underflow
	A003927C	-	000932C	Appropriative	Licensed	Daniel H. Gainey Truct	05/03/2002	36 acre-ft/yr	Santa Barbara	Santa Ynez River Underflow
	A022423_01	15878	-	Appropriative	Permitted	City of Solvang	03/15/1966	3600 acre-ft/yr	Santa Barbara	Santa Ynez River Underflow
	A022516_01	15879	-	Appropriative	Permitted	City of Buellton	07/01/1966	1385 acre-ft/yr	Santa Barbara	Santa Ynez River Underflow
	A023960_01	17447	-	Appropriative	Permitted	Santa Ynez River Water Conservation District	01/06/1972	40000 acre-ft/yr	Santa Barbara	Santa Ynez River
Additional Statement not in eWRIMS										
	-	-	-	-	Claimed	Gildred Trust	-	27.12 acre-ft/yr	Santa Barbara	Santa Ynez River Alluvial Basin
	-	-	-	-	Claimed	Petersen Family Properties	-	10.9 acre-ft/yr	Santa Barbara	Santa Ynez River Alluvial Basin
	-	-	-	-	Claimed	Petersen Family Properties	-	0.01 acre-ft/yr	Santa Barbara	Santa Ynez River Alluvial Basin
	-	-	-	-	Claimed	Petersen Family Properties	-	0.80 acre-ft/yr	Santa Barbara	Santa Ynez River Alluvial Basin
	-	-	-	-	Claimed	Petersen Family Properties	-	10.80 acre-ft/yr	Santa Barbara	Santa Ynez River Alluvial Basin
	S0004237	-	-	-	Claimed	Pitts	-	2.12 cfs from Mar 1 to Oct 31	Santa Barbara	Santa Ynez River Alluvial Basin
	-	-	-	-	Claimed	Slavik Trust	-	14.0 acre-ft/yr	Santa Barbara	Santa Ynez River Alluvial Basin

Source: SWRCB, eWRMIS data base, October, 2011.
Note: information on this table is also provided in body of the ER text.

Appropriative Diverters – Above Narrows

The following have licenses and permits:

- **City of Solvang, Permit 15878 (Application 22423).** Maximum diversion of 5 cfs for municipal and industrial purposes from Santa Ynez River underflow. The City has two wells located in the Santa Ynez Subarea of the Santa Ynez River Alluvial Basin. Production from 1997-1999 ranged from 879 to 1,053 afy, at a maximum diversion rate of 1.8 cfs. The permit expired in 1990 and the City filed a petition for a time extension with the SWRCB, which was denied; the City has filed a petition for reconsideration, and the SWRCB's ~~denied the extension in 2010 and the City has requested reconsideration. The~~ action is still pending.
- **City of Buellton, Permit 15879 (Application 22516).** Maximum diversion of 3.1 cfs for municipal and industrial purposes with an annual diversion limit of 1,385 afy. The City has three wells in the Santa Ynez River. Buellton petitioned the SWRCB to modify its place of use and add a new well to the permit. Action on the petition is being consolidated with Buellton's request for a license for its maximum annual use in 1996 of 2.7 cfs, with an annual diversion limit of 557 afy.
- **SYRWCD, ID #1, Permit 17733 (Application 24578).** Maximum diversion of 4 cfs, from Santa Ynez River underflow, with an annual diversion limit of 2,220 af. Water diversion facilities include wells that are located in the Santa Ynez Subarea of the Santa Ynez River Alluvial Basin.
- **SYRWCD, ID #1, Permit 17734 (Application 24579).** Maximum diversion of 6 cfs, from Santa Ynez River underflow, with an annual diversion limit of 3,400 af. Water diversion facilities include wells located in the Santa Ynez Subarea of the Santa Ynez River Alluvial Basin.
- **SYRWCD, ID #1, License 10415 (A12601).** Maximum diversion of 1.73 cfs, from Santa Ynez River underflow, with an annual diversion limit of 515 af. Water is diverted from an infiltration gallery in the Santa Ynez Subarea of the Santa Ynez River Alluvial Basin.
- **Edalatour, License 1313A (Application 2394A).** Maximum diversion of 0.52 cfs with an annual diversion limit of 53 afy. Water is diverted from the Buellton Subarea of the Santa Ynez River Alluvial Basin.
- **Mercer et al (Shaw), License 1313B (Application 2394B).** Maximum diversion of 0.30 cfs with an annual diversion limit of 50-afy limit. Water is diverted from the Buellton Subarea of the Santa Ynez River Alluvial Basin.
- **O'Brien, et al. (Sundheim, Gainey), Licenses 932A, 932B and 932C (Applications 3927A, 3927B and 2927C).** Total diversion of 0.81 cfs, split as follows. License 932A allows diversion of 0.51 cfs with a diversion limit of 146 afy. License 932B allows diversion of 0.11 cfs with a diversion limit of 36 afy. License 932C allows diversion of 0.19 cfs with a diversion limit of 36 afy. Water is diverted from the Santa Rita East Subarea of the Santa Ynez River Alluvial Basin.
- ~~CWright and Torres, License 790 (Application 4034).~~ Maximum diversion of 0.62 cfs. Diversion is from Santa Rita West Subarea of the Santa Ynez River Alluvial Basin.

- ~~Crawford-Hall and San Lucas Ranch~~, License 1261 (Application 4007). Maximum diversion of 2.5 cfs from the Santa Ynez River. Water is diverted from the Santa Ynez Subarea of the Santa Ynez River Alluvial Basin.

Appropriative Diverters – Below Narrows

The following have permits:

- **SYRWCD, Permit 17447 (Application 23960)**. Maximum diversion of 100 cfs (40,000-afy limit) from the Santa Ynez River for groundwater storage. Diversion works consisting of sand dikes in the stream course were destroyed by high runoff in 1983 and have not been replaced. SYRWCD has petitioned to change its project, and petitioned for a time extension. SWRCB action on the petitions is being held in abeyance based on SYRWCD's proposal, as CEQA lead agency, to complete environmental documentation for the petitions after the SWRCB certifies the final EIR for the Cachuma Project. Water is diverted from the Eastern Plain Subarea of the ~~Santa Ynez River Alluvial~~ Lompoc Basin.

Riparian Diverters – Above Narrows

The following have provided statements of diversion and use:

- **Crawford, Statement S015195**. Claims the right to divert 1.37 cfs for irrigation and stockwatering, with a maximum annual use of 1000 af. The season of diversion is from May 1 to October 31 for irrigation and January 1 to December 31 for stockwatering. Diversion is from Santa Ynez River Subarea of the Santa Ynez River Alluvial Basin.
- **Edalatpour, Statement S015121**. Claims a right to divert 76 acre-ft/yr for domestic and irrigation use year-round from the Santa Ynez River.
- **Edalatpour, Statement S016934**. Claims a right to divert 3 acre-ft/yr for domestic use year-round. Water is diverted from a well in the Buellton Subarea of the Santa Ynez River Alluvial Basin.
- **Edalatpour, Statement S016935**. Claims a right to divert 118 acre-ft/yr for irrigation year-round. Water is diverted from a well in the Buellton Subarea of the Santa Ynez River Alluvial Basin.
- **Hill, et al, Statement S016948**. Claims a right to divert 1.0 acre-ft/yr for domestic and livestock watering purposes year-round. Water is diverted from a well 0.25 mile south of the Santa Ynez River in the Buellton Subarea of the Santa Ynez River Alluvial Basin.
- **Hill, Statement S016951**. Claims a right to divert 8.6 acre-ft/yr for domestic and irrigation purposes year-round. Water is diverted from a well 0.25 mile south of the Santa Ynez River in the Buellton Subarea of the Santa Ynez River Alluvial Basin.
- **Mercer, Statement S015229**. Claims the right to divert 0.65 cfs for domestic and irrigation purposes, with a maximum annual diversion of 50 af. The season of diversion for irrigation is May 1 to October 31. The season for domestic uses is year-round. Diversion is from Buellton Subarea of the Santa Ynez River Alluvial Basin.

- **Merrit Trust, Statement S017091.** Claims a right to divert 11 acre-ft/yr for domestic, livestock watering, and irrigation purposes year-round. Diverted from a well 0.1 mile from the Santa Ynez River in the Buellton Subarea of the Santa Ynez River Alluvial Basin.
- **Merrit Trust, Statement S017100.** Claims a right to divert 7.5 acre-ft/yr for domestic and livestock watering purposes year-round. The water is diverted from a well located 0.1 mile from the Santa Ynez River in the Buellton Subarea of the Santa Ynez River Alluvial Basin.
- **Merrit Trust, Statement S017124.** Claims a right to divert 162 acre-ft/yr to irrigation April through November. Water is diverted from a well 0.1 mile from the Santa Ynez River in the Buellton Subarea of the Santa Ynez River Alluvial Basin.
- **Myers, Statement S008667.** Claims the right to divert 0.117 cfs for irrigation from May 1 to September 30. Diversion is from the Santa Ynez Subarea of the Santa Ynez River Alluvial Basin. (Inactive).
- **Palmer-Gavit Jackson Trust S020791, S020792 S020793 and S020792.** Claims a right to divert 778 acre-ft/yr for domestic and irrigation use from the Santa Ynez River.
- **Pitts, Statement S004237.** Claims the right to divert 2.12 cfs from March 1 to October 31. Diversion is from Santa Rita East Subarea of the Santa Ynez River Alluvial Basin.
- **Steele, Statement S017145.** Claims a right to divert 59 acre-ft/yr for year-round irrigation. Water is diverted from a well in the Solvang Subarea of the Santa Ynez River Alluvial Basin.
- **Steele, Statement S017151.** Claims a right to divert 0.52 acre-ft/yr for domestic and livestock watering purposes year-round. Water is diverted from a well adjacent to the Santa Ynez River in the Solvang Subarea of the Santa Ynez River Alluvial Basin.
- **Weister Trust, Statement S016616.** Claims a right to divert 1 acre-ft/yr for livestock watering. The season of diversion is year-round. Water is diverted from a well located 0.25 mile south of Santa Ynez River in the Buellton Subarea of the Santa Ynez River Alluvial Basin.

The following statements have been received by the SWRCB but not yet entered into the electronic Water Rights Information Management System (e-WRIMS):

- **Gildred Trust.** Claims a right to divert 27.12 acre-ft/yr for domestic and pasture irrigation year-round. The water is diverted from a well in the Santa Ynez Subarea of the Santa Ynez River Alluvial Basin.
- **Palmer Gavit Jackson Trust.** Claims a right to divert 1,020 acre-ft/yr for irrigation use on riparian land. The water is diverted from five wells located in the Solvang and/or Santa Ynez Subareas of the Santa Ynez River Alluvial Basin. The Trust has filed another Statement of Diversion (April 14, 2011) for the five wells for the years 2000 through 2010.
- **Petersen Family Properties.** Claims a right to divert 10.9 acre-ft/yr for sand and gravel washing year-round. Water is diverted from a well in the Solvang Subarea of the Santa Ynez River Alluvial Basin.

- **Petersen Family Properties.** Claims a right to divert 0.01 acre-ft/yr for irrigation year-round. Water is diverted from a well in the Solvang Subarea of the Santa Ynez River Alluvial Basin.
- **Petersen Family Properties.** Claims a right to divert 0.80 acre-ft/yr for domestic use year-round. Water is diverted from a well in the Solvang Subarea of the Santa Ynez River Alluvial Basin.
- **Petersen Family Properties.** Claims a right to divert 10.80 acre-ft/yr for water truck fill and dust control year-round. Water is diverted from a well in the Solvang Subarea of the Santa Ynez River Alluvial Basin.
- **Slavik Trust.** Claims a right to divert 14.0 acre-ft/yr for domestic, livestock watering, and irrigation year-round. The water is diverted from a well in the Santa Ynez Subarea of the Santa Ynez River Alluvial Basin.

Riparian Diverters - Below Narrows

- No riparian diverters exist below the Narrows with Statements of Water Diversion and Use on file with the SWRCB.

Groundwater Pumpers

The following pump groundwater:

- City of Lompoc, Vandenberg Village Community Services District, Mission Hills Community Services District, and private landowners pump from the Lompoc Basin, which includes the Lompoc Uplands and Lompoc Terrace (both hydrologically connected to the river) and the Lompoc Plain, which receives direct recharge from the river.
- Groundwater also is pumped from upland basins along the Santa Ynez River that are not hydrologically connected to the river. Private landowners, small mutual water companies, SYRWCD, ID #1, City of Buellton, and the City of Solvang pump from the Santa Ynez Upland Basin, Buellton Upland Basin, and Santa Rita Upland Basin for municipal, industrial and irrigation uses within the SYRWCD. Extractions from these upland basins are not considered downstream water rights for the purposes of this EIR.

3.1.3 Public Trust Resources

As discussed in **subsection 1.4.1**, rights to use water are subject to the Public Trust Doctrine. Public trust resources for this project include the following resources that occur at Cachuma Lake and/or along the Santa Ynez River downstream of Bradbury Dam:

- Endangered southern steelhead trout occur along the lower river;
- Other native fish, amphibians, reptiles, birds, and mammals occur along the river and at the lake;

Appendix C

**STATE WATER RESOURCES CONTROL BOARD. ACTION REQUIRED:
REMINDER TO REPORT YOUR 2021 WATER USE INFORMATION. JANUARY
2022.**



APRIL 1
Jan - Sept 2024



GAVIN NEWSOM
GOVERNOR



JARED BLUMENFELD
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

January 2022

ACTION REQUIRED: REMINDER TO REPORT YOUR 2021 WATER USE INFORMATION

You are receiving this letter because the Division of Water Rights currently has you on record as the **Primary Owner** for the water right(s) included in the **attachment to this notice**. If you have an agent on record, the agent will receive a reminder notice as well; please coordinate your reporting efforts to avoid duplication. All water right holders are required to submit an online report of water diversion and use for their water use between January 1, 2021 through September 30, 2021 (even if no water was diverted or used during this period). See information below regarding changes to water use reporting dates and deadlines, how to report your water use, how to contact us for questions, and the latest information about drought conditions that may impact water availability in the coming year.

What are the changes to the reporting periods and deadlines in 2022?

- A new law (Senate Bill 155) modified the water use reporting periods from calendar year to water year (October 1 – September 30) and consolidated the reporting deadlines.
- All diverters must report their water use by April 1st, regardless of the type of right or claim. If your previous reporting deadline was in July, your reporting deadline has been changed. **EVERYONE** must report by April 1, 2022. Additional deadline changes will occur in 2023 (see table below).
- At this time, you must report water use for the **January 1, 2021 through September 30, 2021** period by **April 1, 2022**. Refer to the table below for the deadlines and reporting periods for the next three reporting periods.

Deadline	Reporting Period
April 1, 2022	January 1, 2021-September 30, 2021
February 1, 2023	October 1, 2021-September 30, 2022
February 1, 2024	October 1, 2022-September 30, 2023

E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

ATTACHMENT

Report your 2021 water use information online at: <https://rms.waterboards.ca.gov>

Water Right ID	Password	Primary Owner
		; Ranch Domestic
		Ranch #3 Ruiz
		s Ranch #2 Simons

[SUMMARY OF FINAL SUBMITTED VERSION]

Oct 2021 - Sept 2022
Well #3 (River)

SUPPLEMENTAL STATEMENT OF WATER DIVERSION AND USE FOR REPORTING PERIOD

October 1, 2021 to September 30, 2022

Primary Owner

Statement Number

Date Submitted: 01/07/2023

Water is used under	Riparian Claim
Year diversion commenced	1934

Purpose of Use	
Irrigation	

Irrigated Crops			
	Multiple Crops	Area Irrigated (Acres)	Primary Irrigation Method
Vegetables	No	70	Sprinkler

Special Use Categories	
Are you using any water diverted under this right for the cultivation of cannabis?	No

Amount of Water Diverted and Used			
Month	Amount directly diverted (Acre-Feet)	Amount diverted or collected to storage (Acre-Feet)	Amount beneficially used (Acre-Feet)
2021			
October	9.27	0	9.27
November	7.28	0	7.28
December	0	0	0
2022			
January	7.31	0	7.31
February	11.58	0	11.58
March	12.36	0	12.36
April	13.01	0	13.01
May	16.85	0	16.85
June	23.53	0	23.53
July	19.24	0	19.24
August	24.69	0	24.69
September	18.3	0	18.3
Total	163.42	0	163.42
Type of Diversion	Direct Diversion Only		
Comments			

Water Diversion Measurement	
Required to measure as of the date this report is submitted	Yes

Is diversion measured?	Yes
An alternative compliance plan was submitted to the division of water rights on	
A request for additional time was submitted to the division of water rights on	

Measurement ID number	
This Device/Method was used to measure water during the current reporting period	Yes
Briefly describe the measurement device or method	watermeter - insertion - paddlewheel
Nickname	
Type of device / method	Flow meter (propeller)
Device make	Seametrics
Serial number	03376
Model number	IP110
Approximate date of installation	06/01/2017
Additional info	
Approximate date the measuring device was last calibrated or the measurement method was updated	11/15/2022
Estimated accuracy of measurement	1.5%
Description of calibration method	
Describe the maintenance schedule for the device/method	Calibrated every 5 years or as needed
Information for the person who last calibrated the device or designed the measurement method	
Name	
Phone number	
Email	
Qualifications of the individual	California-licensed contractor authorized by the State License Board for C-57 well drilling or C-61 Limited Specialty/D-21 Machinery and Pumps
License number and type for the qualified individual above and/or any other relevant explanation	License #
Type of data recorder device / method	Data logger (digital)
Data recorder device make	Seametrics
Data recorder serial number	03342
Data recorder model number	FT450
Data recorder units of measurement	Acre-Feet
Frequency of data recording	
Additional data recorder info	
I am required to report my diversion or storage data by telemetry as of the date this report is submitted	No
I report my diversion or storage data by telemetry to the following website	

Measurement Attachments			
Measurement ID Number	File Name	Description	Size
No attachments			

Measurement Data Files			
Measurement ID Number	File Name	Description	Size

No data files

Maximum Rate of Diversion	
Month	Rate of Diversion
2021	
October	
November	
December	
2022	
January	
February	
March	
April	
May	
June	
July	
August	
September	

Water Transfers	
Water transfered	No
Quantity transfered (Acre-Feet)	
Dates which transfer occurred	/ to /
Transfer approved by	

Water Supply Contracts	
Water supply contract	No
Contract with	
Contract number	
Source from which contract water was diverted	
Point of diversion same as identified water right	
Amount (Acre-Feet) authorized to divert under this contract	
Amount (Acre-Feet) authorized to be diverted in 2022	
Amount (Acre-Feet) projected for 2023	
Exchange or settlement of prior rights	
All monthly reported diversion claimed under the prior rights	
Amount (Acre-Feet) of reported diversion solely under contract	

Credits Claimed			
	Conservation	Reclaimed Water Use	Conjunctive Groundwater Use
Claimed? (Yes/No)	No	No	No
2021			
October			
November			
December			
2022			
January			
February			

March			
April			
May			
June			
July			
August			
September			

Conservation Supporting Information	
Description of conservation methods	
Description of baseline water use and time period	
Description of conservation calculation methods	
Conserved water used?	

Additional Remarks

Attachments		
File Name	Description	Size
No Attachments		

Contact Information of the Person Submitting the Form	
First Name	
Last Name	
Relation to Water Right	Diverter of Record
Contact Information of the Person Submitting the Form	
First Name	
Last Name	
Relation to Water Right	Diverter of Record

Information on Certification and Signatory	
Name of Person Signing and Certifying the Report	
Date of Signature	01/07/2023

[SUMMARY OF FINAL SUBMITTED VERSION]

OCT 2021
 Sept 2022
 well # 1
 Domestic

SUPPLEMENTAL STATEMENT OF WATER DIVERSION AND USE FOR REPORTING PERIOD

October 1, 2021 to September 30, 2022

Primary Owner

Statement Number

Date Submitted: 01/07/2023

Water is used under	Riparian Claim
Year diversion commenced	1935

Purpose of Use	
Domestic	3 persons, small garden

Special Use Categories	
Are you using any water diverted under this right for the cultivation of cannabis?	No

Amount of Water Diverted and Used			
Month	Amount directly diverted (Acre-Feet)	Amount diverted or collected to storage (Acre-Feet)	Amount beneficially used (Acre-Feet)
2021			
October	0.108	0	0.108
November	0.108	0	0.108
December	0.108	0	0.108
2022			
January	0.108	0	0.108
February	0.108	0	0.108
March	0.108	0	0.108
April	0.108	0	0.108
May	0.108	0	0.108
June	0.108	0	0.108
July	0.108	0	0.108
August	0.108	0	0.108
September	0.108	0	0.108
Total	1.296	0	1.296
Type of Diversion	Direct Diversion Only		
Comments			

Water Diversion Measurement	
Required to measure as of the date this report is submitted	No
Is diversion measured?	No
An alternative compliance plan was submitted to the division of water rights on	
A request for additional time was submitted to the division of water rights on	

Measurement Attachments			
Measurement ID Number	File Name	Description	Size
No attachments			

Measurement Data Files			
Measurement ID Number	File Name	Description	Size
No data files			

Maximum Rate of Diversion	
Month	Rate of Diversion
2021	
October	
November	
December	
2022	
January	
February	
March	
April	
May	
June	
July	
August	
September	

Water Transfers	
Water transfered	No
Quantity transfered (Acre-Feet)	
Dates which transfer occurred	/ to /
Transfer approved by	

Water Supply Contracts	
Water supply contract	No
Contract with	
Contract number	
Source from which contract water was diverted	
Point of diversion same as identified water right	
Amount (Acre-Feet) authorized to divert under this contract	
Amount (Acre-Feet) authorized to be diverted in 2022	
Amount (Acre-Feet) projected for 2023	
Exchange or settlement of prior rights	
All monthly reported diversion claimed under the prior rights	
Amount (Acre-Feet) of reported diversion solely under contract	

Credits Claimed			
	Conservation	Reclaimed Water Use	Conjunctive Groundwater Use
Claimed? (Yes/No)	No		No
2021			

October		
November		
December		
2022		
January		
February		
March		
April		
May		
June		
July		
August		
September		

Conservation Supporting Information

Description of conservation methods

Description of baseline water use and time period

Description of conservation calculation methods

Conserved water used?

Additional Remarks**Attachments**

File Name	Description	Size
No Attachments		

Contact Information of the Person Submitting the Form

First Name

Last Name

Relation to Water Right

Diverter of Record

Contact Information of the Person Submitting the Form

First Name

Last Name

Relation to Water Right

Diverter of Record

Information on Certification and Signatory

Name of Person Signing and Certifying the Report

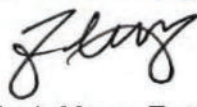
Date of Signature

Appendix D

**GARRAPATA TEST FOR SUBTERRANEAN STREAMS ABOUT A BUELLTON
WELL. ZACHARY MAYO, PG, ENGINEERING GEOLOGIST, STATE WATER
RESOURCES CONTROL BOARD. FEBRUARY 6, 2019. SUBTERRANEAN STREAM
DETERMINATION, BUELLTON, SANTA YNEZ RIVER, SANTA BARBARA
COUNTY.**

State Water Resources Control Board

TO: James Bishop
Engineering Geologist
Cannabis Cultivation Regulatory Program
Central Coast Water Board
James.Bishop@waterboards.ca.gov

FROM: 
Zach Mayo, Engineering Geologist
Sacramento Valley Enforcement Unit
Division of Water Rights

DATE: FEB 06 2019

SUBJECT: SUBJECT: SUBTERRANEAN STREAM DETERMINATION, BUELLTON, SANTA YNEZ RIVER, SANTA BARBARA COUNTY

This memorandum concerns one groundwater well near the Santa Ynez River in Santa Barbara County. The well is screened at a single gravel and sand interval and is drawing water from underflow of the Santa Ynez River from coarse grained alluvium. The well is located southeast of the town of Buellton and is drilled into alluvium underlain by Espada Formation, Sisquoc Shale, and Monterey Shale (Upson and Thomasson, 1951; Dibblee, 1966; and Dibblee, 1988). Division staff has been tasked with performing research and interpreting local geology to make a subterranean stream determination for the well. Groundwater is presumed to be percolating groundwater unless it can be shown that the water from a subterranean stream, which is within the permitting authority of the State Water Board.

GARRAPATA 4-PART TEST FOR SUBTERRANEAN STREAMS

For groundwater to be classified as a subterranean stream flowing through a known and definite channel, the following physical conditions must exist:

1. A subsurface channel must be present;
2. The channel must have relatively impermeable bed and banks;
3. The course of the channel must be known or capable of being determined by reasonable inference; and
4. Groundwater must be flowing in the channel.

INTRODUCTION

Division staff has been asked by the Central Coast Regional Water Board Cannabis Cultivation Regulatory Program to perform a subterranean stream analysis on a single well that is located

FELICIA MARCUS, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

between the towns of Buellton and Solvang along the south bank of the Santa Ynez River. The subject well is producing water that is being diverted to storage to be eventually used for cannabis cultivation. There are three 5,000-gallon storage tanks that the water is being diverted to. Division staff has performed this analysis in order to determine if the subject well is drawing water from a subterranean stream, to determine if the well owner is complying with the Cannabis Cultivation Policy, and if they are required to obtain a Cannabis Small Irrigation Use Registration (SIUR) water right.

GEOLOGY

The Buellton area lies adjacent to the Santa Ynez River on Quaternary alluvium that is underlain by Vaqueros Sandstone, Sespe Formation, and Espada Formation to the south and Paso Robles Formation, Careaga Sandstone, and Sisquoc and Monterey Shale to the north (Figure 1; Upson and Thomasson, 1951; Dibblee 1966; Dibblee, 1988). Vaqueros Sandstone is early Miocene aged sandstone and pebble conglomerate and the Sespe Formation is predominantly Oligocene aged sandstone with siltstone, claystone, and conglomerate (Figures 1 and 2; Dibblee, 1988). The Espada Formation is a late Jurassic to early and middle Cretaceous aged series of well-bedded argillaceous to sandy shales with thin interbeds of hard arkosic sandstone (Figures 1 and 2; Dibblee, 1988). The Espada Formation has no defined sequence of beds with shale making up approximately 90 percent of the formation, sandstone about 10 percent, and limestone and conglomerate a small fraction of 1 percent (Dibblee, 1966). The Quaternary alluvium is comprised of stream-channel sands and gravels (Figures 1 and 2; Dibblee, 1988). To the north, the Santa Ynez River is bound by the topographic high of foothills and structural anticlines which are locally comprised of Quaternary alluvium and alluvial terrace deposits underlain by Paso Robles Formation, Careaga Sandstone, Sisquoc Shale, and Monterey Shale (Figures 1 and 2; Dibblee, 1988). The Paso Robles Formation is a nonmarine weakly consolidated conglomerate of sand and clay and the conglomerate is composed largely of Monterey Shale detritus. The Careaga Sandstone is a shallow marine regressive unit composed of locally pebbly sandstone. The Sisquoc Shale is a marine diatomaceous shale unit that is late Miocene in age and the Monterey Shale is a siliceous and cherty shale that is early to late Miocene in age (Figures 1 and 2; Dibblee, 1988). To the south, the Santa Ynez River is bound by a structural anticline that plunges to the west and exposes the Espada Formation near the well location (Figures 1 and 2; Dibblee, 1988).

GROUNDWATER WELL

Division staff evaluated a single 12-inch groundwater well (the Hart B well) southeast of the town of Buellton that was completed in 2005 (Figure 1). This well is reported to be drilled to approximately 52-feet below ground surface (bgs) with a cement seal to 23-feet bgs. The well location is approximately 400-feet south to southwest of the Santa Ynez River. The well completion report for this well reported a production volume of 50 gallons per minute (gpm) during a pump test, no time duration of the test or drawdown was reported on the well completion report.

The subsurface geological log of the Hart B well completion report shows alluvium to a depth of approximately 42-feet bgs, clay from approximately 42 to 50-feet bgs, and shale bedrock from 50 to 52-feet bgs. The well is screened using 6-inch PVC casing at a single interval from 28 to 49-feet bgs. The alluvium interval is logged as large gravel and sand from 0 to 42-feet bgs on the well completion report.

SUBTERRANEAN STREAM ANALYSIS

Groundwater being pumped from the subject well adjacent to the Santa Ynez River near the town of Buellton does meet the criteria of a subterranean stream. The well is screened from approximately 0 to 42-feet bgs and is drawing water from a subsurface channel in alluvium that is bounded by relatively impermeable shale rock formations to the north and south. Since the alluvium interval is screened, and the water flowing through the alluvium meets the criteria for a subterranean stream, as explained below, the water extracted from the subject groundwater well is, therefore, within the permitting authority of the State Water Board.

GARRAPATA 4-PART TEST

Subsurface Channel

The subsurface channel is bounded by hills of shale bedrock to the north and south of the Santa Ynez River valley. Relatively impermeable shale bedrock is mapped in the foothills north and south of the Santa Ynez River with the bedding mapped with opposing dips (anticlines) indicating the formations intersect at some depth below the Santa Ynez River forming a valley filled with Quaternary Alluvium.

Impermeable Bed and Banks

The Santa Ynez River is bound to the north by Sisquoc and Monterey Shale and is bounded to the south by Espada Formation (Dibblee, 1988). These older and deeper shale formations are exposed to the north and south of the Santa Ynez River and form also the relatively impermeable bed and banks of the subterranean stream. The quaternary alluvium mapped within the river valley is described as coarse-grained river and stream bed deposits (Figure 2) indicating high porosity material that is significantly more permeable than the shale bedrock.

Alluvium

The well log provided to the Division shows that the depth of the water bearing alluvium is approximately 42-feet below ground surface (bgs). Clay is logged below the water bearing alluvium from approximately 42 to 50-feet bgs; however, clay rich soils are typically not productive water bearing units. The depth to static water level is logged at 24-feet bgs and the well is constructed with a screened interval from approximately 28 to 49-feet bgs. The water in the alluvium of the valley of the Santa Ynez River is part of a subterranean stream flowing through a known and definite channel.

Flowing Water

Well data within the area between Solvang and Buellton indicates varying water levels between approximately 20-feet bgs to approximately 45-feet bgs and depth to shale varying between approximately 40-feet bgs to 60-feet bgs. Topography indicates that the Santa Ynez River flows from east to west and has a mean annual discharge of between 11.0 and 25.8 cubic feet per second (cfs) over the last three years; according to the United States Geological Survey (USGS) National Water Information System. The water flow measurements were taken from a USGS stream gauge approximately 1.8 miles upstream near the town of Solvang. Water flow levels are maintained by releases made from Lake Cachuma (Santa Barbary County 2011 Groundwater Report). The alluvium within the river valley is bound at depth by the relatively

impermeable shale units and the river gradient indicates flow from the well location to the mouth of the river at the Pacific Ocean (Dibblee, 1988). Division staff performed analysis of current and historical photos in the areas adjacent to the subject well and observed two saturated pools north and south of the Santa Ynez River that fluctuate with the level of the river, indicating surface and subsurface connectivity. Therefore, water flowing within the alluvium meets the criteria of a subterranean stream.

Figure 1: Geologic Map

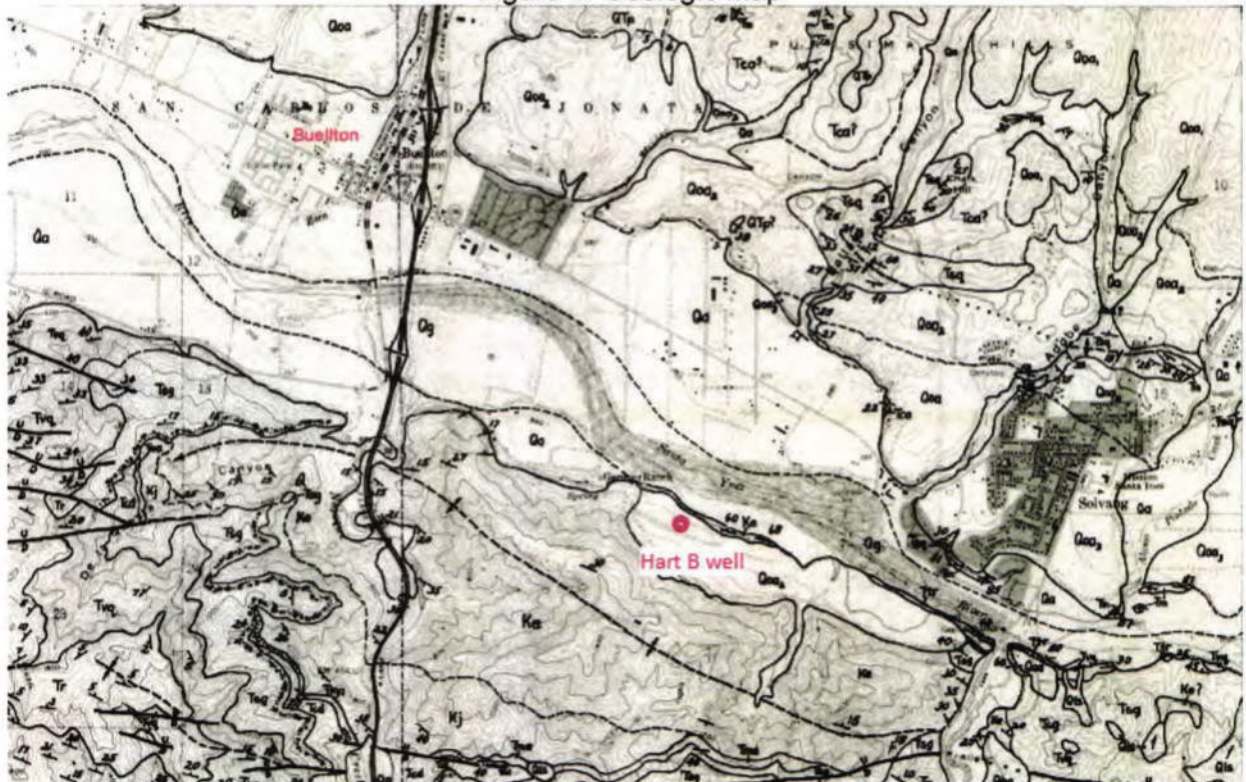
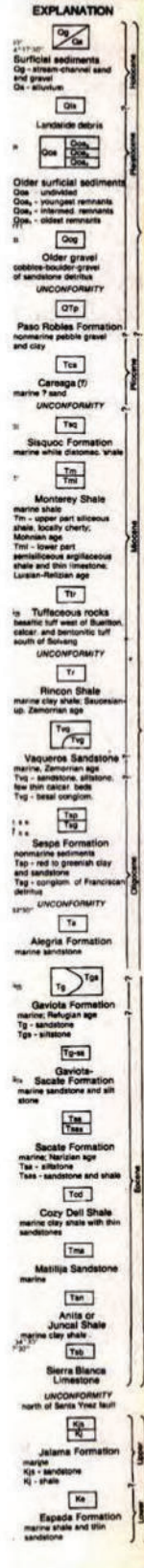


Figure 2: Map Explanation



REFERENCES

- Dibblee, T.W., Jr., 1966, Geology of the central Santa Ynez Mountains, Santa Barbara County, California: California Division of Mines and Geology Bulletin 186, 99 p.
- Dibblee, T.W., Jr., 1988, Geologic map of the Solvang and Gaviota quadrangles, Santa Barbara County, California: Santa Barbara, Dibblee Geological Foundation Map DF-16, scale 1:24,000.
- Upson, J.E., and Thomasson, H.G., 1951, Geology and water resources of the Santa Ynez River basin Santa Barbara County, California: U.S. Geological Survey Water-Supply Paper 1107, 202 p.
- <http://www.countyofsb.org/uploadedFiles/pwd/Content/Water/WaterAgency/Report%20Document%20FINAL.pdf>

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Section 5 – Basin Setting
Appendix 5-B:

Joint Presentation of Water Budget

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DRAFT TECHNICAL MEMORANDUM

2171 E. Francisco Blvd., Suite K • San Rafael, California • 94901

TEL: (415) 457-0701 FAX: (415) 457-1638

TO: File

DATE: July 2, 2026

FROM: Stetson Engineers

RE: **DRAFT** Joint Presentation of Santa Ynez River Valley Groundwater Basin Water Budgets Showing Consistency

SUMMARY

This is a summary presentation of the water budget for the Santa Ynez River Valley Groundwater Basins (“SYRVGB”), DWR Basin No. 3-15. The historical period of 1982–2018 was coordinated throughout the SYRVGB. This document is a summary of the water budget information presented separately in the individual groundwater sustainability plans (“GSPs”) prepared by the Western Management Area (“WMA”), Central Management Area (“CMA”), and Eastern Management Area (“EMA”) groundwater sustainability agencies. In general, these management areas are distinct with very little connection and may be best managed separately. To the extent that these are connected, water flows from the EMA into the CMA, and then from the CMA into the WMA, and from the WMA into the Pacific Ocean. **Table 1** is a summary of how key components of the water budget compare across the three management areas.

This document provides information about the factors used in setting the sustainable yield and groundwater change in storage, including time periods, terminologies, and definitions for the physical components of the Basin. Method for calculating the sustainable yield and groundwater change in storage is reviewed in the Periodic Evaluations. The sustainable yield and change in groundwater storage are determined using portions of the water budget. The sustainable yields and periods are summarized in **Table 2**.

Table 1
Select Water Budget Components
Historical 1982–2018 Average Flows for each
Santa Ynez River Valley Groundwater Basin
Management Area from 2022 GSPs

Management Area	EMA		CMA		WMA	
Component	Inflow	Outflow	Inflow	Outflow	Inflow	Outflow
Santa Ynez River Surface Flow	61,600	85,700	85,720	91,320	91,320	89,190
Santa Ynez River Tributary Inflow	27,000	-	9,060	-	16,130	-

Notes:

Values in acre-feet ("AF").

In the GSP, the EMA presented water budget results rounded to nearest 100 AF, the CMA and WMA presented results rounded to nearest 10 AF.

Table 2
Sustainable Yield Estimates for each
Santa Ynez River Valley Groundwater Basin
Management Area from 2022 GSP

Management Area	Analysis Period	Sustainable Yield	Page Location in GSP
EMA	1982–2018	12,870 AFY	3-146, 2022 EMA GSP
CMA	1982–2018	2,800 AFY	2c-55, 2022 CMA GSP
WMA	1982–2018	26,400 AFY	ES-7, 2022 WMA GSP

Note: "AFY" is acre-feet per year.

At the end of this document, Table 5, Table 6, Table 7, and Table 8 provide the historical (1982–2018) groundwater inflows and outflows from the WMA, CMA, and EMA GSPs (Table 2c.3-6 in the WMA GSP, Table 2c.3-6 in the CMA GSP, and Table 3-27 in the EMA GSP). These tables indicate what portions of the water budget are coordinated and show consistency. The following discusses what these components represent and why they are coordinated.

BACKGROUND

The SYRVGB has three independent Groundwater Sustainability Agencies (“GSAs”) for compliance with the Sustainable Groundwater Management Act. The three GSAs are the WMA, CMA, and EMA. Each GSA submitted a Groundwater Sustainability Plan (“GSP”) in January 2022. **Figure 1** shows the location of all three management areas of the Basin. These individual management areas are an intermediate level of analysis, as they represent collections of local “subareas” which are areas with similar hydrogeologic conditions.

In its review, the Department of Water Resources (“DWR”) analyzed all three GSPs and the coordination agreement as a single “Plan” (combined total of 3,757 pages). DWR’s Staff Report indicated several specific inconsistencies^{1,2} which, upon review, may have been errors. As part of the January 2024 approval of the Plan, the DWR requested a reevaluation of the water budgets to address these inconsistencies and a simplified single presentation of the water budget for the entire basin.

Attachment I is a copy of DWR’s proposed Recommended Corrective Action (“RCA”) with regards to water budgets.

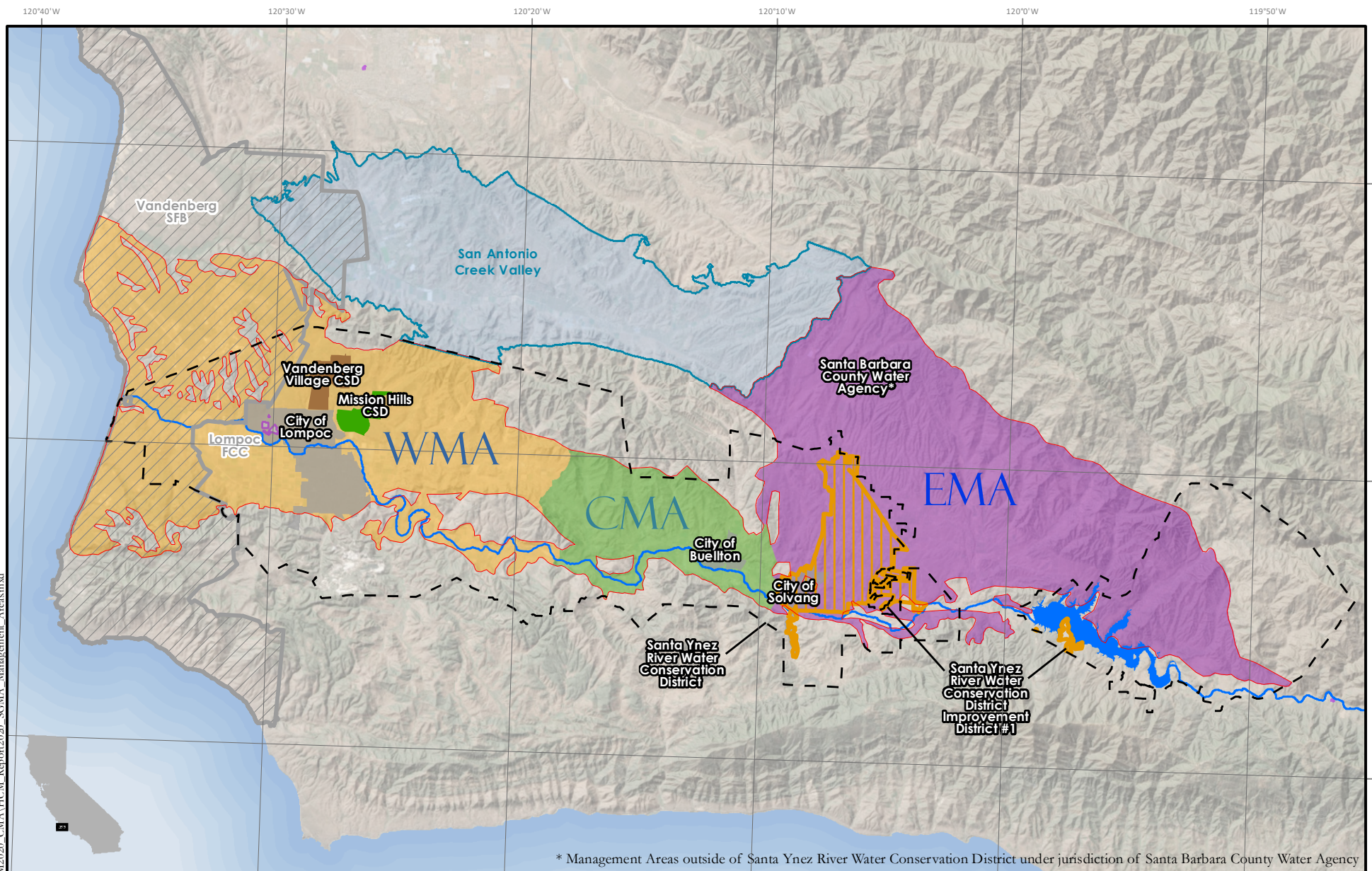
SYRVGB CONCEPTUAL FRAMEWORK

This document reviews regional-scale accounting and understanding of the lower Santa Ynez River Valley groundwater basins as a single unit. This reviews the water budgets for all three management areas and shows how they consistently assess hydrologic conditions and develop consistent groundwater inflows and outflows.

Analysis at this regional level is abstracted from the local subarea and management area level presented in the GSPs. **Figure 2** is an illustration of a regional conceptual model for the water budget across the entire lower Santa Ynez River Valley. The figure is a conceptual representation, which is a combination of the map view (from above) and cross-section (side view) perspectives to make the topology easier to understand.

¹ Apparent error in GSP Assessment Staff Report (exclusion of CMA), Page 27: “*When comparing surface water outflows from the EMA with inflows to WMA, Department staff noted that surface water increased by approximately 6,000 AFY.*”

² Apparent error in GSP Assessment Staff Report, Page 27: “*Additionally, Department staff note that the WMA used the years 2002-2011 to calculate its sustainable yield while CMA and EMA used 1982-2018.*”



* Management Areas outside of Santa Ynez River Water Conservation District under jurisdiction of Santa Barbara County Water Agency



-  Western Management Area (WMA)
-  Central Management Area (CMA)
-  Eastern Management Area (EMA)

SANTA YNEZ RIVER VALLEY GROUNDWATER BASIN (DWR BULLETIN 118 BASIN NO. 3-105) AND SGMA MANAGEMENT AREA BOUNDARIES

0 2 4
Miles

Sources:
NAIP (2018)
USGS National Elevation Dataset, 2002
Groundwater basin boundary from DWR Bulletin 118, 2018



FIGURE 1

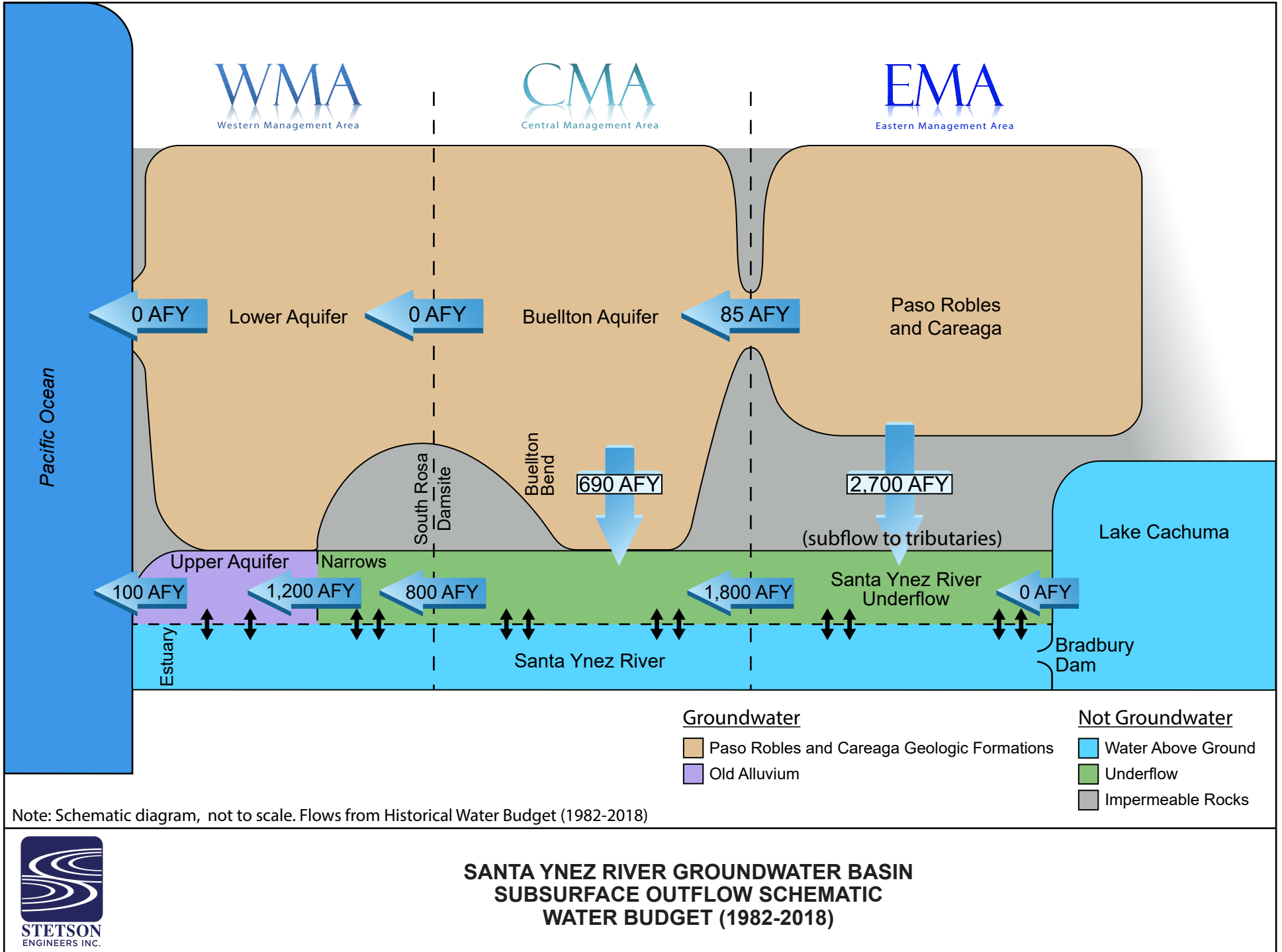


Figure 2 shows how the Santa Ynez River flows from Lake Cachuma to the Pacific Ocean. Before it reaches the Lompoc Narrows, the river does not only flow on top of the ground, it also flows underground through loose soil and rocks called alluvium. The term describing this is “underflow.” The thickness of this underground layer changes, which affects the water seen above ground. Sometimes, all the river water flows underground. The Santa Ynez River flow is measured at spots where the underground layer is thin; an example of this is the Lompoc Narrows where a USGS gage is located.

Figure 2 also shows the aquifers in three management areas of the Santa Ynez River Valley: EMA, CMA, and WMA. The aquifers for these management areas connect to varying extents underground. The border between the EMA and CMA areas is where the aquifer narrows significantly, near the city of Solvang. This narrowing is based on surface geological mapping. The border between the CMA and WMA is based on the topographic divide between Santa Rosa Creek and Santa Rita Valley. This area is relatively undeveloped. Based on groundwater flow modeling, little water moves between these two areas. In the WMA, there are two aquifers. The Lower Aquifer one crosses under the Upper Aquifer one, but the Upper Aquifer is always between it and the river as shown here on Figure 2.

Also shown in Figure 2, the groundwater from the aquifers connects with the Santa Ynez River. In the EMA, impermeable rock blocks the aquifer from the river, resulting in no mixing. In most of the CMA, the groundwater is also blocked from the river. However, near the city of Buellton, the groundwater aquifer is closer to the river. While these two water bodies are close, they are distinguishable. There is some exchange between the groundwater aquifer and the river system in this region. In the WMA, the area upstream of the Lompoc Narrows groundwater is blocked from the river by impermeable rock, so they do not mix. However, in the WMA below the Lompoc Narrows, the Upper Aquifer groundwater is directly connected to the river.

Figure 2 also shows how underground water in the WMA connects with the Pacific Ocean. The Upper Aquifer gets thinner and narrower as it gets closer to the ocean, especially near the river’s estuary. The deeper layer, called the Lower Aquifer, moves away from the Santa Ynez River and Upper Aquifer. Separately, this figure also shows that the Lower Aquifer extends nearly to the Pacific Ocean, where it is away from the Upper Aquifer. This represents where it comes close to touching the Pacific Ocean near Bear Creek on Vandenberg Space Force Base.

Each of the management areas presented figures showing aspects of the hydrological cycle for illustration of their water budgets. The EMA presented a generalized figure from DWR

Stetson Engineers Inc. *Page 6* *July 2, 2026*
Joint Presentation of Santa Ynez River Valley Groundwater Basin Water Budgets Showing Consistency

(Figure 3), while the CMA (Figure 4) and WMA (Figure 5) developed specific images customized to the specific local condition.

COLLABORATION ON BASIN HYDROLOGY AND ANALYSIS PERIODS

The three GSAs collaborated on the basin hydrology in developing the GSPs. However, the GSAs represent distinct geographical areas with differing conditions that affect the water supply. Each GSA has different streamflow and precipitation gages that are more representative for conditions that occur within each GSA. Additionally, the three GSAs have differing amounts of historical data availability. As part of developing the water budget, the three GSAs teams emailed and met to determine what period of record would best represent historical conditions for all three GSAs.

In a series of meetings in late 2019 and early 2020,³ the teams from the three GSAs considered records and cumulative departure from means for four precipitation stations located throughout the Santa Ynez basin and vicinity: Lompoc, Santa Barbara, Cachuma Lake, and Gibraltar Dam. Additionally, most historical groundwater level data and most groundwater production data was collected after the Santa Ynez River Water Conservation District (SYRWCD) begin preparing Engineering and Survey Report on Water Supply Conditions in 1979. As a result of these meetings the three GSAs identified the period of 1982–2018 as the period to use basin wide. The period was considered hydrologically balanced, representative of the long-term period of record in the basin, and inclusive of both a wet period and dry period.

As part of the 2027 Periodic Evaluation, the GSAs plan to continue using 1982–2018 as the analysis period for historical conditions, with a potential reassessment after 2032. As described in other documents, the five completed water years since 2019 have included two dry years, one below normal year, and two wet years. Prompted by SMGA, in 2019, groundwater monitoring in the basin increased because fall monitoring weather began basin-wide

³ In a collaborative meeting on January 9, 2020, Stetson Engineers (WMA and CMA) and GSI Water Solutions (EMA) after their independent reviews following an earlier meeting, both proposed the period 1983-2018. This later was revised to 1982–2018.

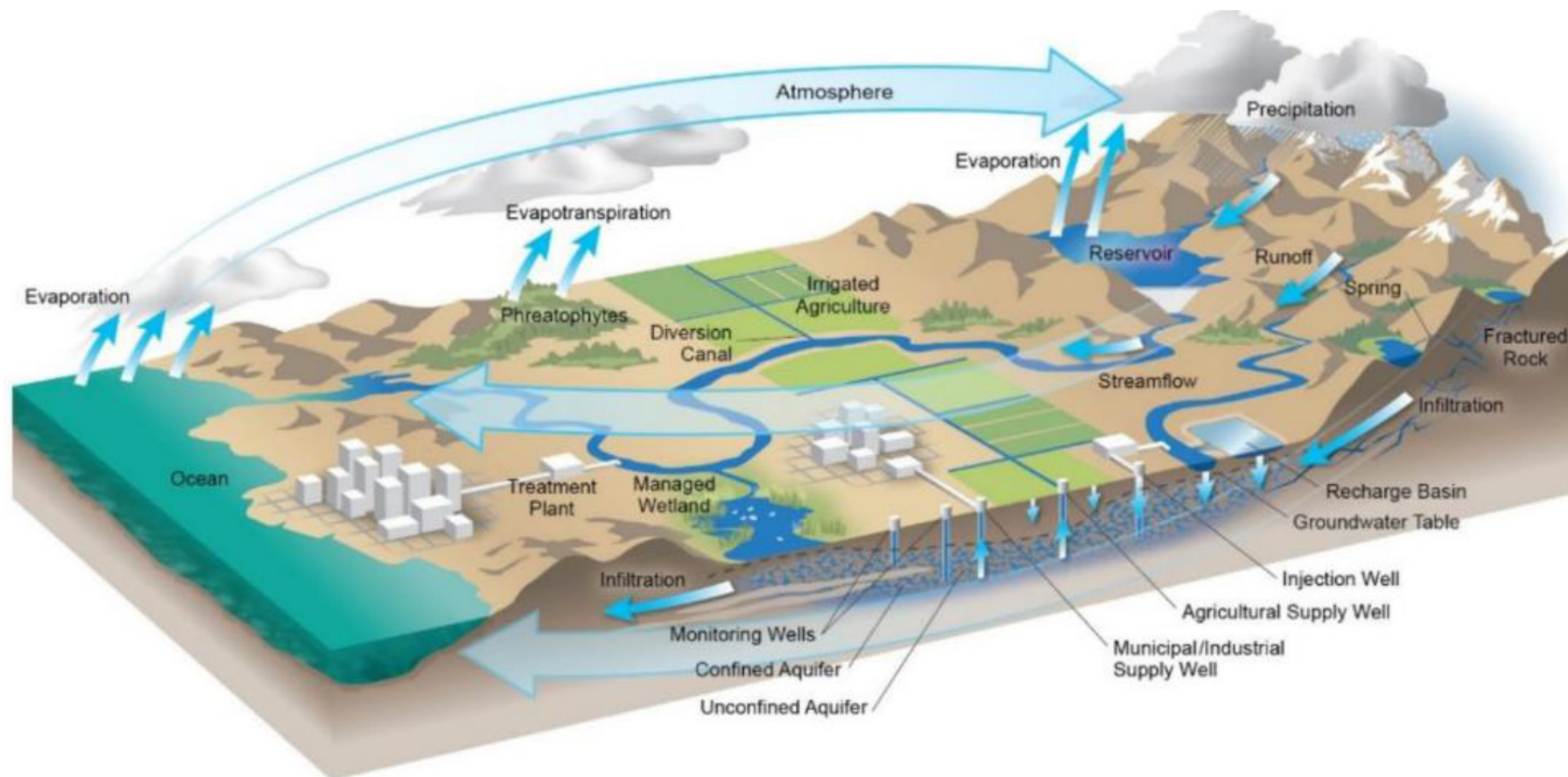
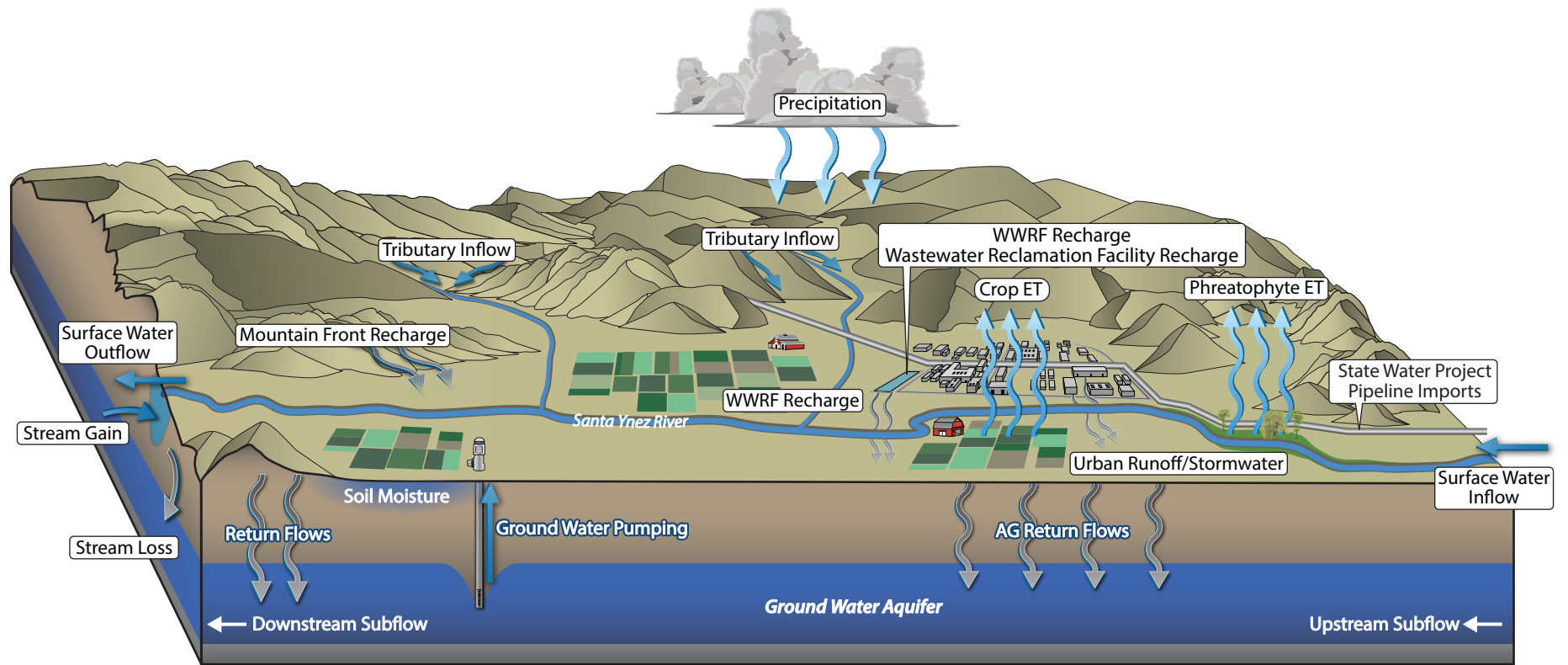
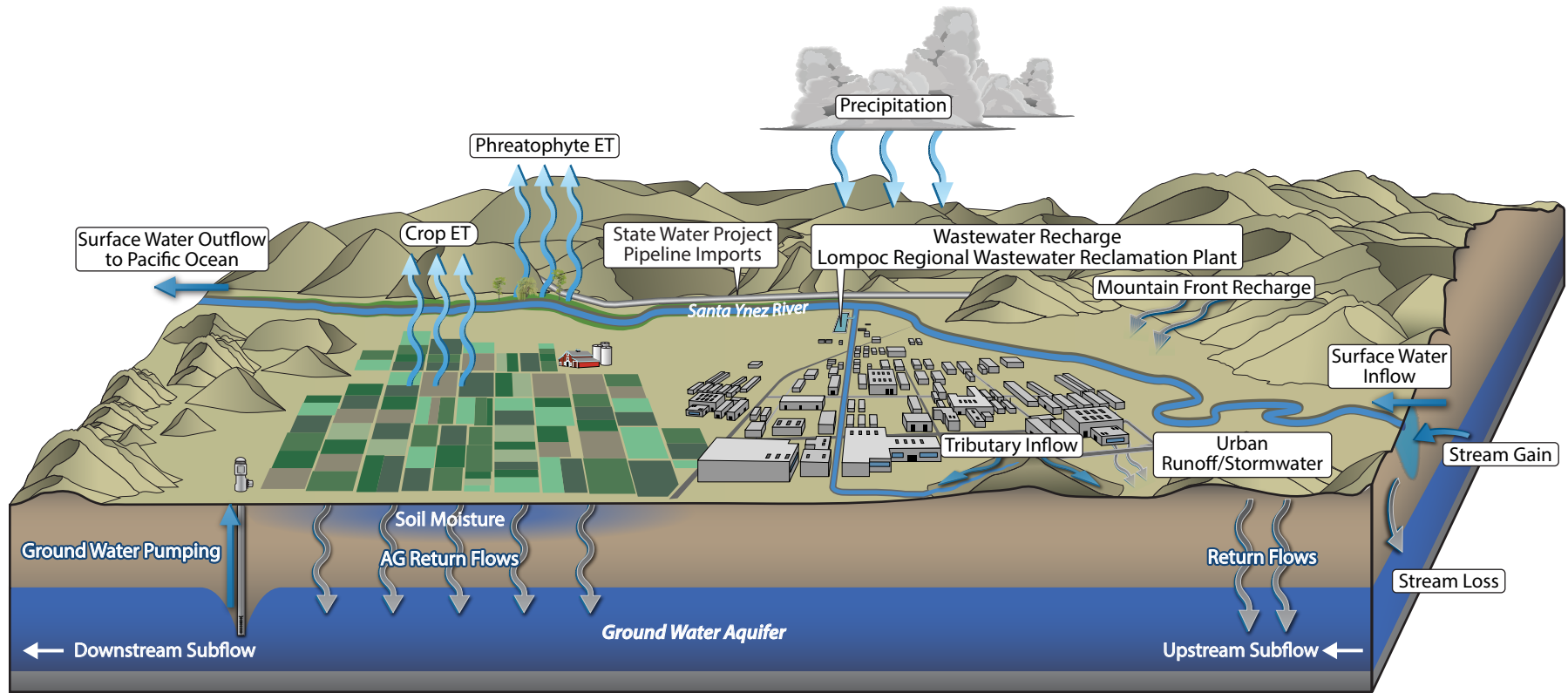


Figure 3-43. Hydrologic Cycle

(Source: DWR, 2016a)





**HYDROGEOLOGICAL CONCEPTUAL MODEL
WESTERN MANAGEMENT AREA
SANTA YNEZ RIVER VALLEY GROUNDWATER BASIN**

The GSPs analyzed the 1982–2018 Historical Period to understand inflows and outflows within the GSAs. Table 3-27 from the EMA GSP (**Attachment II**), Table 2c.3-6 from the CMA (**Attachment III**) and Table 2c.3-6 from the WMA GSPs (**Attachment IV**) present the water budget summaries for groundwater. Attachment II also includes the surface water budgets for the EMA. Table 3-23 from the EMA GSP (**Attachment V**), Table 2c.3-2 from the CMA (**Attachment VI**) and Table 3-23 from the WMA GSP (**Attachment VII**) provide relevant information about the surface water budget. Table 2c.3-3 from the CMA GSP (**Attachment VIII**) and Table 2c.303 from the WMA GSP (**Attachment IX**) are the full surface water budget for the CMA and WMA, respectively.

BASIN WIDE CONSISTENCY IN WATER BUDGET COMPONENTS

The GSAs coordinated portions of their groundwater and surface water budgets. Generally, three portions of the water budgets were coordinated:

1. Groundwater flow between GSAs
2. Santa Ynez River Alluvium underflow (below ground) between GSAs
3. Above ground Santa Ynez River flow between GSAs

Figure 2 is a conceptual figure that helps with organization across the basin and summarizes the major components across the Basin and how they are evaluated at the borders between the EMA, CMA, and WMA. In this section, the water budget is reviewed, generally going from the east to the west. Note that “AFY” is acre-feet per year and “AF” is acre-feet. The values discussed below are historical averages (1982-2018 period).

EMA INFLOWS

The EMA inflows are not specifically coordinated as the area is upstream from the CMA and is only connected as discussed in the following section. The EMA border extends east of Lake Cachuma, and the southern boundary of the EMA encompasses portions of northern Lake Cachuma (see Figure 1). The greatest surface water inflows are the Santa Ynez River Inflow and Tributary Inflow (61,600 AFY and 27,000 AFY in Attachment II). After the SYR flows from Lake Cachuma, the river crosses the southern portion of EMA boundary at multiple points. Stream gages along this portion of the river allow for quantification of the SYR inflow. There are also stream gages along tributaries that flow in the EMA. Other surface water inflows include

mountain front recharge, precipitation recharge, “ag irrigation return flows”, imported [water], and septic return flows. These flows are either modelled or derived from information from water suppliers or the SYRWCD.

The primary groundwater inflow is precipitation recharge (11,300 AFY in Attachment II). This component is modeled using USGS data. The other groundwater inflows include mountain front recharge, “ag irrigation return flows”, tributary percolation, urban irrigation return flows, septic return flows, and Chumash Wastewater Treatment Plant (“WWTP”) effluent. These flows are EMA specific.

FLOWS WITHIN EMA

In the EMA, the principal aquifers are the Paso Robles Formation and Careaga Sand Formation. The principal aquifers are bound below by bedrock. Particularly, bedrock separates the SYR system and the principal aquifers. The subsurface flow (groundwater flow) from the higher elevation Santa Ynez Uplands to the lower lying SYR is relatively small (negligible) due to impermeable bedrock.

The Paso Robles Formation has the greatest lateral extent and contains most of the groundwater in storage. Thus, the Paso Robles Formation contains the most pumping activity. The Careaga Sand is present at the surface near the San Rafael Mountains (northeastern side of the EMA) and the Purisima Hills (western side of the EMA). Generally, below the ground, the Careaga Sand underlies the Paso Robles Formation.

All three GSAs use SYRWCD pumping data within their water budget to determine groundwater outflows. The EMA estimates groundwater pumping in “White Area” (the area outside of the SYRWCD and the Santa Ynez River Water Conservation District, Improvement District No. 1 [“ID No.1”]). Water reported to SYRWCD or ID No. 1 averages 5,310 AFY while the “White Area” pumping totals 9,220 AFY (see Attachment II).

EMA OUTFLOWS, CMA INFLOWS

The EMA water budget includes groundwater transfer within the Paso Robles and Carrega Formations along the EMA and CMA border, a surface water transfer between the SYR underflow along the border of the EMA and CMA, and surface transfer above the ground. The Paso Robles and Carrega Formations span the border of the Buellton Upland and Santa Ynez Upland subareas, resulting in some sub-surface flow (groundwater flow) between the EMA and

CMA. This value is referred to “subsurface outflow” in the EMA groundwater outflow portion of the water budget (Attachment II) and as “subflow in” the groundwater inflow portion of the water budget (Attachment III). The subsurface flow occurs around some tributaries that traverse the EMA and CMA boundary. The flow is relatively small, resulting in approximately 85 acre-feet per year (“AFY”). This outflow is reported in the EMA GSP as 100 AFY because of rounding, shown in Attachment II. This flow is presented as 85 AFY in the CMA’s water budget but rounded to 90 AFY for the historical average, shown in Attachment III. These values, despite rounding, are congruent with each other.

Another transfer between EMA and CMA is through the SYR underflow. The underflow is considered surface water due to the GSPs’ description of the SYR underflow, despite the water being below the ground surface. The SYR underflow is reported as “subsurface outflow” in the EMA surface water outflow portion of the water budget (Attachment V) as 1,800 AFY. This underflow from the EMA to the CMA within the SYR alluvium is not directly reported in the CMA. The value for the CMA is presented indirectly. The 1,800 AFY can be checked in the CMA by subtracting the subflow from the Buellton aquifer (690 AFY from Attachment III) from the total subsurface inflow (2,490 AFY from Attachment VI). The table of annual surface water inflow (Attachment VI) notes that the 2,490 AFY includes the SYR underflow and the subflow from the Buellton aquifer.

Lastly, the above ground surface water outflow from the EMA is consistent with the CMA inflow, 85,700 AFY. This value is in the surface water outflow portion of the EMA (Attachment II), rounded to the nearest hundred and labelled “surface outflow”. This value is in the surface water inflow portion of the CMA (Attachment VI), rounded to the nearest ten and labelled “Santa Ynez River Inflow from EMA”.

FLows WITHIN CMA

In the CMA, the Buellton aquifer is the principal aquifer. The Buellton aquifer is largely disconnected from the SYR. The CMA GSP notes that subsurface outflow from the Buellton aquifer occurs along the southern boundary with the SYR Alluvium (generally, above the Buellton Bend). The subflow from the principal aquifer to the Alluvium was estimated as 690 AFY (shown in Attachment III).

CMA OUTFLOWS, WMA INFLOWS

There may exist an aquitard or some structural impediment along the Santa Rita Upland and Buellton Upland border based on groundwater levels and geology. USGS reports indicate no substantial flow in the area⁴. Thus, no subsurface outflow in this region is considered.

At the border of the WMA and CMA, there is SYR underflow transferred between the two GSAs. The CMA notes this as “Santa Ynez River Underflow out”, averaging 800 AFY, shown in Attachment VI. The WMA includes this transfer as “Subsurface inflow” in Attachment VII. These values match. This value is part of the Surface Water Outflow/Inflow in the Table 7 and Table 8.

Lastly, the CMA surface water outflow (91,320 AF [Attachment VI]) is the same as the WMA surface water inflow (Attachment VII).

FLOWS WITHIN THE WMA

The flows within the WMA are not specifically coordinated as the area is downstream from the CMA and is only connected as discussed in the previous section. The SYR Alluvium directly overlies the Upper Aquifer. The condition of the Upper Aquifer is more closely related to the flow of the SYR River. For example, in wet years, the Upper Aquifer is expected to have greater recharge. While in dry years, the Upper Aquifer groundwater levels are expected to lower.

The Upper Aquifer overlies the Lower Aquifer primarily in the Lompoc Plain subarea. Within this overlap, water moves between the Upper Aquifer to the Lower Aquifer. In areas not underlain by the Lower Aquifer, the Upper Aquifer is underlain by non-water bearing units (Sisquoc or Monterey Formations). The portion of the Santa Ynez River Alluvium in the WMA notes an average annual underflow out of 1,200 AF (see Attachment VII). This is the amount of water transferred from the SYR underflow to the Upper and Lower Aquifers (the Upper Aquifer, as indicated above, includes a portion of the SYR underflow from the Lompoc Narrows to the ocean). This value is not coordinated because it represents a flow entirely within the WMA.

For the portion of the Lower Aquifer not overlain by the Upper Aquifer, the Lower Aquifer is the primary water bearing unit, particularly in the Lompoc Upland and Santa Rita

⁴ Hamlin 1985

Upland areas. For the Lompoc Upland, the saturated (water bearing) unit is the Careaga Formation rather than the Paso Robles Formation. The GSP includes that during very wet periods, recharge to the Lompoc Upland aquifer can occur from infiltration of the SYR. The movement of groundwater in the Lower Aquifer within the Santa Rita subarea had an associated data gap in the GSP.

WMA OUTFLOWS (TO PACIFIC OCEAN)

Outflows from the WMA are not specifically coordinated as the area is downstream from the CMA. As the WMA’s western edge borders the Pacific Ocean, the water budget considers outflows to the Pacific Ocean. The WMA also monitors potential seawater intrusion. The SYR flows to the Pacific Ocean through the SYR estuary first. SYR outflow to the Pacific Ocean is the largest component, 89,190 AFY (see Attachment VII). The WMA is working to install a stream gage near the SYR estuary to better estimate this outflow.

The WMA groundwater budget includes a minor “subflow out” of 100 AFY (see Attachment IV). The WMA GSP describes this outflow occurring in a narrow channel, constricted by bedrock to the north and south.

CURRENT AND PROJECTED GROUNDWATER DEFICITS

The RCA requests that the three GSAs collaboratively show how the “GSA projects and management actions will improve the current and projected groundwater deficits.” In WY2024, the three GSAs collaborated to joint annual report that included information combining the information. On an annual basis and a long-term basis, the GSAs for WY2024 determined that there is no current groundwater deficit at a Basin level. See **Table 3**.

Table 3
WY 2024 Change in Groundwater Storage, by GSA, in Acre-Feet

GSA	WMA (AF)		CMA (AF)	EMA (AF)		Basin-Wide (Total AF)
	Upper Aquifer	Lower Aquifer	Buellton Aquifer	Paso Robles Formation	Careaga Sand	
WY2024 Change	800	-200	1,000	6,700	-600	7,700
Total Change Since 2015	14,000	3,100	5,900	-14,100	-1,100	7,800

Notes:

“AF” is acre-feet.

Numbers are rounded to the nearest 100 AF.

Source: Joint Table 5-1 from Santa Ynez River Valley Groundwater Basin. SGMA Joint Annual Report, Water Year 2024

All three GSAs have adaptive strategies with tiered adoption for their projects and management action. This means they have a substantial number of project and management actions planned in case that potential deficit conditions occur. All three agencies have adaptive strategy with tiered adoption if conditions are required. Each individual project will have different levels of impact. **Table 4** summarizes the 67 projects and management actions currently considered. Apart from the Lower Santa Ynez (LSYR) Action Plan, all the projects would be implemented independently for each GSA basis - similar projects in multiple GSAs are counted individually.

Table 4
Count of Currently Planned SGMA Projects and Management Actions as of 2026

GSA	Other Projects and Actions		PMAs			
	Implementation Projects	LSYR Action Plan	Group 1	Group 2	Group 3	Group 4
WMA	8	4	5	2	1	7
CMA	7	4	4	2	1	6
EMA	-	4	4	3	8	
Total	15	4	18	7	10	13

Note: The WMA and CMA GSPs distinguished between projects or actions which were expected to directly result in improvement with one or more of the underlying sustainability indicators, and those needed to comply with administration or measurements of the indicators.

RCA #3 asks for additional analysis only to address conditions of shortage which are not present. As there are a substantial number of project and management actions, proceeding with additional assessment is outside of addressing the RCA.

DATA GAPS

RCA #3 part a.), requests that the GSAs “collaboratively and consistently... **assess associated data gaps effecting the water budget (like groundwater level information).**” The data gaps effecting the water budget are discussed in the WMA and CMA Periodic Evaluations Section 2, Section 4, Section 5, and Section 6. For groundwater level information, for example, the coverage of the CMA and WMA monitoring wells is still adequate. However, the gaps

related to the survey information and fall water level data gaps are not fully addressed. These data gaps do not affect the water budget currently.

CONCLUSION

The above discussion illustrates that the water budget is consistent. The GSAs recognize that edits could be made to ensure that all reporting, tables, and figures use common language to understand the subflow and underflow more clearly, but do not warrant a plan amendment.

Table 5, Table 6, Table 7, and Table 8 provide the groundwater and surface water inflows and outflows as detailed in the original GSPs. These tables provide a consolidated version of the water budget for the basins. Due to the hydrogeologic conditions of the basin, it is more useful to consider particular flows that across GSA boundaries than focus on the difference between groundwater or surface water inflows and outflows. The GSAs will continue to coordinate inflow and outflow values in their water budgets.

Table 5

Joint Presentation of Groundwater Inflows and Outflows from the Groundwater Sustainability Plans (values in acre-feet per year)																			
EMA																			
	Groundwater Inflow							Groundwater Outflow											
								City of Solvang Pumping	ID No. 1 and SYRWCD Self-Reported Pumping			“White Area” Pumping			Total Pumping	Outflow to Tributaries	Phreatophyte ET (GW)	Evaporative Losses	Subsurface Outflow (GW)
Water Year	Mountain Front Recharge (GW)	Tributary Percolation	Precipitation Recharge (GW)	Chumash WWTP Effluent	Septic Return Flows (GW)	Ag Irrigation Return Flows (GW)	Urban Irrigation Return Flows		Agricultural Water Pumping	Other Water Pumping	Special Irrigation Water Pumping	Ag Irrigation Pumping	Mutual Water Companies	Rural Domestic Pumping					
1982	3,300	600	6,600	0	700	3,000	60	90	4,300	1,000	0	7,200	650	200	13,440	900	3,000	0	100
1983	7,000	700	41,900	0	700	2,800	60	90	4,400	1,100	0	7,200	670	200	13,660	17,500	3,100	0	100
1984	1,900	1,600	7,200	0	700	3,400	50	90	4,100	1,000	0	7,200	690	200	13,280	400	3,100	0	100
1985	700	300	1,400	0	800	3,200	20	100	4,800	1,200	0	7,200	710	200	14,210	0	3,100	0	100
1986	4,900	500	10,500	0	800	3,200	30	110	4,700	1,100	0	7,700	730	200	14,540	1,700	3,100	0	100
1987	700	800	2,500	0	800	3,300	40	100	4,000	700	0	7,800	740	200	13,540	0	3,100	0	100
1988	3,800	400	9,800	0	800	3,200	30	30	4,600	1,100	0	7,800	740	200	14,470	1,300	3,100	0	100
1989	400	800	1,200	0	900	2,900	50	20	4,100	2,900	0	7,800	750	200	15,770	0	3,100	0	100
1990	100	300	100	0	900	2,700	40	20	4,100	3,900	0	7,700	760	200	16,680	0	3,100	0	100
1991	3,100	300	5,500	0	900	3,000	30	150	4,800	1,200	0	7,600	770	200	14,720	700	3,000	0	100
1992	6,200	800	14,800	0	900	2,800	40	130	5,000	1,300	0	7,600	780	200	15,010	3,700	3,100	0	100
1993	7,200	1,100	27,200	0	900	2,700	10	470	4,200	2,100	0	7,400	780	200	15,150	8,300	3,100	0	100
1994	1,700	1,200	6,000	0	900	2,400	10	350	3,300	1,800	0	7,300	790	300	13,840	200	3,100	0	100
1995	4,500	600	26,700	0	900	2,300	10	490	3,900	2,400	0	7,200	800	300	15,090	6,000	3,000	0	100
1996	1,900	1,300	6,800	0	900	2,500	10	310	4,500	3,000	0	7,100	810	200	16,020	400	3,100	0	100
1997	5,600	500	11,200	0	900	2,400	10	480	3,600	2,300	0	7,700	810	200	15,190	2,100	3,100	0	100
1998	5,900	500	33,500	0	900	2,500	30	500	3,000	1,800	60	8,300	820	300	14,780	10,900	3,000	0	100
1999	2,200	1,600	8,700	0	900	2,800	120	480	3,300	1,900	20	9,000	830	300	15,830	600	3,000	0	100
2000	4,200	500	14,100	0	1,000	3,000	260	560	3,400	1,800	10	9,700	830	300	16,600	2,500	3,100	0	100
2001	6,300	700	25,800	0	1,000	2,900	240	740	3,100	1,400	10	9,200	840	300	15,590	5,800	3,100	0	100
2002	200	1,100	1,400	0	1,000	2,600	250	370	2,900	1,100	20	8,700	840	300	14,230	0	3,100	0	100
2003	4,600	300	12,700	120	1,000	2,700	260	200	2,900	1,200	10	8,700	850	300	14,160	2,200	3,100	0	100
2004	1,800	700	6,200	120	1,000	2,500	240	180	2,800	1,300	20	8,800	860	300	14,260	300	3,100	0	100
2005	6,900	500	34,900	120	1,000	2,400	240	140	2,300	1,200	20	8,800	860	300	13,620	13,400	3,000	0	100
2006	5,200	1,600	15,900	120	1,000	2,400	180	100	2,500	1,400	20	8,700	870	300	13,890	3,200	3,100	0	100

Joint Presentation of Groundwater Inflows and Outflows from the Groundwater Sustainability Plans (values in acre-feet per year) continued																			
EMA																			
2007	0	800	800	120	1,000	2,400	200	140	3,100	1,800	20	8,500	880	300	14,740	0	3,100	0	100
2008	5,600	300	13,600	120	1,000	2,400	240	190	3,300	2,100	30	8,300	880	300	15,100	2,900	3,100	0	100
2009	1,200	700	3,400	120	1,000	2,300	260	160	2,900	1,800	20	8,300	890	300	14,370	100	3,100	0	100
2010	4,300	600	12,800	120	1,000	2,100	240	140	2,700	1,300	20	8,200	890	300	13,550	2,000	3,000	0	100
2011	7,000	900	30,000	110	1,000	2,100	170	0	2,800	1,500	20	8,100	900	300	13,620	10,000	3,000	0	100
2012	800	1,200	2,700	40	1,000	2,300	190	110	3,200	2,200	30	8,000	910	300	14,750	0	3,100	0	100
2013	400	500	700	40	1,000	2,400	210	180	3,600	2,400	20	8,100	910	300	15,410	0	3,100	0	100
2014	0	300	100	40	1,100	2,300	220	290	3,400	2,200	20	8,100	920	300	15,230	0	3,200	0	100
2015	100	400	100	40	1,100	2,600	170	230	3,300	1,800	10	8,600	930	300	15,170	0	3,200	0	100
2016	300	400	200	40	1,000	2,300	160	290	3,200	1,600	10	9,000	930	300	15,330	0	3,100	0	100
2017	5,900	400	14,200	40	1,000	2,500	170	190	3,000	1,700	10	9,000	940	300	15,140	3,000	3,100	0	100
2018	500	900	8,200	40	1,100	2,300	200	370	2,900	1,700	10	9,000	950	300	15,230	0	3,100	0	100
Historical 1982–2018 Average	3,100	700	11,300	40	900	2,630	150	230	3,600	1,700	10	8,100	820	300	14,700	2,700	3,081	0	100

Table 6

Joint Presentation of Groundwater Inflows and Outflows from the Groundwater Sustainability Plans (values in acre-feet per year)																							
	CMA											WMA											
	Groundwater Inflows						Groundwater Outflows					Groundwater Inflows							Groundwater Outflows				
Water Year	Subflow In	Precipitation Recharge-Overlying	Mountain Front Recharge	Net Stream Percolation	Agricultural Return Flows	Urban Return Flows	Agricultural Pumping	Municipal Pumping	Domestic Pumping	Phreato-phytes	Subflow Out	Subflow In	Precipitation Recharge-Overlying	Mountain Front Recharge	Net Stream Percolation	Agricultural Return Flows	Urban Return Flows	Agricultural Pumping	Municipal Pumping	Domestic Pumping	Phreato-phytes	Subflow Out	
1982	85	1,873	768	161	466	23	2,364	221	53	88	700	1,200	6,583	2,086	9,517	3,387	623	17,031	6,443	203	4,914	100	
1983	85	3,557	768	1,137	442	19	2,240	266	44	88	700	1,200	10,570	4,919	28,131	2,967	613	14,924	6,110	218	4,914	100	
1984	85	2,088	768	262	510	21	2,582	405	48	88	683	1,200	8,496	2,450	17,657	3,223	845	16,209	6,990	235	4,914	100	
1985	85	1,998	768	139	527	19	2,659	335	43	88	673	1,200	7,756	2,288	8,070	3,276	830	16,463	7,503	260	4,914	100	
1986	85	2,115	768	451	457	23	2,308	426	53	88	609	1,200	8,941	2,380	19,973	3,413	922	17,134	8,510	279	4,914	100	
1987	85	1,463	768	124	482	26	2,438	487	60	88	504	1,200	6,359	2,907	9,665	4,292	907	21,548	8,126	259	4,914	100	
1988	85	1,779	768	114	464	28	2,347	326	63	88	610	1,200	8,799	3,657	8,249	3,912	1,019	19,647	8,732	242	3,718	100	
1989	85	1,267	768	34	512	32	2,590	205	72	88	526	1,200	5,194	3,091	4,224	3,912	1,063	19,656	9,219	213	3,464	100	
1990	85	1,044	768	12	531	40	2,683	288	91	88	483	1,200	5,669	2,875	3,888	4,104	1,018	20,617	7,945	222	3,464	100	
1991	85	1,634	768	227	465	44	2,357	90	100	88	504	1,200	8,113	2,906	14,458	3,977	897	19,976	7,173	224	4,533	100	
1992	85	2,321	768	446	367	45	1,859	315	103	88	483	1,200	7,526	2,367	22,267	4,058	910	20,362	7,365	211	4,914	100	
1993	85	2,654	768	757	280	39	1,427	223	89	88	526	1,200	8,965	3,172	22,844	3,984	903	20,029	7,890	226	4,914	100	
1994	85	1,584	768	203	255	37	1,302	436	84	88	801	1,200	7,056	1,908	16,084	3,511	937	17,680	8,144	214	4,914	100	
1995	85	2,834	768	1,470	208	39	1,068	385	88	88	780	1,200	11,637	4,828	26,319	3,020	853	15,213	7,656	220	4,914	100	
1996	85	1,668	768	292	242	38	1,241	301	86	88	695	1,200	6,769	1,976	15,071	3,803	955	19,154	8,181	216	4,914	100	
1997	85	1,677	768	424	250	39	1,280	374	88	88	1,056	1,200	6,326	2,028	16,567	5,005	1,094	25,165	8,114	224	4,914	100	
1998	85	3,216	768	1,361	241	39	1,226	115	89	88	907	1,200	14,080	4,392	27,616	3,640	888	18,297	7,230	186	4,914	100	
1999	85	2,171	768	408	342	72	1,739	138	165	88	886	1,200	7,874	2,774	14,226	4,192	984	21,084	7,631	211	4,914	100	
2000	85	2,124	768	488	396	71	2,014	173	192	88	865	1,200	8,643	2,707	15,155	4,430	1,055	22,303	7,952	214	4,914	100	
2001	85	2,676	768	771	429	91	2,232	362	206	88	928	1,200	10,054	2,888	18,714	4,314	1,068	21,767	7,392	224	4,914	100	
2002	85	1,568	768	164	388	101	2,104	318	230	88	780	1,200	7,286	1,730	13,469	4,420	1,143	22,399	7,953	234	4,914	100	
2003	85	1,757	768	270	291	107	1,676	325	243	88	844	1,200	7,231	1,787	17,652	3,509	1,122	17,906	7,841	223	4,914	100	
2004	85	1,540	768	121	365	114	2,130	226	260	88	971	1,200	6,901	1,738	10,662	3,700	1,198	18,969	8,099	224	4,914	100	
2005	85	3,394	768	1,046	334	109	1,960	89	248	88	1,119	1,200	11,851	4,367	20,239	3,550	1,096	18,162	7,351	238	4,914	100	
2006	85	2,069	768	364	259	116	1,717	79	264	88	1,056	1,200	9,141	2,462	16,452	3,212	1,130	16,643	7,642	245	4,914	100	
2007	85	1,281	768	65	321	129	2,133	442	294	88	907	1,200	4,831	1,319	10,735	3,573	1,258	18,596	8,225	280	4,914	100	

Joint Presentation of Groundwater Inflows and Outflows from the Groundwater Sustainability Plans (values in acre-feet per year) continued																						
	CMA											WMA										
2008	85	2,119	768	451	444	154	2,729	663	351	88	632	1,200	8,364	2,285	12,246	3,566	1,250	18,537	8,215	297	4,914	100
2009	85	1,417	768	71	483	139	2,988	788	317	88	695	1,200	7,971	1,567	7,032	3,785	1,183	19,712	7,402	326	4,914	100
2010	85	2,056	768	259	403	118	2,617	718	268	88	444	1,200	9,131	2,687	18,670	3,837	1,052	19,989	6,892	309	4,914	100
2011	85	2,075	768	629	310	120	2,194	667	272	88	399	1,200	9,521	3,508	21,914	3,460	1,154	18,139	6,879	309	4,914	100
2012	85	1,585	768	118	338	113	2,573	331	258	88	526	1,200	8,753	2,306	8,407	4,145	1,097	21,862	6,901	281	4,914	100
2013	85	1,236	768	35	397	112	2,925	546	255	88	165	1,200	6,978	2,684	7,542	4,753	1,100	24,959	7,296	282	3,464	100
2014	85	1,077	768	23	467	123	3,173	527	279	88	314	1,200	6,481	2,930	8,228	4,052	1,021	21,297	7,153	297	3,464	100
2015	85	968	768	10	437	123	3,244	786	278	88	504	1,200	5,246	2,752	3,495	4,090	853	21,761	6,083	281	3,464	100
2016	85	997	768	16	365	110	2,868	625	249	88	526	1,200	6,466	2,924	5,776	3,904	859	20,934	6,138	244	3,464	100
2017	85	1,552	768	410	365	100	2,856	296	255	88	886	1,200	8,215	2,501	19,911	3,812	835	20,419	5,945	239	4,744	100
2018	85	890	768	22	276	109	2,415	350	249	88	844	1,200	5,914	2,708	7,967	3,622	895	19,451	6,374	254	4,914	100
Historical 1982–2018 Average	90	1,870	770	360	380	80	2,220	370	170	90	690	1,200	7,990	2,730	14,300	3,820	990	19,570	7,480	240	4,630	100

Note: Yellow fill indicates the value coordinated between GSAs.

Table 7

Joint Presentation of Surface Water Inflows and Outflows from the Groundwater Sustainability Plans (values in acre-feet per year)																						
Water Year	EMA													CMA								
	Surface Water Inflows							Surface Water Outflows						Surface Water Inflows					Surface Water Outflows			
	Santa Ynez River Inflow	Tributary Inflow	Mountain Front Recharge (River)	Precipitation Recharge	Ag Irrigation Return Flows	Imported	Septic Return Flows	Subsurface Outflow	Surface Outflow	Pumping Extractions			Phreatophyte ET	Santa Ynez River (Inflow)	Tributary	Imported SWP	River Alluvium Total Inflows	Total Inflows	Santa Ynez River (Outflow)	Net Percolation to Groundwater	River Alluvium Total Outflows	Total Outflows
										City of Solvang Pumping Extractions	ID No. 1 Pumping Extractions	SYRWCD Pumping Extractions										
1982	4,000	11,100	4,000	100	90	3,000	10	1,800	3,900	1,100	300	2,700	4,100	3,916	1,403	0	5,125	10,445	3,402	161	9,239	12,801
1983	366,200	147,800	8,700	800	70	1,500	10	1,800	511,200	1,200	400	2,400	4,100	511,215	35,305	0	5,721	552,242	539,648	1,137	8,890	549,675
1984	20,100	3,800	3,900	100	110	5,100	10	1,800	24,900	1,200	1,000	2,700	4,200	24,859	2,955	0	5,236	33,049	26,082	262	9,126	35,470
1985	5,400	2,100	400	0	90	2,700	10	1,800	2,700	1,300	700	2,900	4,100	2,677	937	0	5,129	8,742	562	139	8,656	9,358
1986	8,100	21,200	5,700	200	90	2,700	10	1,800	12,300	1,300	500	3,000	4,100	12,297	10,412	0	5,034	27,742	14,906	451	8,144	23,501
1987	4,200	1,700	500	0	100	3,800	10	1,800	1,900	1,300	700	3,300	4,100	1,853	1,374	0	4,735	7,961	1,392	124	8,228	9,743
1988	4,900	9,700	3,500	200	90	2,800	10	1,800	4,100	1,400	700	3,100	4,100	4,119	720	0	4,995	9,834	1,320	114	8,209	9,643
1989	6,700	1,300	500	0	80	2,800	10	1,800	1,800	1,300	600	3,500	4,100	1,758	155	0	4,765	6,677	109	34	8,568	8,712
1990	4,800	1,000	0	0	70	800	10	1,800	600	1,400	700	3,300	4,200	629	84	0	4,702	5,416	39	12	8,771	8,821
1991	5,600	21,000	3,200	100	90	1,700	10	1,800	12,400	1,100	1,600	2,900	4,100	12,361	5,477	0	4,816	22,654	11,091	227	8,429	19,747
1992	14,800	42,200	6,700	300	80	900	10	1,800	40,100	1,200	1,200	3,000	4,200	40,134	8,366	0	5,085	53,585	43,968	446	8,039	52,453
1993	284,000	74,400	8,800	500	70	2,000	10	1,800	364,100	400	1,400	2,000	4,200	364,086	18,499	0	5,258	387,844	377,397	757	7,857	386,011
1994	9,600	5,200	2,500	100	60	1,800	10	1,800	9,400	600	2,000	1,800	4,200	9,390	2,468	0	5,193	17,050	10,416	203	7,806	18,425
1995	360,200	117,200	9,500	500	50	100	10	1,800	533,900	500	800	2,100	4,100	533,933	61,822	0	5,641	601,396	590,940	1,470	7,670	600,081
1996	11,800	5,700	3,500	500	100	2,100	10	1,800	15,900	1,000	1,100	2,100	4,200	15,892	3,624	0	5,206	24,722	17,646	292	7,900	25,838
1997	15,700	13,000	5,800	200	60	2,000	10	1,800	15,300	1,000	100	2,400	4,200	15,294	6,532	74	5,584	27,484	19,711	424	8,042	28,176
1998	397,600	144,000	10,200	700	50	3,500	10	1,800	655,500	900	0	2,300	4,100	655,470	49,154	609	5,905	711,137	699,276	1,361	7,199	707,836
1999	3,100	7,100	3,300	200	70	4,000	10	1,800	11,000	900	1,500	3,000	4,000	10,953	5,491	569	5,522	22,535	14,156	408	7,914	22,478
2000	12,900	16,500	7,800	300	70	3,200	10	1,800	24,200	700	2,000	4,200	4,200	24,183	9,991	602	5,579	40,356	32,004	488	8,170	40,662
2001	117,900	59,900	8,400	500	70	2,700	10	1,800	157,900	300	3,100	4,100	4,100	157,890	22,082	384	5,825	186,181	176,979	771	7,867	185,617
2002	13,700	1,700	100	0	60	2,600	10	1,800	8,500	300	900	4,000	4,100	8,544	1,222	584	5,234	15,584	7,722	164	7,841	15,727
2003	4,700	14,100	6,900	300	50	5,000	20	1,800	7,700	200	2,700	3,700	4,100	7,711	3,344	530	5,409	16,994	9,747	270	7,970	17,987
2004	16,300	5,100	3,000	100	60	3,600	20	1,800	10,100	300	1,000	3,700	4,200	10,147	1,484	511	5,521	17,663	6,017	121	8,674	14,812
2005	266,500	108,900	9,600	700	50	4,600	20	1,800	373,600	100	1,000	3,200	4,100	373,556	33,659	511	5,984	413,710	404,441	1,046	8,583	414,069
2006	71,200	20,600	7,900	300	60	4,600	20	1,800	96,500	100	1,500	3,000	4,200	96,498	5,477	641	5,528	108,144	98,411	364	8,332	107,108
2007	14,300	1,000	0	0	60	4,300	20	1,800	10,900	200	1,500	3,100	4,100	10,885	469	665	5,173	17,192	7,714	65	8,632	16,411
2008	33,300	20,800	6,600	300	60	4,200	20	1,800	49,600	200	1,700	3,300	4,100	49,596	10,337	513	5,238	65,684	57,782	451	8,497	66,730

Joint Presentation of Surface Water Inflows and Outflows from the Groundwater Sustainability Plans (values in acre-feet per year) continued																						
	EMA													CMA								
2009	8,700	4,300	900	100	50	3,100	20	1,800	4,800	200	1,600	3,600	4,200	4,753	481	293	4,908	10,435	2,362	71	8,345	10,779
2010	14,400	19,400	6,200	100	40	4,200	20	1,800	18,600	300	400	3,300	4,100	18,594	4,572	226	5,091	28,483	18,906	259	8,246	27,411
2011	93,700	54,100	8,900	600	40	5,000	20	1,800	120,400	100	500	2,600	4,100	120,436	15,004	394	5,008	140,841	130,640	629	7,994	139,264
2012	6,900	4,200	700	100	60	4,400	20	1,800	4,900	100	1,100	3,900	4,200	4,862	763	582	5,003	11,210	3,107	118	8,734	11,959
2013	16,600	1,600	600	0	60	3,500	20	1,800	11,500	200	1,400	3,900	4,200	11,520	250	216	4,591	16,577	6,378	35	8,923	15,335
2014	10,200	1,200	0	0	60	2,100	20	1,800	6,100	200	1,700	4,000	4,200	6,118	165	32	4,632	10,947	4,433	23	8,974	13,429
2015	14,800	1,800	100	0	70	2,100	20	1,800	9,500	300	2,200	4,100	4,300	9,518	73	0	4,633	14,224	3,370	10	8,719	12,099
2016	13,500	2,500	400	0	50	400	20	1,800	8,000	400	600	3,800	4,200	8,006	116	82	4,638	12,842	3,823	16	8,649	12,488
2017	10,100	28,300	5,700	300	200	3,000	20	1,800	18,700	300	1,400	4,500	4,200	18,652	10,820	293	5,255	35,020	24,538	410	9,026	33,974
2018	14,200	2,700	600	200	50	1,800	20	1,800	9,300	300	1,200	3,300	4,200	9,315	162	224	5,035	14,735	8,527	22	9,239	17,788
Historical 1982– 2018 Average	61,600	27,000	4,200	200	70	2,900	10	1,800	85,700	600	1,200	3,200	4,100	85,720	9,060	230	5,190	100,200	91,320	360	8,380	100,070

Notes:
Yellow fill indicates the value coordinated between GSAs.
Orange indicates a portion of the value is coordinated. Particularly, the River Alluvium Total Inflows for the CMA includes the Subsurface Outflow of the EMA. Described in further detail later in the EMA Outflows, CMA Inflows Section of this document.
“SWP” is State Water Project.
“ID No. 1” Santa Ynez River Water Conservation District, Improvement District No. 1

Table 8

Joint Presentation of Surface Water Inflows and Outflows from the Groundwater Sustainability Plans (values in acre-feet per year)										
WMA										
Water Year	Surface Water Inflows						Surface Water Outflows			
	Santa Ynez River (Inflow)	Tributary	Lompoc Wastewater	Imported SWP	River Alluvium Total Inflows	Total Inflows	Santa Ynez River (Outflow)	Net Percolation to Groundwater	River Alluvium Total Outflows	Total Outflows
1982	3,402	2,902	3,583	0	3,289	13,175	1,592	9,517	7,433	18,542
1983	539,648	64,565	3,786	0	4,112	612,111	499,844	28,131	7,286	535,262
1984	26,082	6,168	3,666	0	3,363	39,279	22,370	17,657	7,267	47,295
1985	562	2,297	3,968	0	3,260	10,087	0	8,070	6,957	15,028
1986	14,906	19,078	4,090	0	3,275	41,350	20,688	19,973	6,723	47,384
1987	1,392	2,896	4,107	0	2,960	11,355	654	9,665	6,800	17,120
1988	1,320	1,688	3,944	0	3,122	10,073	0	8,249	6,813	15,062
1989	109	400	4,019	0	3,014	7,542	0	4,224	7,579	11,804
1990	39	317	3,707	0	3,070	7,134	0	3,888	8,415	12,303
1991	11,091	9,445	3,616	0	3,293	27,446	13,782	14,458	8,022	36,263
1992	43,968	12,689	3,691	0	3,602	63,950	47,843	22,267	7,814	77,923
1993	377,397	30,539	3,889	0	3,748	415,572	382,370	22,844	7,698	412,911
1994	10,416	5,068	3,725	0	3,206	22,415	5,071	16,084	7,691	28,846
1995	590,940	114,087	4,017	0	3,822	712,866	504,051	26,319	7,603	537,974
1996	17,646	7,849	4,107	0	3,406	33,007	17,436	15,071	8,480	40,987
1997	19,711	10,077	4,120	13	3,695	37,616	25,270	16,567	9,901	51,739
1998	699,276	80,355	4,568	3,174	4,238	791,611	687,053	27,616	8,698	723,366
1999	14,156	10,941	4,652	3,339	3,813	36,900	22,503	14,226	9,234	45,964
2000	32,004	19,256	4,719	4,086	3,788	63,854	44,838	15,155	9,256	69,248
2001	176,979	38,318	4,045	4,316	4,078	227,737	248,894	18,714	9,297	276,905
2002	7,722	2,677	3,824	3,809	3,575	21,606	720	13,469	9,598	23,787
2003	9,747	6,626	3,746	4,018	3,582	27,719	4,110	17,652	9,170	30,931
2004	6,017	2,917	3,879	4,176	3,628	20,616	875	10,662	9,984	21,522
2005	404,441	57,620	3,730	3,260	4,442	473,493	432,183	20,239	9,333	461,755
2006	98,411	10,028	3,744	3,337	3,684	119,204	78,283	16,452	8,953	103,687
2007	7,714	996	3,993	3,802	3,478	19,983	360	10,735	9,967	21,061
2008	57,782	16,465	3,921	2,321	3,921	84,410	69,645	12,246	10,011	91,901
2009	2,362	977	3,395	1,377	3,591	11,703	360	7,032	10,171	17,563
2010	18,906	8,751	4,045	961	3,878	35,904	19,559	18,670	9,991	48,220

Joint Presentation of Surface Water Inflows and Outflows from the Groundwater Sustainability Plans (values in acre-feet per year) continued										
WMA										
2011	130,640	27,575	3,190	2,002	3,721	167,129	125,814	21,914	9,170	156,897
2012	3,107	1,753	2,946	2,238	3,625	13,669	720	8,407	10,032	19,159
2013	6,378	624	3,288	2,070	3,652	16,012	360	7,542	11,052	18,594
2014	4,433	430	3,588	145	3,490	12,086	360	8,228	10,584	18,812
2015	3,370	233	3,334	109	3,430	10,475	360	7,495	10,799	14,294
2016	3,823	329	3,324	1,758	3,402	12,637	0	5,776	10,769	16,545
2017	24,538	19,517	3,439	1,924	3,723	53,142	22,633	19,911	10,988	53,532
2018	8,527	438	3,338	2,296	3,374	17,974	360	7,967	10,926	19,253
Historical 1982–2018 Average	91,323	16,132	3,787	1,474	3,577	116,293	89,186	14,300	8,931	112,417

Notes:
Yellow fill indicates the value coordinated between GSAs.
“SWP” is State Water Project.

Recommended Corrective Action 3 - “Reevaluate Water Budgets for Consistency”

Excerpt from Staff Recommendation chapter of the *GSP Assessment Staff Report Santa Ynez River Valley Basin (No. 3-015)*, attachment to *Statement of Findings Regarding the Approval of the Santa Ynez River Valley Basin Groundwater Sustainability Plan*, dated January 18, 2024.

The following is RCA#3, part of their GSP Determination for the 3 GSAs:

The GSAs need to reevaluate the water budgets for consistency:

- a. Collectively, in the coordination agreement or otherwise, collaboratively and consistently assess the Basin’s hydrologic conditions, develop consistent groundwater inflows and outflows, assess associated data gaps effecting the water budget (like groundwater level information), and refine the water budgets to show how projected GSA projects and management actions will improve the current and projected groundwater deficits. This assessment should be conducted for the Basin as a whole, and not just the individual management areas.**
- b. Adopt and employ consistent time periods, methods, terminologies, and definitions for the various physical components of the Basin that inform the Basin-wide water budget including the sustainable yield and groundwater change in storage. For example, the GSAs should collectively use the same time periods for the development of their sustainable yields and should clearly explain how releases from Lake Cachuma are managed to effectively regulate the surface water and groundwater system through each of the three management areas.**

Table 3-27. Santa Ynez River Groundwater Basin Eastern Management Area Historical a d Current Water Budget Summaries
Values in acre-feet

Water Budget	Water Year	Rainfall		Surface Water Inflow							Groundwater Inflow							Total Inflow	
				Santa Ynez River Inflow	Tributary Inflow	Mountain Front Recharge (River)	Precipitation Recharge	Ag Irrigation Return Flows	Imported	Septic Return Flows	Mountain Front Recharge	Tributary Percolation	Precipitation Recharge	Chumash WWTP Effluent	Septic Return Flows	Ag Irrigation Return Flows	Urban Irrigation Return Flows		
		Inches	% of Average																
Historical	1982	15	92%	4,000	11,100	4,000	100	90	3,000	10	3,300	600	6,600	0	700	3,000	60	36,560	
	1983	35	219%	366,200	147,800	8,700	800	70	1,500	10	7,000	700	41,900	0	700	2,800	60	578,240	
	1984	7	46%	20,100	3,800	3,900	100	110	5,100	10	1,900	1,600	7,200	0	700	3,400	50	47,970	
	1985	11	68%	5,400	2,100	400	0	90	2,700	10	700	300	1,400	0	800	3,200	20	17,120	
	1986	17	106%	8,100	21,200	5,700	200	90	2,700	10	4,900	500	10,500	0	800	3,200	30	57,930	
	1987	9	56%	4,200	1,700	500	0	100	3,800	10	700	800	2,500	0	800	3,300	40	18,450	
	1988	17	105%	4,900	9,700	3,500	200	90	2,800	10	3,800	400	9,800	0	800	3,200	30	39,230	
	1989	7	46%	6,700	1,300	500	0	80	2,800	10	400	800	1,200	0	900	2,900	50	17,640	
	1990	6	40%	4,800	1,000	0	0	70	800	10	100	300	100	0	900	2,700	40	10,820	
	1991	17	105%	5,600	21,000	3,200	100	90	1,700	10	3,100	300	5,500	0	900	3,000	30	44,530	
	1992	25	155%	14,800	42,200	6,700	300	80	900	10	6,200	800	14,800	0	900	2,800	40	90,530	
	1993	28	174%	284,000	74,400	8,800	500	70	2,000	10	7,200	1,100	27,200	0	900	2,700	10	408,890	
	1994	14	84%	9,600	5,200	2,500	100	60	1,800	10	1,700	1,200	6,000	0	900	2,400	10	31,480	
	1995	30	187%	360,200	117,200	9,500	500	50	100	10	4,500	600	26,700	0	900	2,300	10	522,570	
	1996	12	76%	11,800	5,700	3,500	100	70	2,100	10	1,900	1,300	6,800	0	900	2,500	10	36,690	
	1997	12	73%	15,700	13,000	5,800	200	60	2,000	10	5,600	500	11,200	0	900	2,400	10	57,380	
	1998	36	226%	397,600	144,000	10,200	700	50	3,500	10	5,900	500	33,500	0	900	2,500	30	599,390	
	1999	12	76%	3,100	7,100	3,300	200	70	4,000	10	2,200	1,600	8,700	0	900	2,800	120	34,100	
	2000	15	95%	12,900	16,500	7,800	300	70	3,200	10	4,200	500	14,100	0	1,000	3,000	260	63,840	
	2001	26	159%	117,900	59,900	8,400	500	70	2,700	10	6,300	700	25,800	0	1,000	2,900	240	226,420	
	2002	8	49%	13,700	1,700	100	0	60	2,600	10	200	1,100	1,400	0	1,000	2,600	250	24,720	
	2003	17	103%	4,700	14,100	6,900	300	70	5,000	20	4,600	300	12,700	120	1,000	2,700	260	52,770	
	2004	10	64%	16,300	5,100	3,000	100	60	3,600	20	1,800	700	6,200	120	1,000	2,500	240	40,740	
	2005	35	219%	266,500	108,900	9,600	700	50	4,600	20	6,900	500	34,900	120	1,000	2,400	240	436,430	
	2006	18	109%	71,200	20,600	7,900	300	60	4,600	20	5,200	1,600	15,900	120	1,000	2,400	180	131,080	
	2007	7	42%	14,300	1,000	0	0	60	4,300	20	0	800	800	120	1,000	2,400	200	25,000	
	2008	16	98%	33,300	20,800	6,600	300	60	4,200	20	5,600	300	13,600	120	1,000	2,400	240	88,540	
	2009	13	82%	8,700	4,300	900	100	50	3,100	20	1,200	700	3,400	120	1,000	2,300	260	26,150	
	2010	21	132%	14,400	19,400	6,200	300	40	4,200	20	4,300	600	12,800	120	1,000	2,100	240	65,720	
	2011	26	164%	93,700	54,100	8,900	600	40	5,000	20	7,000	900	30,000	110	1,000	2,100	170	203,640	
	2012	12	74%	6,900	4,200	700	100	60	4,400	20	800	1,200	2,700	40	1,000	2,300	190	24,610	
	2013	7	42%	16,600	1,600	600	0	60	3,500	20	400	500	700	40	1,000	2,400	210	27,630	
	2014	8	49%	10,200	1,200	0	0	60	2,100	20	0	300	100	40	1,100	2,300	220	17,640	
	2015	8	50%	14,800	1,800	100	0	70	2,100	20	100	400	100	40	1,100	2,600	170	23,400	
	2016	10	62%	13,500	2,500	400	0	50	400	20	300	400	200	40	1,100	2,300	160	21,370	
	2017	21	128%	10,100	28,300	5,700	300	60	3,000	20	5,900	400	14,200	40	1,100	2,500	170	71,790	
	2018	8	49%	14,200	2,700	600	200	50	1,800	20	500	900	8,200	40	1,100	2,300	200	32,810	
		Minimum	6.5	40%	3,100	1,000	0	0	40	100	10	0	300	100	0	700	2,100	10	10,820
		Maximum	36.4	226%	397,600	147,800	10,200	800	110	5,100	20	7,200	1,600	41,900	120	1,100	3,400	260	599,390
		Average	16.1	100%	61,600	27,000	4,200	200	70	2,900	10	3,100	700	11,300	40	900	2,600	130	115,000
	% of Total:			54%	23%	4%	0.2%	0.1%	2.5%	0.0%	3%	1%	10%	0.0%	1%	2%	0.1%		
Current	2011	26.3	164%	93,700	54,100	8,900	600	40	5,000	20	7,000	900	30,000	110	1,000	2,100	170	203,640	
	2012	11.9	74%	6,900	4,200	700	100	60	4,400	20	800	1,200	2,700	40	1,000	2,300	190	24,610	
	2013	6.8	42%	16,600	1,600	600	0	60	3,500	20	400	500	700	40	1,000	2,400	210	27,630	
	2014	7.9	49%	10,200	1,200	0	0	60	2,100	20	0	300	100	40	1,100	2,300	220	17,640	
	2015	8.1	50%	14,800	1,800	100	0	70	2,100	20	100	400	100	40	1,100	2,600	170	23,400	
	2016	10.0	62%	13,500	2,500	400	0	50	400	20	300	400	200	40	1,100	2,300	160	21,370	
	2017	20.6	128%	10,100	28,300	5,700	300	60	3,000	20	5,900	400	14,200	40	1,100	2,500	170	71,790	
	2018	7.9	49%	14,200	2,700	600	200	50	1,800	20	500	900	8,200	40	1,100	2,300	200	32,810	
	Minimum	6.8	42%	6,900	1,200	0	0	40	400	20	0	300	100	40	1,000	2,100	160	17,640	
	Maximum	26.3	164%	93,700	54,100	8,900	600	70	5,000	20	7,000	1,200	30,000	110	1,100	2,600	220	203,640	
	Average	12.4	77%	22,500	12,100	2,100	200	60	2,790	20	1,900	600	7,000	50	1,100	2,400	200	52,900	
	% of Total:			43%	23%	4%	0.4%	0.1%	5.3%	0.0%	4%	1%	13%	0.1%	2%	5%	0.4%		

Table 3-27. Santa Ynez River Groundwater Basin Eastern Management Area Historical and Current Water Budget Summaries
Values in acre-feet

Water Budget	Water Year	Rainfall		Surface Water Outflow						Groundwater Outflow													Total Outflow	Change of Groundwater in Storage	Cumulative Change in Storage
				Subsurface Outflow	Surface Outflow	Pumping Extractions			Phreatophyte ET	City of Solvang Pumping	ID No. 1 and SYRWCD Self-Reported Pumping			"White Area" Pumping ¹			Total Pumping	Outflow to Tributaries	Phreatophyte ET	Evaporative Losses	Subsurface Outflow				
		Inches	% of Average			City of Solvang	ID No. 1	SYRWCD			"Agricultural Water" Pumping	"Other Water" Pumping	"Special Irrigation Water" Pumping	Ag Irrigation Pumping	Mutual Water Companies	Rural Domestic Pumping									
Historical	1982	15	92%	1,800	3,900	1,100	300	2,700	4,100	90	4,300	1,000	0	7,200	650	200	13,440	900	3,000	0	100	31,400	-3,180	-3,180	
	1983	35	219%	1,800	511,200	1,200	400	2,400	4,100	90	4,400	1,100	0	7,200	670	200	13,660	17,500	3,100	0	100	555,300	18,800	15,620	
	1984	7	46%	1,800	24,900	1,200	1,000	2,700	4,200	90	4,100	1,000	0	7,200	690	200	13,280	400	3,100	0	100	52,700	-2,030	13,590	
	1985	11	68%	1,800	2,700	1,300	700	2,900	4,100	100	4,800	1,200	0	7,200	710	200	14,210	0	3,100	0	100	30,900	-10,990	2,600	
	1986	17	106%	1,800	12,300	1,300	500	3,000	4,100	110	4,700	1,100	0	7,700	730	200	14,540	1,700	3,100	0	100	42,500	490	3,090	
	1987	9	56%	1,800	1,900	1,300	700	3,300	4,100	100	4,000	700	0	7,800	740	200	13,540	0	3,100	0	100	29,700	-8,600	-5,510	
	1988	17	105%	1,800	4,100	1,400	700	3,100	4,100	30	4,600	1,100	0	7,800	740	200	14,470	1,300	3,100	0	100	34,400	-940	-6,450	
	1989	7	46%	1,800	1,800	1,300	600	3,500	4,100	20	4,100	2,900	0	7,800	750	200	15,770	0	3,100	0	100	32,000	-12,720	-19,170	
	1990	6	40%	1,800	600	1,400	700	3,300	4,200	20	4,100	3,900	0	7,700	760	200	16,680	0	3,100	0	100	31,700	-15,740	-34,910	
	1991	17	105%	1,800	12,400	1,100	1,600	2,900	4,100	150	4,800	1,200	0	7,600	770	200	14,720	700	3,000	0	100	42,500	-5,690	-40,600	
	1992	25	155%	1,800	40,100	1,200	1,200	3,000	4,200	130	5,000	1,300	0	7,600	780	200	15,010	3,700	3,100	0	100	73,400	3,630	-36,970	
	1993	28	174%	1,800	364,100	400	1,400	2,000	4,200	470	4,200	2,100	0	7,400	780	200	15,150	8,300	3,100	0	100	400,600	12,460	-24,510	
	1994	14	84%	1,800	9,400	600	2,000	1,800	4,200	350	3,300	1,800	0	7,300	790	300	13,840	200	3,100	0	100	36,800	-5,030	-29,540	
	1995	30	187%	1,800	533,900	500	800	2,100	4,100	490	3,900	2,400	0	7,200	800	300	15,090	6,000	3,000	0	100	567,400	10,820	-18,720	
	1996	12	76%	1,800	15,900	1,000	1,100	2,100	4,200	310	4,500	3,000	0	7,100	810	300	16,020	400	3,100	0	100	45,700	-6,210	-24,930	
	1997	12	73%	1,800	15,300	1,000	100	2,400	4,200	480	3,600	2,300	0	7,700	810	300	15,190	2,100	3,100	0	100	45,300	120	-24,810	
	1998	36	226%	1,800	655,500	900	0	2,300	4,100	500	3,000	1,800	60	8,300	820	300	14,780	10,900	3,000	0	100	693,300	14,550	-10,260	
	1999	12	76%	1,800	11,000	900	1,500	3,000	4,000	480	3,300	1,900	20	9,000	830	300	15,830	600	3,000	0	100	41,700	-3,210	-13,470	
	2000	15	95%	1,800	24,200	700	2,000	4,200	4,200	560	3,400	1,800	10	9,700	830	300	16,600	2,500	3,100	0	100	59,500	760	-12,710	
	2001	26	159%	1,800	157,900	300	3,100	4,100	4,100	740	3,100	1,400	10	9,200	840	300	15,590	5,800	3,100	0	100	196,000	12,350	-360	
	2002	8	49%	1,800	8,500	300	900	4,000	4,100	370	2,900	1,100	20	8,700	840	300	14,230	0	3,100	0	100	36,900	-10,880	-11,240	
	2003	17	103%	1,800	7,700	200	2,700	3,700	4,100	200	2,900	1,200	10	8,700	850	300	14,160	2,200	3,100	0	100	39,700	2,120	-9,120	
	2004	10	64%	1,800	10,100	300	1,000	3,700	4,200	180	2,800	1,300	20	8,800	860	300	14,260	300	3,100	0	100	38,900	-5,200	-14,320	
	2005	35	219%	1,800	373,600	100	1,000	3,200	4,100	140	2,300	1,200	20	8,800	860	300	13,620	13,400	3,000	0	100	413,800	15,940	1,620	
	2006	18	109%	1,800	96,500	100	1,500	3,000	4,200	100	2,500	1,400	20	8,700	870	300	13,890	3,200	3,100	0	100	127,200	6,110	7,730	
	2007	7	42%	1,800	10,900	200	1,500	3,100	4,100	140	3,100	1,800	20	8,500	880	300	14,740	0	3,100	0	100	39,500	-12,620	-4,890	
	2008	16	98%	1,800	49,600	200	1,700	3,300	4,100	190	3,300	2,100	30	8,300	880	300	15,100	2,900	3,100	0	100	81,800	2,060	-2,830	
	2009	13	82%	1,800	4,800	200	1,600	3,600	4,200	160	2,900	1,800	20	8,300	890	300	14,370	100	3,100	0	100	33,700	-8,690	-11,520	
	2010	21	132%	1,800	18,600	200	400	3,300	4,100	140	2,700	1,300	20	8,200	890	300	13,550	2,000	3,000	0	100	46,900	2,510	-9,010	
	2011	26	164%	1,800	120,400	100	500	2,600	4,100	0	2,800	1,500	20	8,100	900	300	13,620	10,000	3,000	0	100	156,300	14,560	5,550	
	2012	12	74%	1,800	4,900	100	1,100	3,900	4,100	110	3,200	2,200	30	8,000	910	300	14,750	0	3,100	0	100	33,800	-9,720	-4,170	
	2013	7	42%	1,800	11,500	200	1,400	3,900	4,200	180	3,600	2,400	20	8,000	910	300	15,410	0	3,100	0	100	41,700	-13,360	-17,530	
	2014	8	49%	1,800	6,100	200	1,700	4,000	4,200	290	3,400	2,200	20	8,100	920	300	15,230	0	3,100	0	100	36,500	-14,370	-31,900	
	2015	8	50%	1,800	9,500	300	2,200	4,100	4,300	230	3,300	1,800	10	8,600	930	300	15,170	0	3,200	0	100	40,500	-13,960	-45,860	
2016	10	62%	1,800	8,000	400	600	3,800	4,200	290	3,200	1,600	10	9,000	930	300	15,330	0	3,100	0	100	37,200	-14,030	-59,890		
2017	21	128%	1,800	18,700	300	1,400	4,500	4,200	190	3,000	1,700	10	9,000	940	300	15,140	3,000	3,100	0	100	52,100	2,970	-56,920		
2018	8	49%	1,800	9,300	300	1,200	3,300	4,200	370	2,900	1,700	10	9,000	950	300	15,230	0	3,100	0	100	38,500	-5,190	-62,110		
	Minimum	6.5	40%	1,800	600	100	0	1,800	4,000	0	2,300	700	0	7,100	650	200	13,280	0	3,000	0	100	29,700	-15,740		

Table 2c.3-6
Annual Groundwater Inflows, Outflow, and Change in Storage, Historical Period (1982 through 2018), AFY

		Inflows						Outflows						
Water Year	Hydrologic Year Type	Subflow In	Precipitation Recharge-Overlying	Mountain Front Recharge	Net Stream Percolation	Agricultural Return Flows	Urban Return Flows	Agricultural Pumping	Municipal Pumping	Domestic Pumping	Phreatophytes	Subflow Out	Change in Storage	Cumulative Change in Storage
1982	Dry	85	1,873	768	161	466	23	2,364	221	53	88	700	-51	-51
1983	Wet	85	3,557	768	1,137	442	19	2,240	266	44	88	700	2,670	2,619
1984	Below normal	85	2,088	768	262	510	21	2,582	405	48	88	683	-72	2,547
1985	Dry	85	1,998	768	139	527	19	2,659	335	43	88	673	-264	2,283
1986	Above normal	85	2,115	768	451	457	23	2,308	426	53	88	609	414	2,697
1987	Dry	85	1,463	768	124	482	26	2,438	487	60	88	504	-628	2,068
1988	Dry	85	1,779	768	114	464	28	2,347	326	63	88	610	-197	1,871
1989	Critically Dry	85	1,267	768	34	512	32	2,590	205	72	88	526	-783	1,089
1990	Critically Dry	85	1,044	768	12	531	40	2,683	288	91	88	483	-1,155	-66
1991	Below normal	85	1,634	768	227	465	44	2,357	90	100	88	504	84	18
1992	Above normal	85	2,321	768	446	367	45	1,859	315	103	88	483	1,184	1,201
1993	Wet	85	2,654	768	757	280	39	1,427	223	89	88	526	2,230	3,431
1994	Below normal	85	1,584	768	203	255	37	1,302	436	84	88	801	220	3,651
1995	Wet	85	2,834	768	1,470	208	39	1,068	385	88	88	780	2,993	6,645
1996	Below normal	85	1,668	768	292	242	38	1,241	301	86	88	695	681	7,326
1997	Above normal	85	1,677	768	424	250	39	1,280	374	88	88	1,056	356	7,682
1998	Wet	85	3,216	768	1,361	241	39	1,226	115	89	88	907	3,285	10,967
1999	Above normal	85	2,171	768	408	342	72	1,739	138	165	88	886	831	11,798
2000	Above normal	85	2,124	768	488	396	85	2,014	173	192	88	865	613	12,412
2001	Wet	85	2,676	768	771	429	91	2,232	362	206	88	928	1,004	13,415
2002	Dry	85	1,568	768	164	388	101	2,104	318	230	88	780	-446	12,969
2003	Below normal	85	1,757	768	270	291	107	1,676	325	243	88	844	102	13,071
2004	Dry	85	1,540	768	121	365	114	2,130	226	260	88	971	-682	12,390
2005	Wet	85	3,394	768	1,046	334	109	1,960	89	248	88	1,119	2,231	14,620
2006	Above normal	85	2,069	768	364	259	116	1,717	79	264	88	1,056	457	15,077
2007	Critically Dry	85	1,281	768	65	321	129	2,133	442	294	88	907	-1,215	13,862
2008	Above normal	85	2,119	768	451	444	154	2,729	663	351	88	632	-441	13,421
2009	Critically Dry	85	1,417	768	71	483	139	2,988	788	317	88	695	-1,913	11,507
2010	Below normal	85	2,056	768	259	403	118	2,617	718	268	88	441	-444	11,063
2011	Wet	85	2,075	768	629	310	120	2,194	667	272	88	399	367	11,430
2012	Dry	85	1,585	768	118	338	113	2,573	331	258	88	526	-768	10,663
2013	Critically Dry	85	1,236	768	35	397	112	2,925	546	255	88	165	-1,347	9,315
2014	Critically Dry	85	1,077	768	23	467	123	3,173	527	279	88	314	-1,839	7,476
2015	Critically Dry	85	968	768	10	437	122	3,244	786	278	88	504	-2,510	4,966
2016	Critically Dry	85	997	768	16	365	110	2,868	625	249	88	526	-2,016	2,950
2017	Above normal	85	1,552	768	410	360	112	2,856	296	255	88	886	-1,095	1,855
2018	Critically Dry	85	890	768	22	276	109	2,415	350	249	88	844	-1,796	60
Average 1982 - 2018		90	1,870	770	360	380	80	2,220	370	170	90	690	0	

Table 2c.3-6
Annual Groundwater Inflows, Outflow, and Change in Storage,
Historical Period (1982 through 2018), AFY

		Inflows						Outflows						
Water Year	Hydrologic Year Type	Subflow In	Precipitation Recharge-Overlying	Mountain Front Recharge	Net Stream Percolation	Agricultural Return Flows	Urban Return Flows	Agricultural Pumping	Municipal Pumping	Domestic Pumping	Phreatophytes	Subflow Out	Change in Storage	Cumulative Change in Storage
1982	Dry	1,200	6,583	2,086	9,517	3,387	623	17,031	6,443	203	4,914	100	-5,293	-5,293
1983	Wet	1,200	10,570	4,919	28,131	2,967	613	14,924	6,110	218	4,914	100	22,134	16,841
1984	Below normal	1,200	8,496	2,450	17,657	3,223	845	16,209	6,990	235	4,914	100	5,424	22,265
1985	Dry	1,200	7,756	2,288	8,070	3,276	830	16,463	7,503	260	4,914	100	-5,819	16,446
1986	Above normal	1,200	8,941	2,380	19,973	3,413	922	17,134	8,510	279	4,914	100	5,894	22,339
1987	Dry	1,200	6,359	2,907	9,665	4,292	907	21,548	8,126	259	4,914	100	-9,616	12,723
1988	Dry	1,200	8,799	3,657	8,249	3,912	1,019	19,647	8,732	242	3,718	100	-5,602	7,121
1989	Critically Dry	1,200	5,194	3,091	4,224	3,912	1,063	19,656	9,219	213	3,464	100	-13,968	-6,847
1990	Critically Dry	1,200	5,669	2,875	3,888	4,104	1,018	20,617	7,945	222	3,464	100	-13,595	-20,442
1991	Below normal	1,200	8,113	2,906	14,458	3,977	897	19,976	7,173	224	4,533	100	-455	-20,897
1992	Above normal	1,200	7,526	2,367	22,267	4,058	910	20,362	7,365	211	4,914	100	5,375	-15,522
1993	Wet	1,200	8,965	3,172	22,844	3,984	903	20,029	7,890	226	4,914	100	7,909	-7,614
1994	Below normal	1,200	7,056	1,908	16,084	3,511	937	17,680	8,144	214	4,914	100	-355	-7,969
1995	Wet	1,200	11,637	4,828	26,319	3,020	853	15,213	7,656	220	4,914	100	19,754	11,785
1996	Below normal	1,200	6,769	1,976	15,071	3,803	955	19,154	8,181	216	4,914	100	-2,791	8,994
1997	Above normal	1,200	6,326	2,028	16,567	5,005	1,094	25,165	8,114	224	4,914	100	-6,296	2,697
1998	Wet	1,200	14,080	4,392	27,616	3,640	888	18,297	7,230	186	4,914	100	21,090	23,788
1999	Above normal	1,200	7,874	2,774	14,226	4,192	984	21,084	7,631	211	4,914	100	-2,689	21,098
2000	Above normal	1,200	8,643	2,707	15,155	4,430	1,055	22,303	7,952	214	4,914	100	-2,292	18,806
2001	Wet	1,200	10,054	2,888	18,714	4,314	1,068	21,767	7,392	224	4,914	100	3,842	22,649
2002	Dry	1,200	7,286	1,730	13,469	4,420	1,143	22,399	7,953	234	4,914	100	-6,352	16,297
2003	Below normal	1,200	7,231	1,787	17,652	3,509	1,122	17,906	7,841	223	4,914	100	1,517	17,814
2004	Dry	1,200	6,901	1,738	10,662	3,700	1,198	18,969	8,099	224	4,914	100	-6,907	10,908
2005	Wet	1,200	11,851	4,367	20,239	3,550	1,096	18,162	7,351	238	4,914	100	11,539	22,446
2006	Above normal	1,200	9,141	2,462	16,452	3,212	1,130	16,643	7,642	245	4,914	100	4,053	26,499
2007	Critically Dry	1,200	4,831	1,319	10,735	3,573	1,258	18,596	8,225	280	4,914	100	-9,199	17,300
2008	Above normal	1,200	8,364	2,285	12,246	3,566	1,250	18,537	8,215	297	4,914	100	-3,151	14,149
2009	Critically Dry	1,200	7,971	1,567	7,032	3,785	1,183	19,712	7,402	326	4,914	100	-9,717	4,432
2010	Below normal	1,200	9,131	2,687	18,670	3,837	1,052	19,989	6,892	309	4,914	100	4,374	8,807
2011	Wet	1,200	9,521	3,508	21,914	3,460	1,154	18,139	6,879	309	4,914	100	10,415	19,221
2012	Dry	1,200	8,753	2,306	8,407	4,145	1,097	21,862	6,901	281	4,914	100	-8,149	11,073
2013	Critically Dry	1,200	6,978	2,684	7,542	4,753	1,100	24,959	7,296	282	3,464	100	-11,844	-771
2014	Critically Dry	1,200	6,481	2,930	8,228	4,052	1,021	21,297	7,153	297	3,464	100	-8,400	-9,172
2015	Critically Dry	1,200	5,246	2,752	3,495	4,090	853	21,761	6,083	281	3,464	100	-14,053	-23,225
2016	Critically Dry	1,200	6,466	2,924	5,776	3,904	859	20,934	6,138	244	3,464	100	-9,751	-32,976
2017	Above normal	1,200	8,215	2,501	19,911	3,812	835	20,419	5,945	239	4,744	100	5,027	-27,949
2018	Critically Dry	1,200	5,914	2,708	7,967	3,622	895	19,451	6,374	254	4,914	100	-8,786	-36,734
Average 1982 - 2018		1,200	7,990	2,730	14,300	3,820	990	19,570	7,480	240	4,630	100	(990)	

Table 3-23. Annual Surface Water Outflow, Historical Period (1982 through 2018)

(Values in acre-feet per year)

Surface Water Outflow Component	Average	Minimum ¹	Maximum ¹
Santa Ynez River Outflow (including Zaca Creek)	85,700	600	655,500
Pumping (River Wells)	5,000	1,900	9,000
Subsurface Outflow	1,800	1,800	1,800
Phreatophyte ET	4,100	4,000	4,300
Total	96,600	—	—

Note¹ Minimum and maximum values are not totaled because the values for each component may have occurred in different years.

ET = evapotranspiration

Note that imported water from SWP Table A, Exchange Agreement, and the Cachuma Project sources are included as an inflow component in the water budgets. The outflow of this water, along with the commingled water from Santa Ynez Uplands groundwater sources includes consumptive use, percolation as irrigation return flow and urban irrigation return flow (which includes system leakage) and septic system return flow. The remainder of this water flows to the municipal treatment plant, which serves the City of Solvang, where it is percolated back into the Santa Ynez River Alluvium downstream and outside of the EMA. Subsurface outflow through the Santa Ynez River Alluvium has been calculated using Darcy's law with estimated values for hydraulic conductivity, average hydraulic gradient, and outflow plane cross-sectional area near the downstream shared border with the CMA (based on relatively steady saturated thickness estimates). This estimate was made in coordination with Stetson Engineers for the downstream CMA, where this same volume of outflow is accounted for as inflow to the CMA. Furthermore, these flow volumes have been verified by the numerical groundwater models being created separately for the CMA and EMA.

Components of surface water outflow vary less than inflow components. Whereas the variability of inflow is large, the extraction by phreatophytes is continual during most climatic conditions and subsurface outflow is very steady due to a stable subsurface hydraulic gradient at the western end of the Santa Ynez River Alluvium.

The estimated average annual total outflow from these surface water sources for the historical period is approximately 96,600 AFY. The largest component of this outflow is gauged surface flow within the Santa Ynez River near the City of Solvang and flow through Zaca Creek near the intersection of Highways 101 and 154, which together total 89 percent of the total surface water outflow. The remainder of the surface water outflow, or 11 percent of the total, leaves the EMA through the Santa Ynez River Alluvium either as subsurface outflow near the City of Solvang; pumping by the City of Solvang, ID No. 1 and other users; or phreatophyte ET. The large difference between the minimum and maximum outflows reflects the difference between dry and wet years in the EMA and contributing watershed.

3.3.3.3 Groundwater Inflows and Outflows

During the historical period from water year 1982 through water year 2018, groundwater from both of the two principal aquifers (the Paso Robles Formation and the Careaga Sand) supplied a vast majority of the water used in the EMA. This section presents a summary of estimated groundwater inflows, groundwater outflows, and a change of groundwater in storage under historical conditions.

Table 2c.3-1
Annual Surface Water Inflow, Historical Period (1982 through 2018)

Surface Water Inflow Component	Average	Minimum	Maximum ¹
	(Acre-Feet per Year)		
Santa Ynez River Inflow from EMA	85,720	630	655,470
Santa Ynez River Tributary Inflow	9,060	70	61,820
Imported SWP	230	0	670
<i>Santa Ynez River Alluvium Subarea (Surface Water Underflow)</i>			
Subsurface inflow ^A	2,490	1,970	2,920
Recharge from Precipitation (Overlying and Mountain Front)	880	530	1,490
Recharge from Agricultural Return Flows to Underflow	480	340	710
Recharge from Municipal Return Flows to Underflow ^B	1,240	1,000	1,460
Recharge from Domestic Return Flows to Underflow	100	30	170
TOTAL	100,200	4,570	724,710

^A Includes underflow from the Santa Ynez River Alluvium in the EMA and subflow from the Buellton Upland.

^B Includes percolation return flow from both City of Buellton and City of Solvang wastewater treatment plants.

2c.3-1-2 Surface Water Outflows

The estimated annual average total surface water outflow leaving the CMA as flow in the Santa Ynez River, within the Santa Ynez River Alluvium Upper Aquifer, and percolation into Lower Aquifer over the historical base period is summarized in **Table 2c.3-2**. Similar to inflows, the Santa Ynez River surface outflow represents the majority (91%) off the average annual surface flow out of the CMA.

Table 2c.3-2
Annual Surface Water Outflow, Historical Period (1982 through 2018)

Surface Water Outflow Component	Average	Minimum	Maximum ¹
	(Acre-Feet per Year)		
Santa Ynez River Outflow to WMA	91,320	40	699,280
Net Channel Percolation to Groundwater ^A	360	10	1,470
<i>Santa Ynez River Alluvium Subarea (Surface Water Underflow)</i>			
<i>Santa Ynez River Underflow Out</i>	800	800	800
<i>River well pumping – Agriculture^B</i>	2,720	1,920	3,690
<i>River well pumping – Municipal^B</i>	470	80	1,020
<i>River well pumping – Domestic^B</i>	225	70	380
<i>Riparian Vegetation Evapotranspiration</i>	4,165	4,165	4,165
TOTAL	100,070	7,085	710,805

^A Does not include percolation to Santa Ynez River Alluvium, which is part of the surface water component.

^B River well pumping occurs from wells in the Santa Ynez River Alluvium. The wells pump from the underflow of the Santa Ynez River and are administered by the SWRCB as a surface water diversion.

2c.3-1-3 Summary

As indicated in Tables 2c.3-1 and 2c.3-2, the average surface flow in and out averaged 100,200 AFY and 100,070 AFY, respectively, for the historical period (1982 through 2018). The surface water inflow exceeded outflow by 130 AFY.

The surface water budget for the historical period in the CMA is presented on **Figure 2c.3-1** and **Table 2c.3-3**. The inflows and outflows for the Santa Ynez River Alluvium shown in Tables 2c.3-1 and 2c.3-2 are totaled in Figure 2c.3-1 and Table 2c.3-3. The figure shows how flashy the hydrologic system is, with ten wet years showing orders of magnitude more flux of surface water than the other, drier, years. In these wet years, surface water inflows and outflows are extremely large in response to precipitation, compared with the drier years.



Imported surface water from the SWP became available after completion of the Coastal Branch pipeline in 1997. The VSFB has an SWP allocation of 5,500 AFY and a drought buffer of 550 AFY for a total of 6,050 AFY.

Table 2c.3-1 summarizes the average, minimum, and maximum inflow from surface water from all sources. The estimated average annual total inflow over the historical base period is approximately 116,290 AFY. The large difference between the minimum and maximum inflows reflects the climatic variability between dry and wet years. The largest components of this average local inflow are releases from Bradbury Dam and flow in the Santa Ynez River upstream of the WMA, which represent about 78% of the average annual surface inflow. Inflow from the Lompoc and Santa Rita Upland and the Santa Ynez Mountains contributes 14% of the total surface water inflow. The remaining surface flow components make up 8% of the total surface water inflow (**Table 2c.3-1**).

Table 2c.3-1
Annual Surface Water Inflow, Historical Period (1982 through 2018)

Surface Water Inflow Component	Average	Minimum	Maximum
	(Acre-Feet per Year)		
Santa Ynez River Inflow from CMA	91,320	40	699,280
Santa Ynez River Tributary Inflow	16,130	230	114,090
Lompoc Regional Wastewater Reclamation Plant	3,790	2,950	4,720
Imported SWP	1,470	0	4,320
<i>Santa Ynez River Alluvium Subarea (Surface Water Underflow)</i>			
<i>Subsurface inflow</i>	800	800	800
<i>Recharge from Precipitation (Overlying and Mountain Front)</i>	1,900	1,400	2,750
<i>Recharge from Agricultural Return Flows to Underflow</i>	860	450	1,250
<i>Recharge from Domestic Return Flows to Underflow</i>	20	0	40
TOTAL	116,290	5,870	827,250

The annual average, minimum, and maximum volumes of imported local surface water during the historical base period (1982 through 2018) are presented Table 2c.3-1. The average value of 1,470 AFY does not represent the typical SWP imports by the VSFB because deliveries did not start until 1997. The average amount of SWP imports for the period of 1998–2018 was approximately 2,600 AFY. The imported water supply provides approximately zero to 2% of the total volume of surface water that enters the WMA.

2c.3-1-2 Surface Water Outflows

The estimated annual average total surface water outflow leaving the WMA as flow in the Santa Ynez River, within the Santa Ynez River Alluvium Upper Aquifer, and percolation into Lower Aquifer over the historical base period is summarized in **Table 2c.3-2**. Similar to inflows, the Santa Ynez River surface outflow represents the majority (79%) off the average annual surface flow out of the WMA.

Table 2c.3-2
Annual Surface Water Outflow, Historical Period (1982 through 2018)

Surface Water Outflow Component	Average	Minimum	Maximum
	(Acre-Feet per Year)		
Santa Ynez River Outflow to Pacific Ocean	89,190	0	687,050
Net Channel Percolation to Groundwater ^A	14,300	3,500	28,130
<i>Santa Ynez River Alluvium Subarea (Surface Water Underflow)</i>			
<i>Santa Ynez River Underflow Out</i>	1,200	1,200	1,200
<i>River well pumping ^B – Agriculture</i>	4,510	2,340	6,620
<i>River well pumping ^B – Domestic</i>	50	10	100
<i>Riparian Vegetation Evapotranspiration</i>	3,170	3,170	3,170
TOTAL	112,420	10,220	726,270

A Does not include percolation to Santa Ynez River Alluvium, which is part of the surface water component.

B River well pumping occurs from wells in the Santa Ynez River Alluvium upstream of the Lompoc Narrows. The wells pump from the underflow of the Santa Ynez River and are administered by the SWRCB as a surface water diversion.

Table 2c.3-3
Annual Surface Water Components, Historical Period (1982 through 2018), AFY

		Inflows					Outflows				
Water Year	Hydrologic Year Type	Santa Ynez River	Tributary	Imported SWP	River Alluvium Total Inflows	Total Inflows	Santa Ynez River	Net Percolation to Groundwater	River Alluvium Total Outflows	Total Outflows	Inflow - Outflow
1982	Dry	3,916	1,403	0	5,125	10,445	3,402	161	9,239	12,801	-2,357
1983	Wet	511,215	35,305	0	5,721	552,242	539,648	1,137	8,890	549,675	2,566
1984	Below normal	24,859	2,955	0	5,236	33,049	26,082	262	9,126	35,470	-2,421
1985	Dry	2,677	937	0	5,129	8,742	562	139	8,656	9,358	-615
1986	Above normal	12,297	10,412	0	5,034	27,742	14,906	451	8,144	23,501	4,241
1987	Dry	1,853	1,374	0	4,735	7,961	1,392	124	8,228	9,743	-1,782
1988	Dry	4,119	720	0	4,995	9,834	1,320	114	8,209	9,643	191
1989	Critically Dry	1,758	155	0	4,765	6,677	109	34	8,568	8,712	-2,035
1990	Critically Dry	629	84	0	4,702	5,416	39	12	8,771	8,821	-3,406
1991	Below normal	12,361	5,477	0	4,816	22,654	11,091	227	8,429	19,747	2,907
1992	Above normal	40,134	8,366	0	5,085	53,585	43,968	446	8,039	52,453	1,132
1993	Wet	364,086	18,499	0	5,258	387,844	377,397	757	7,857	386,011	1,833
1994	Below normal	9,390	2,468	0	5,193	17,050	10,416	203	7,806	18,425	-1,375
1995	Wet	533,933	61,822	0	5,641	601,396	590,940	1,470	7,670	600,081	1,315
1996	Below normal	15,892	3,624	0	5,206	24,722	17,646	292	7,900	25,838	-1,116
1997	Above normal	15,294	6,532	74	5,584	27,484	19,711	424	8,042	28,176	-692
1998	Wet	655,470	49,154	609	5,905	711,137	699,276	1,361	7,199	707,836	3,301
1999	Above normal	10,953	5,491	569	5,522	22,535	14,156	408	7,914	22,478	57
2000	Above normal	24,183	9,991	602	5,579	40,356	32,004	488	8,170	40,662	-306
2001	Wet	157,890	22,082	384	5,825	186,181	176,979	771	7,867	185,617	564
2002	Dry	8,544	1,222	584	5,234	15,584	7,722	164	7,841	15,727	-143
2003	Below normal	7,711	3,344	530	5,409	16,994	9,747	270	7,970	17,987	-993
2004	Dry	10,147	1,484	511	5,521	17,663	6,017	121	8,674	14,812	2,851
2005	Wet	373,556	33,659	511	5,984	413,710	404,441	1,046	8,583	414,069	-359
2006	Above normal	96,498	5,477	641	5,528	108,144	98,411	364	8,332	107,108	1,036
2007	Critically Dry	10,885	469	665	5,173	17,192	7,714	65	8,632	16,411	781
2008	Above normal	49,596	10,337	513	5,238	65,684	57,782	451	8,497	66,730	-1,046
2009	Critically Dry	4,753	481	293	4,908	10,435	2,362	71	8,345	10,779	-344
2010	Below normal	18,594	4,572	226	5,091	28,483	18,906	259	8,246	27,411	1,071
2011	Wet	120,436	15,004	394	5,008	140,841	130,640	629	7,994	139,264	1,577
2012	Dry	4,862	763	582	5,003	11,210	3,107	118	8,734	11,959	-748
2013	Critically Dry	11,520	250	216	4,591	16,577	6,378	35	8,923	15,335	1,242
2014	Critically Dry	6,118	165	32	4,632	10,947	4,433	23	8,974	13,429	-2,483
2015	Critically Dry	9,518	73	0	4,633	14,224	3,370	10	8,719	12,099	2,125
2016	Critically Dry	8,006	116	82	4,638	12,842	3,823	16	8,649	12,488	354
2017	Above normal	18,652	10,820	293	5,255	35,020	24,538	410	9,026	33,974	1,046
2018	Critically Dry	9,315	162	224	5,035	14,735	8,527	22	9,239	17,788	-3,053
Average 1982 - 2018		85,720	9,060	230	5,190	100,200	91,320	360	8,380	100,070	130

Table 2c.3-3
Annual Surface Water Components, Historical Period (1982 through 2018), AFY

		Inflows						Outflows				
Water Year	Hydrologic Year Type	Santa Ynez River	Tributary	Lompoc Wastewater	Imported SWP	River Alluvium Total Inflows	Total Inflows	Santa Ynez River	Net Percolation to Groundwater	River Alluvium Total Outflows	Total Outflows	Inflow - Outflow
1982	Dry	3,402	2,902	3,583	0	3,289	13,175	1,592	9,517	7,433	18,542	-5,367
1983	Wet	539,648	64,565	3,786	0	4,112	612,111	499,844	28,131	7,286	535,262	76,849
1984	Below normal	26,082	6,168	3,666	0	3,363	39,279	22,370	17,657	7,267	47,295	-8,015
1985	Dry	562	2,297	3,968	0	3,260	10,087	0	8,070	6,957	15,028	-4,940
1986	Above normal	14,906	19,078	4,090	0	3,275	41,350	20,688	19,973	6,723	47,384	-6,034
1987	Dry	1,392	2,896	4,107	0	2,960	11,355	654	9,665	6,800	17,120	-5,765
1988	Dry	1,320	1,688	3,944	0	3,122	10,073	0	8,249	6,813	15,062	-4,989
1989	Critically Dry	109	400	4,019	0	3,014	7,542	0	4,224	7,579	11,804	-4,261
1990	Critically Dry	39	317	3,707	0	3,070	7,134	0	3,888	8,415	12,303	-5,170
1991	Below normal	11,091	9,445	3,616	0	3,293	27,446	13,782	14,458	8,022	36,263	-8,817
1992	Above normal	43,968	12,689	3,691	0	3,602	63,950	47,843	22,267	7,814	77,923	-13,973
1993	Wet	377,397	30,539	3,889	0	3,748	415,572	382,370	22,844	7,698	412,911	2,660
1994	Below normal	10,416	5,068	3,725	0	3,206	22,415	5,071	16,084	7,691	28,846	-6,430
1995	Wet	590,940	114,087	4,017	0	3,822	712,866	504,051	26,319	7,603	537,974	174,893
1996	Below normal	17,646	7,849	4,107	0	3,406	33,007	17,436	15,071	8,480	40,987	-7,979
1997	Above normal	19,711	10,077	4,120	13	3,695	37,616	25,270	16,567	9,901	51,739	-14,123
1998	Wet	699,276	80,355	4,568	3,174	4,238	791,611	687,053	27,616	8,698	723,366	68,245
1999	Above normal	14,156	10,941	4,652	3,339	3,813	36,900	22,503	14,226	9,234	45,964	-9,064
2000	Above normal	32,004	19,256	4,719	4,086	3,788	63,854	44,838	15,155	9,256	69,248	-5,395
2001	Wet	176,979	38,318	4,045	4,316	4,078	227,737	248,894	18,714	9,297	276,905	-49,168
2002	Dry	7,722	2,677	3,824	3,809	3,575	21,606	720	13,469	9,598	23,787	-2,180
2003	Below normal	9,747	6,626	3,746	4,018	3,582	27,719	4,110	17,652	9,170	30,931	-3,213
2004	Dry	6,017	2,917	3,879	4,176	3,628	20,616	875	10,662	9,984	21,522	-906
2005	Wet	404,441	57,620	3,730	3,260	4,442	473,493	432,183	20,239	9,333	461,755	11,738
2006	Above normal	98,411	10,028	3,744	3,337	3,684	119,204	78,283	16,452	8,953	103,687	15,516
2007	Critically Dry	7,714	996	3,993	3,802	3,478	19,983	360	10,735	9,967	21,061	-1,078
2008	Above normal	57,782	16,465	3,921	2,321	3,921	84,410	69,645	12,246	10,011	91,901	-7,491
2009	Critically Dry	2,362	977	3,395	1,377	3,591	11,703	360	7,032	10,171	17,563	-5,860
2010	Below normal	18,906	8,751	3,408	961	3,878	35,904	19,559	18,670	9,991	48,220	-12,316
2011	Wet	130,640	27,575	3,190	2,002	3,721	167,129	125,814	21,914	9,170	156,897	10,232
2012	Dry	3,107	1,753	2,946	2,238	3,625	13,669	720	8,407	10,032	19,159	-5,490
2013	Critically Dry	6,378	624	3,288	2,070	3,652	16,012	0	7,542	11,052	18,594	-2,582
2014	Critically Dry	4,433	430	3,588	145	3,490	12,086	0	8,228	10,584	18,812	-6,727
2015	Critically Dry	3,370	233	3,334	109	3,430	10,475	0	3,495	10,799	14,294	-3,819
2016	Critically Dry	3,823	329	3,324	1,758	3,402	12,637	0	5,776	10,769	16,545	-3,908
2017	Above normal	24,538	19,517	3,439	1,924	3,723	53,142	22,633	19,911	10,988	53,532	-389
2018	Critically Dry	8,527	438	3,338	2,296	3,374	17,974	360	7,967	10,926	19,253	-1,279
Average 1982 - 2018		91,323	16,132	3,787	1,474	3,577	116,293	89,186	14,300	8,931	112,417	3,876

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Section 5 – Basin Setting

Appendix 5-C:

Analysis of the Effects of Lake Cachuma Releases

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DRAFT TECHNICAL MEMORANDUM

2171 E. Francisco Blvd., Suite K • San Rafael, California • 94901

TEL: (415) 457-0701 FAX: (415) 457-1638

TO: File

DATE: July 27, 2026

FROM: Stetson Engineers

JOB NO: 2925/2926

RE: **DRAFT** Technical Memorandum of the Effect of Lake Cachuma Releases on Downstream Users

SUMMARY

The Department of Water Resources (“DWR”) requested that the Groundwater Sustainability Agencies (“GSAs”) of the Santa Ynez River Valley Groundwater Basin (“the Basin” or “SYRVGB”) explain how certain operations upstream of the Basin affect the surface water and groundwater systems in the SYRVGB. This memorandum explains how Lake Cachuma releases affect the surface-water and groundwater systems, while recognizing that the GSAs do not control surface-water rights or reservoir operations.

While the GSAs primarily focus on groundwater, they also evaluate general water availability in relation to key upstream inputs and outputs, including precipitation, evaporation, diversions, and reservoir releases. The majority of precipitation in the Santa Ynez River watershed falls above Lake Cachuma, and more than a third of the surface water availability is lost due to operations at and above Lake Cachuma. Downstream of Lake Cachuma the river water flows both at the surface and through a known and definite channel of alluvial sediments. The GSAs’ groundwater aquifers are separated from the river along most of this downstream section. The separation between the river and the groundwater aquifers along most of the river minimizes the potential direct impacts of groundwater pumping on the Santa Ynez River, especially compared to these upstream operations.

Release operations at Lake Cachuma influence downstream conditions and are the only upstream operations that the GSAs could potentially influence. The GSAs can request that a GSA member agency, the Santa Ynez River Water Conservation District (“SYRWCD”), release water under two accounts, based on the State Water Resources Control Board (“SWRCB”) Water Right (“WR”) Order 2019-0148. These releases can be strategic to help provide recharge and more broadly support the Western Management Area (“WMA”) and Central Management Area (“CMA”) groundwater portions of the Santa Ynez River. These releases would not be a

comprehensive or long-term solution to potential issues such as groundwater overdraft but can help mitigate short-term impacts during droughts.

1.0 BACKGROUND

The Santa Ynez River Valley Groundwater Basin has three independent GSAs for compliance with the Sustainable Groundwater Management Act (“SGMA”). The three GSAs are the WMA, CMA, and Eastern Management Area (“EMA”). **Figure 1** shows the location of the three SGMA management areas and the extents of the Santa Ynez watershed.

Each GSA submitted a Groundwater Sustainability Plan in January 2022. The DWR approved all three GSPs together as “the Plan” in January 2024. Attached to the approval were proposed Recommended Corrective Actions (“RCAs”). **Attachment I** is a copy of DWR’s proposed RCA regarding water budgets, RCA No. 3. This memorandum focuses on the request to “clearly explain how releases from Lake Cachuma are managed to effectively regulate the surface water and groundwater system through each of the three management areas.”

In order to explain these releases, this technical memorandum describes the general surface conditions upstream of Lake Cachuma, the total amount of upstream diversions, and the current agreements around when and how much water is released.

SANTA YNEZ RIVER WATERSHED PRECIPITATION

The Santa Ynez River headwaters originate in the Santa Ynez and San Rafael Mountains at an elevation of about 4,000 feet near the eastern boundary of Santa Barbara County, with average annual precipitation of up to 50.3 inches per year.¹ **Figure 2** shows the typical precipitation patterns in the Santa Ynez River watershed. On average, this area upstream of Lake Cachuma receives 58% of the rainfall by volume in the Santa Ynez River watershed, while representing 47% of the land area. **Table 1** numerically summarizes the average rainfall information shown on **Figure 2** and shows that a majority of the water entering the Santa Ynez River watershed does so upstream of Lake Cachuma. Based on these average annual isohyets, the minimum rainfall upstream of Lake Cachuma (21.3 in/yr) is greater than the average of the entire SYRVGB (18.9 in/yr), and the maximum rainfall in the WMA (19.4 in/yr) and the CMA (20.4 in/yr).

¹ PRISM Climate Group (2022) United States Average Annual Total Precipitation, 1991-2020.

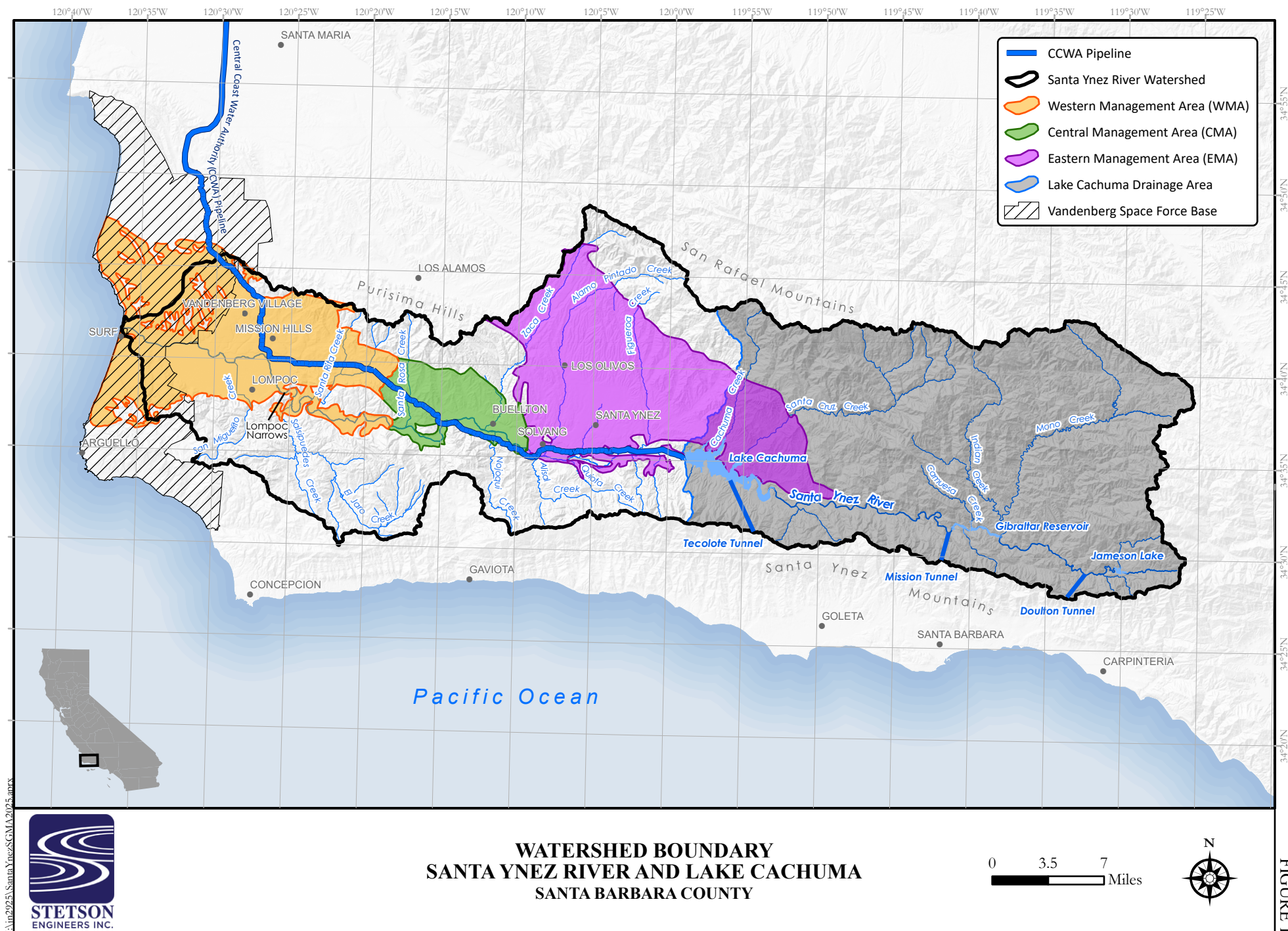


FIGURE 1

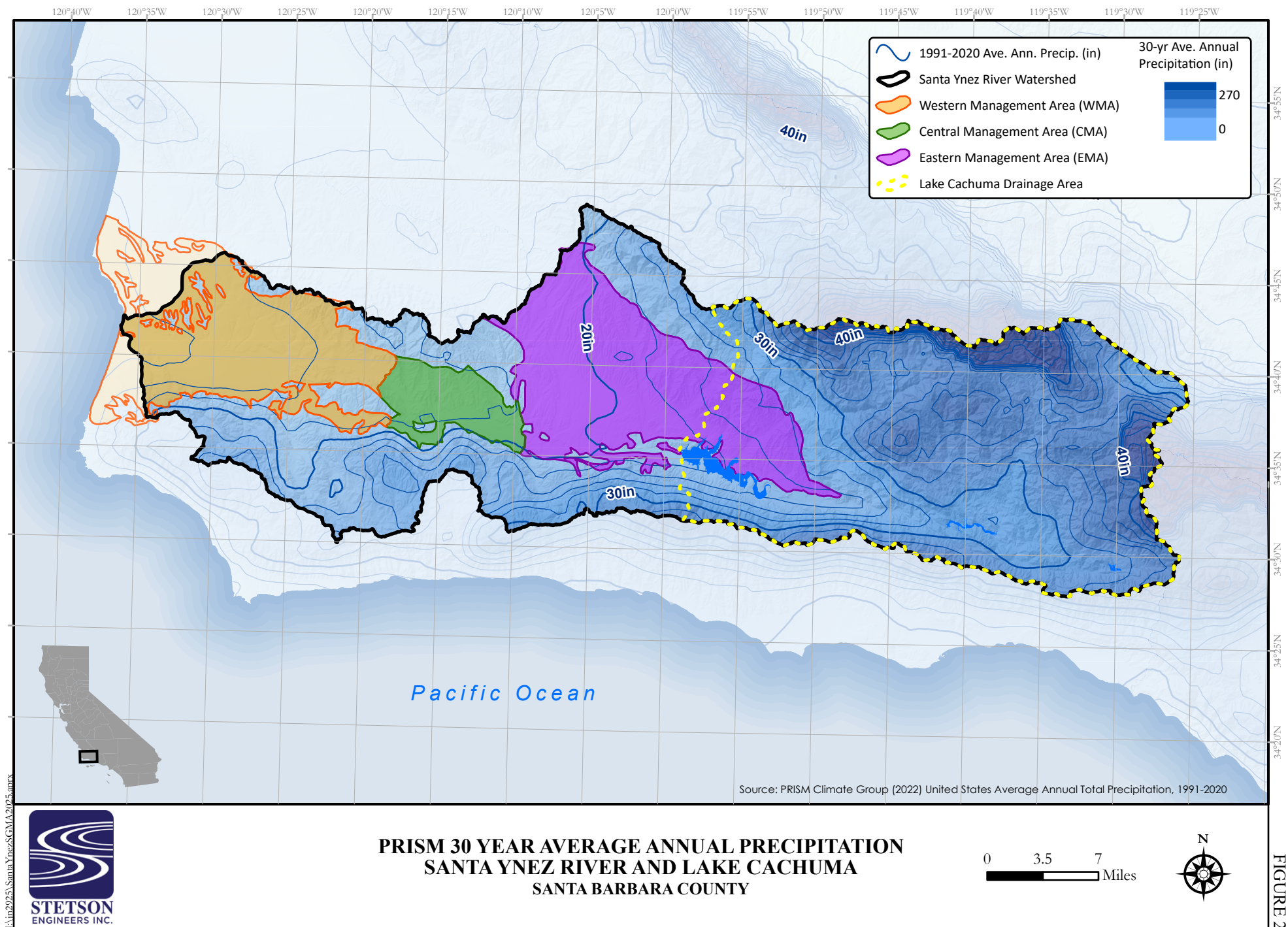


Table 1
Comparison of Average Annual Precipitation (1991-2020)
for Areas within the Santa Ynez Watershed

Area Description	Area Size	Average Rainfall Rate			Average Annual Volume of Rainfall
		Minimum	Maximum	Mean	
	(Acres)	(Inches/Year)	(Inches/Year)	(Inches/Year)	(Acre-Feet/Year)
Santa Ynez Watershed	573,800	12.7	50.3	25.5	1,221,500
Lake Cachuma Watershed	267,200	21.3	50.3	31.9	710,700
Santa Ynez River Valley Groundwater Basin*	181,000	12.7	26.5	18.9	284,500
Eastern Management Area	96,300	18.1	26.5	21.3	170,900
Central Management Area	21,000	16.5	20.4	17.8	31,100
Western Management Area*	63,600	12.7	19.4	15.5	82,400

Source: Derived from PRISM Climate Group (2022) United States Average Annual Total Precipitation, 1991-2020. Area and average volume rounded to nearest 100 acres.

Notes:

* Calculated for area within the Santa Ynez River Watershed, as part of the WMA boundary extends outside of the watershed.

UPSTREAM WATER EXPORTS AND EVAPORATION

As shown on Figures 1 and 3, the Santa Ynez River has three dammed reservoirs upstream of the SYRVGB: Jameson Reservoir is the farthest upstream, then Gibraltar Reservoir, and finally Bradbury Dam (Lake Cachuma)². Although reservoir releases and spills do flow into the Santa Ynez River, the reservoirs are also managed to divert water out of the Santa Ynez River

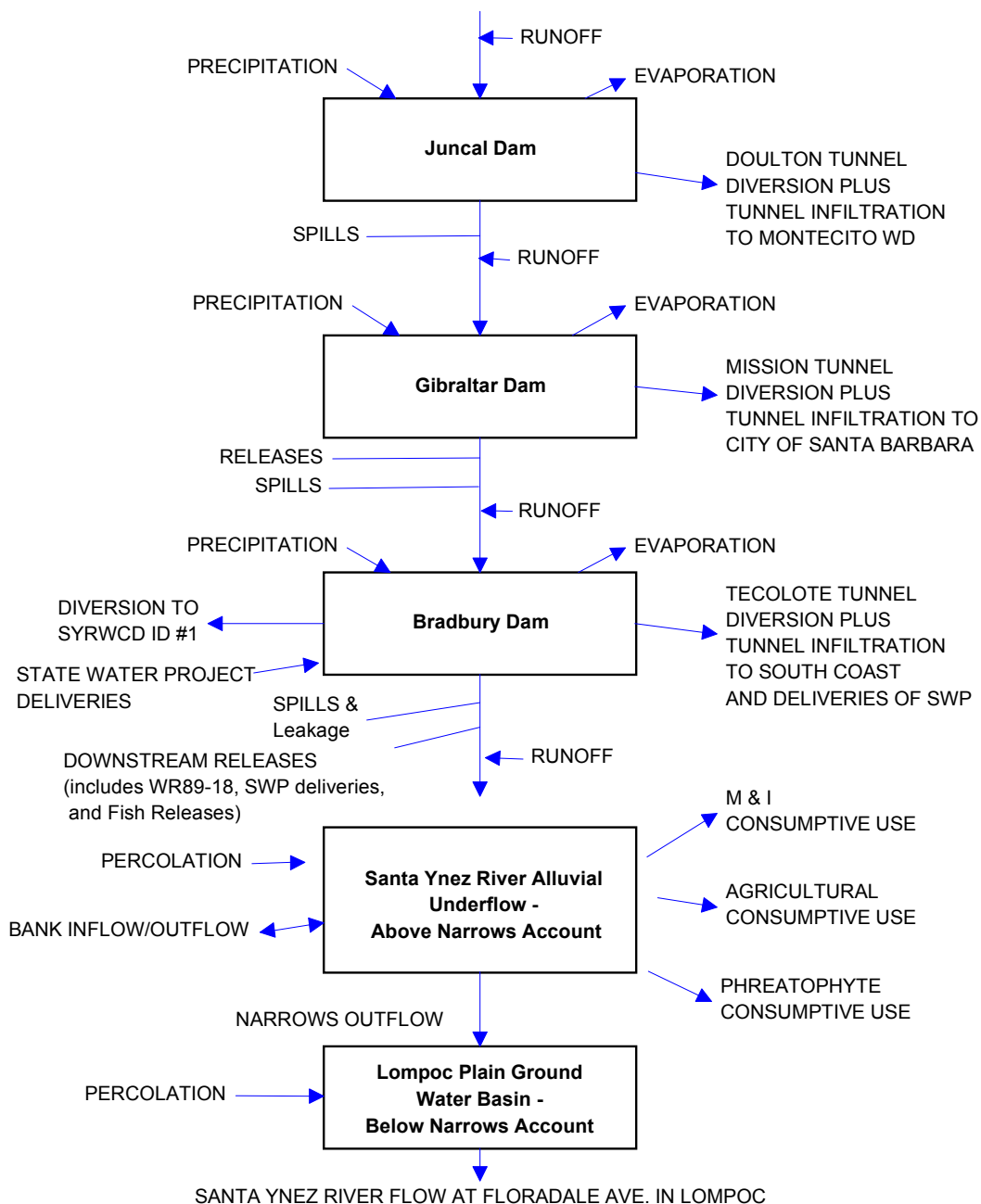
² These three tunnels, which divert water, are also shown on Figures 1 and 3, from east to west (upstream to downstream): Doulton Tunnel, Mission Tunnel, and Tecolote Tunnel.

watershed via a system of tributary diversions and tunnels through the Santa Ynez Mountains for use by the cities located on the Santa Barbara County south coast (i.e., Goleta and Santa Barbara). **Figure 3** identifies the major inflows and outflows along the entire Santa Ynez River. **Table 2** is a summary of the average amount of water that is either diverted or evaporated out of the Santa Ynez River watershed.

Table 2
Volume of Water Exported Upstream of
SYRVGB by Diversion Tunnel

Diversion	Associated Lake or Reservoir	Average Annual Flow	Data Source/ Comments
		(Acre Feet Per Year)	
Doulton Tunnel	Jameson Lake	1,781	Montecito Water District 2020 UWMP-Final; Includes Fox and Alder tributary diversion and tunnel infiltration.
Mission Tunnel	Gibraltar Reservoir	5,725	City of Santa Barbara Water Supply Management Report 2023-2024; Based on WY 2024 Actual Water Use including Devils Canyon tributary diversion and tunnel infiltration
Tecolote Tunnel	Lake Cachuma	25,714	Cachuma Project Water Rights Hearing Final EIR, December 2011; Based on current contract with Reclamation
TOTAL Upstream Export Diversions	-----	33,220	For water exported out of the Santa Ynez River watershed, return flows are unable to contribute to the local hydrology.
TOTAL Upstream Reservoir Evaporation		13,700	Based on typical evaporation of 1,000 AFY; 1,700AFY; and 11,000 AFY from Jameson, Gibraltar, and Cachuma, respectively

SCHEMATIC PRESENTATION OF THE HYDROLOGIC INPUTS AND OUTPUTS FOR THE SANTA YNEZ WATERSHED



2.0 LAKE CACHUMA RELEASES FOR DOWNSTREAM USES

This section discusses the current rules for Lake Cachuma³ downstream releases. The GSAs do not directly regulate or manage the releases from Lake Cachuma, which is part of the Santa Ynez River's surface water system. SGMA prohibits the GSAs from determining or altering any surface water right.⁴ Lake Cachuma releases are managed under existing surface-water rights and reservoir-operation procedures, not directly by the GSAs. The Santa Ynez River has a century of water-rights litigation that governs how it is operated that has resulted in SWRCB WR orders. The current key governing document for Lake Cachuma is the SWRCB WR Order 2019-0148.⁵

The water right permits issued by the SWRCB contain conditions that the United States Bureau of Reclamation (Reclamation), which owns and operates the dam, must meet to mitigate the dam, lake, and associated diversions.⁶ **Table 3** provides a summary of the Cachuma releases for the period 2001-2025. Each release targets different areas but are governed by the same authority, SWRCB Order 2019-0148.

Table 3 Summary of Lake Cachuma Downstream Releases

Release Type		Average AFY (2001-2025)	Primary GSA Affected	Primary Benefit
Fish Releases		5,200	EMA	Habitat and flow
Water Rights Releases	ANA Releases	4,050	EMA, CMA, (portion of) WMA	Underflow alluvial replenishment
	BNA Releases	1,550	WMA	Lompoc forebay Upper Aquifer recharge

Notes: ANA = Above Narrows Account area of benefit; BNA = Below Narrows Account area of benefit

³ Also referred to as Cachuma Reservoir. The dam has been called both Bradbury Dam and Cachuma Dam.

⁴ CA WAT 10720.5 (b) Nothing in this part, or in any groundwater management plan adopted pursuant to this part, determines or alters surface water rights or groundwater rights under common law or any provision of law that determines or grants surface water rights.

⁵ State Of California State Water Resources Control Board. (2019) Order WR 2019-0148. In the Matter of Permits 11308 and 11310 (Applications 11331 and 11332) held by the United States Bureau of Reclamation for the Cachuma Project on the Santa Ynez River. 184pg.
https://www.waterboards.ca.gov/waterrights/water_issues/programs/hearings/cachuma/docs/wro2019_0148_withagreement_final.pdf
Accessed 2026-07-27.

⁶ These are collectively referred to as the Cachuma Project. Cachuma Project Member Units receive Cachuma Project water via a contract with Reclamation and include the City of Santa Barbara, Goleta, Montecito, Carpinteria, and the SYRWCD-Improvement District No. 1.

WATER RIGHTS RELEASES

Water rights releases are for the use of this Santa Ynez River water by downstream users. These downstream users typically divert water from the river by pumping it from wells which extract the underflow of the Santa Ynez River.⁷ Water rights releases for users downstream of Lake Cachuma are outlined in the SWRCB Order of 1973 (WR 73-37), as amended in 1989 (WR 89-18) and 2019 (WR 2019-0148). The Santa Ynez River Water Conservation District (SYRWCD) is named in these orders as the responsible party for managing downstream water-rights releases.

These water rights releases are based on the establishment of two accounts and the accrual of credits (storing water) in Lake Cachuma for the Above Narrows Account (ANA) and the Below Narrows Account (BNA). These two locations describe the areas along the river relative to the Lompoc Narrows, the constriction of the Santa Ynez River channel located near and east of the City of Lompoc. **Figure 4** shows the location of the Lompoc Narrows and the ANA and BNA areas relative to the three GSAs. **Table 4** is a summary of how these areas relate to the three GSAs. The ANA includes all of the Santa Ynez River alluvium through the EMA and CMA, and a portion of the WMA, while the BNA is only in the WMA. ANA water is for Santa Ynez River Alluvium (not SGMA groundwater), while the BNA water is for the WMA's Upper Aquifer (which is SGMA groundwater).

Table 4 SGMA Context of the ANA and BNA Water Rights Releases

Water Rights Releases	Targeted Recharge Area		Recharge Area in GSAs Boundary?		
	Description	SGMA Groundwater	EMA	CMA	WMA
ANA	Channelized Santa Ynez River Alluvium	No	Yes	Yes	Yes (Partial)
BNA	WMA Upper Aquifer	Yes	No	No	Yes

Notes: ANA = Above Narrows Account area of benefit; BNA = Below Narrows Account area of benefit

Water is credited to either the ANA or BNA per the SWRCB Order and remains stored in the reservoir until released at the request of the SYRWCD or is lost by spill. Also, the monthly balance in either the ANA or BNA cannot exceed the amount of dewatered storage in the downstream basins as estimated by a network of monitoring wells. In addition, Below Narrows releases that do not reach the Narrows will reduce the ANA.

⁷ Historical discussions of this water do not account for the distinctions in SGMA definition of groundwater in Water Code 10721 (g), which “does not include water that flows in known and definite channels,” typically meaning all underground water (e.g., Water Code 75502).

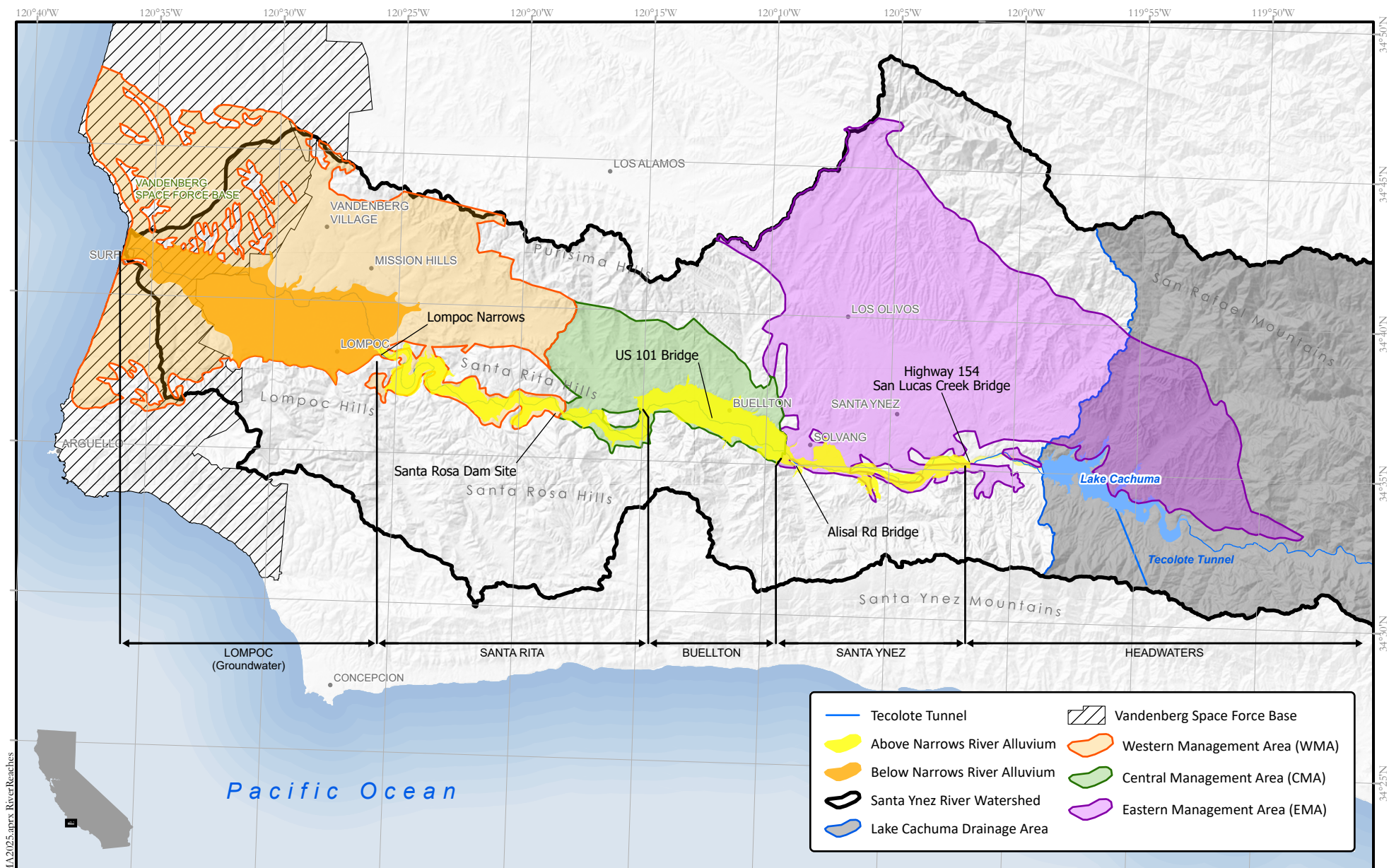


FIGURE 4

The premise of the credits for the ANA and BNA in Lake Cachuma is based on the type of water each represents. Credits for the ANA are based on observations of live stream at key locations downstream, which recognizes the direct connection between the underflow deposits above the Lompoc Narrows and the surface flow of the Santa Ynez River. These surface water live stream locations were first described in a contract between Reclamation and the SYRWCD. This contract obligated Reclamation to release water from Lake Cachuma to maintain a “live stream” downstream if water was flowing into Lake Cachuma (Reclamation, 1949). As described in the contract, a “live stream” meant visible surface flow at several points downstream along the Santa Ynez River (footnotes added):

“A live stream, as the term is used in this contract, shall be deemed to exist in the Santa Ynez River whenever there is a visible stream of water flowing on the surface of the river at San Lucas Bridge, at the Mission Bridge near Solvang,⁸ at the U. S. Highway 101 Bridge near Buellton, at what is known as Santa Rosa damsite,⁹ which is near the east end of what is known as Santa Rosa Park, at Robinson’s Bridge, near Lompoc, and there is a surface flow in the river of not less than one cubic foot of water per second at the “H” Street Bridge, which is north of Lompoc.”(Reclamation, 1949, p. 4)

Since 1949, the details of the live stream accounting have been modified per the SWRCB WR Orders. Currently, the ANA obtains credits daily based on the total inflow into Lake Cachuma whenever a live stream does not exist at the key locations downstream per Order 2019-148.

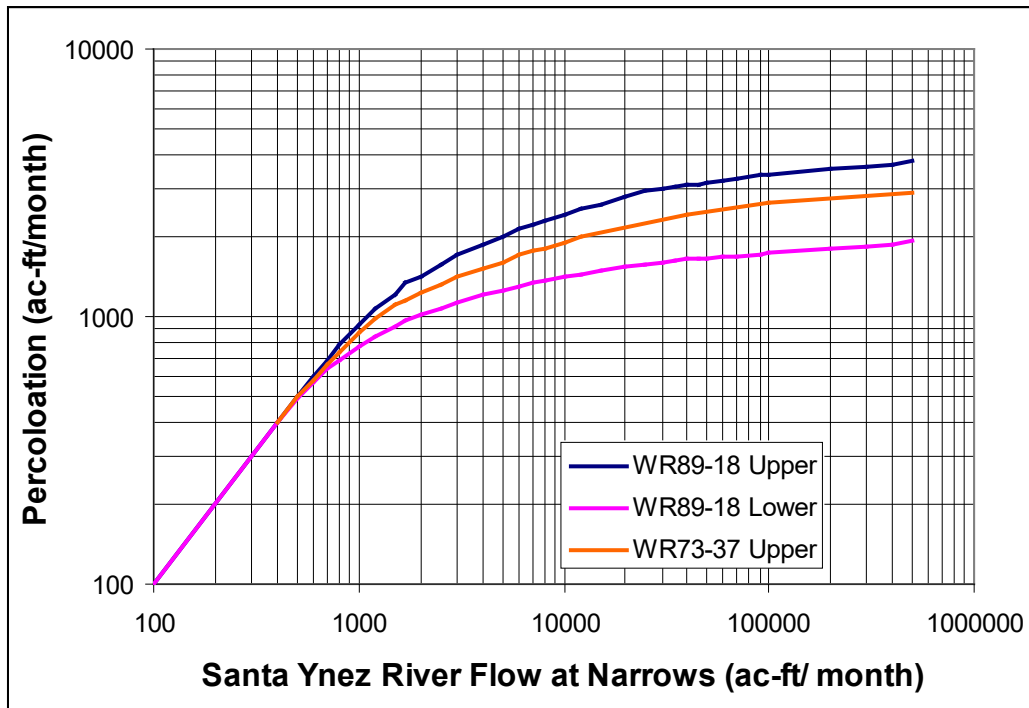
The BNA obtains credits based on the difference between the estimated actual percolation below the Narrows and the percolation estimated to occur if Cachuma Reservoir did not impound river flows. Reclamation calculates monthly percolation with and without Cachuma Reservoir using the percolation curves shown in **Figure 5** based on measured flows and “constructed flows” which are flows without Lake Cachuma.¹⁰ WR Order 2019-148 adopts a Settlement Agreement, in which the upper 89-18 percolation curve in Figure 5 is always used to calculate the total credit. Still, the lower curve is used in wetter year types to allocate a certain portion of the upper curve water to Cachuma Project Member Units.

⁸ This is 0.75 mile upstream of the EMA/CMA boundary. This was a bridge, dismantled on August 23, 1953, at the location of what is now the Alisal Road bridge.

⁹ This is the CMA/WMA boundary.

¹⁰ The SWRCB order uses the terminology “constructive flows”.

Figure 5
Below Narrows Percolation from Santa Ynez River



Requests for releases are generally made when the amount of dewatered storage in the alluvium between the dam and the Lompoc Narrows exceeds 10,000 acre-feet¹¹. The releases are constrained by the outlet works capacity of Bradbury Dam, which has been tested up to 230 cfs. However, Reclamation is planning to replace the two existing 30-inch valves at the Bradbury Dam outlet works in 2027 with two smaller 24-inch valves, which are expected to provide a maximum discharge of 150 to 200 cfs from the dam, depending on the lake level. In any given year, the amount may range from zero releases up to over 15,000 AF depending on conditions. **Table 5** shows the amount of water rights releases that have occurred historically as published in the SYRWCD 48th Annual Report (Stetson Engineers, 2026). ANA water rights releases are made at Bradbury Dam for the benefit of water users between the dam and the Lompoc Narrows. Releases from the BNA in Lake Cachuma benefit water users in the Lompoc Plain subarea, and deliveries are measured at the Lompoc Narrows. Combined releases of ANA and BNA water are made to replenish the alluvium and groundwater basin in the above and below Narrows areas. Water rights releases after Order SWRCB 89-18 have averaged 5,700 AFY for the period 1990-2025.

¹¹ The 10,000 acre-feet dewatered storage level is mentioned in the SWRCB Order 73-37 as guideline. The decision to make a water rights release is managed by the SYRCWD based on a multitude of downstream conditions.

Table 5
Historical Water Rights Releases

Calendar Year	Releases (Acre-Feet)		Total	Calendar Year	Releases (Acre-Feet)		Total
	Above Narrows Account (ANA)	Below Narrows Account (BNA)			Above Narrows Account (ANA)	Below Narrows Account (BNA)	
Releases under Live Stream				Releases under WR 89-18			
1953	-	-	7,540	1990	4,792	0	4,792
1954	-	-	4,632	1991	7,745	3,638	11,383
				1992	4,930	3,287	8,217
1955	-	-	3,921	1993	0	0	0
1956	-	-	2,449	1994	6,727	4,012	10,739
1957	-	-	3,674				
1958	-	-	4,142	1995	0	0	0
1959	-	-	1,294	1996	7,319	3,459	10,778
				1997	9,572	3,438	13,010
1960	-	-	3,411	1998	0	0	0
1961	-	-	1,365	1999	0	0	0
1962	-	-	380				
1963	-	-	2,239	2000	4,360	1,858	6,218
1964	-	-	3,665	2001	0	0	0
				2002	9,054	4,412	13,466
1965	-	-	7,251	2003	0	0	0
1966	-	-	6,860	2004	11,494	4,512	16,006
1967	-	-	3,274				
1968	-	-	6,705	2005	0	0	0
1969	-	-	1,499	2006	0	0	0
				2007	6,703	4,897	11,600
1970	-	-	6,100	2008	0	0	0
1971	-	-	8,095	2009	0	0	0
1972	-	-	6,320				
1973	-	-	1,245	2010	5,122	3,524	8,646
Releases under WR 73-37				2011	0	0	0
1974	1,353	0	1,353	2012	0	0	0
				2013	10,694	6,779	17,473
1975	1,134	0	1,134	2014	4,698	0	4,698
1976	4,237	0	4,237				
1977	2,299	0	2,299	2015	10,603	0	10,603
1978	62	0	62	2016	9,334	2,286	11,620
1979	1,200	0	1,200	2017	7,758	4,454	12,212
				2018	6,606	1,448	8,054
1980	0	0	0	2019	0	0	0
1981	4,175	0	4,175	Releases under WR 2019-0148			
1982	6,655	755	7,410	2020	6,379	4,101	10,480
1983	0	0	0	2021	4,649	0	4,649
1984	3,162	0	3,162	2022	7,912	2,001	9,913
				2023	0	0	0
1985	5,686	0	5,686	2024	0	0	0
1986	5,317	1,780	7,097	2025	0	0	0
1987	3,887	0	3,887				
1988	5,050	1,283	6,333				
1989	5,192	0	5,192				

The GSAs' role is to monitor groundwater and interconnected surface-water conditions, coordinate with member agencies such as SYRWCD, and request or support releases from available accounts where appropriate. These releases help maintain surface water flows and support the riparian ecosystem in each GSA. In addition to providing water to each surface

water system for all three GSAs, in the WMA, the water rights releases recharge the Lompoc Plain/forebay system of the Upper Aquifer

FISH WATER RELEASES

In addition to downstream water rights releases, Order WR 2019-0148 requires Reclamation to release water below Bradbury Dam for the protection of fish and other public trust resources¹². These instream flows depend on reservoir spill, total lake storage, and cumulative inflow into the lake each water year. There are several types of water releases required to support the river habitat: instream flow releases and fish passage supplementation releases. Releases for fish post-Order SWRCB 2019-148 have averaged 8,000 AFY for the period 2020-2025. Under the 2000 Biological Opinion, releases for fish averaged about 4,300 AFY for the period 2001-2019.

INSTREAM FLOW RELEASES

The instream flow releases are primarily intended to support fish rearing in the area of the river immediately below Lake Cachuma. These flows are to simulate the year-round river baseflow that, absent Bradbury Dam, historically was present in the reach of the Santa Ynez River above the Alisal Bridge. This is the reach of the Santa Ynez River that is located within the EMA boundary. The river habitat is critical for juvenile steelhead/rainbow trout, including Steelhead trout (*Oncorhynchus mykiss* or *O. mykiss*) which is a federally protected species.

The amount of water that is available and would naturally, absent Bradbury Dam, be expected in the Santa Ynez River varies from year to year. A system based on the water year (WY) type is used to determine what level of instream flows are required for fish to account for this natural variability. WY types are defined by SWRCB and classified in accordance with the Cachuma Reservoir Inflow Index shown in **Table 6**. Cumulative inflow to Lake Cachuma from October 1st to September 30th is used to determine WY type. The inflow amounts were determined based on historical inflow data.

Table 6 Cachuma Reservoir Inflow Index for Water Year Classification

Water Year Classification	Cachuma Reservoir Inflow (AF)	Instream Flow Requirement
Wet	> 117,842	Higher Instream Flows
Above Normal	≤ 117,842 > 33,707	
Below Normal	≤ 33,707 > 15,366	Lower Instream Flows
Dry	≤ 15,366 > 4,550	
Critical	≤ 4,550	

Notes: Wet/Above Normal (blue) = higher instream flow required; Below Normal/Dry/Critical (yellow) = lower instream flow required.

¹² Prior to Order 2019-148, Reclamation was making releases for fish under the 2000 Biological Opinion by the National Marine Fisheries Service (NMFS). The SWRCB utilized the flow requirements from this regime and expanded release requirements in wet and above-normal years.

As shown above in Table 6, there are two minimum instream flow requirements depending on the year's Cachuma Reservoir Inflow Index. In Below Normal, Dry, and Critical WY types, there is a lower instream flow requirement which is summarized in Table 7.¹³ In Wet and Above Normal WY types, higher instream flows are required as shown in Table 8.¹⁴

Table 7 Lower Flow Requirements for Below Normal, Dry, and Critical Water Year Types

Reservoir Spill (AF) ^a	Lake Storage (AF) ^b	Flow (cfs) Requirements at:		
		Highway 154	Alisal Road	Stilling Basin & Long Pool
≥20,000	N/A	10	1.5 ^c	-
< 20,000	≥ 120,000	5	1.5 ^d	-
<20,000	≥30,000 and <120,000	2.5	1.5 ^d	-
<20,000	<30,000	-	-	30 AF/month ^e

Water years are the period October 1st through September 30th.

Source: Table 1 in Order WR 2019-0148.

Notes:

^a Reservoir spill is calculated cumulatively over the course of the water year beginning October 1.

^b Lake storage is measured on the first day of each month.

^c The specified flow only applies when *O. mykiss* are present.

^d The specified flow applies only if there was reservoir spill greater than or equal to 20,000 AF in the prior water year and *O. mykiss* are present in the Alisal Reach.

^e When there is less than 30,000 AF of total water stored in the reservoir, regardless of origin, Reclamation shall provide periodic releases of 30 AF per month for refreshing flows. These refreshing flows will preferentially be provided to Hilton Creek, as system capabilities allow, followed by the Stilling Basin and long pool directly downstream of the dam to provide for *O. mykiss* rearing in these areas. Less than 30 AF per month may be released upon determination by the fishery agencies (NMFS and CDFW) and the SWRCB that less water is necessary to refresh rearing habitat for *O. mykiss* in these areas.

Table 8 Higher Instream Flow Requirements for Wet and Above Normal Water Year Types

Minimum Flow Requirement at Highway 154* and Alisal Bridges**	Period of Flow	Purpose of Flow
48 cfs	02/15 to 4/14	Spawning
20 cfs	04/15 to 06/01	Incubation and Rearing
25 cfs	06/02 to 06/09	Emigration

¹³ These are referred to as Table 1 flows in Order WR 2019-0148. These are the same flow requirements under a 2000 Biological Opinion by NMFS.

¹⁴ Referred to as Table 2 flows in Order WR 2019-0148.

Minimum Flow Requirement at Highway 154* and Alisal Bridges**	Period of Flow	Purpose of Flow
	Ramp down to 10 cfs by 6/30	
10 cfs	06/30 to 10/01	Rearing and Resident Fish Maintenance
5 cfs	10/01 to 02/15	Resident Fish

Water years are the period October 1st through September 30th.

Source: Table 2 in Order WR 2019-0148.

Notes:

* Order WR 2019-0148 also refers to Highway 154 as "San Lucas Bridge".

** These flows may be met with both natural stream flow and releases from Bradbury Dam.

The cycle for evaluating which set of flow requirements is in effect starts on February 15th of each year. If the cumulative inflow for the current WY is less than 33,707 AF lower instream flows (Table 7) are used, else if flows greater than 33,707 AF have occurred, the higher instream flow requirements are used (Table 8). A move to the higher instream flow requirements (Table 8) are triggered to begin once cumulative Lake Cachuma inflow for the WY (beginning October 1) first reaches 33,707 AF. Once higher instream flow requirements are triggered in a given WY, they continue until February 15th of the following WY, at which point the cycle restarts.

In most years the Lower Flow Requirements are in force, and this supports surface flow extending from Bradbury Dam to the Alisal Bridge, the in the EMA portion of the Santa Ynez River. In the wetter year types, there is more water and the Higher Instream Flow Requirements are in force, supporting surface flow for the fish into the CMA portion of the Santa Ynez River as well.

FISH PASSAGE SUPPLEMENTATION RELEASES

In addition to the baseflow requirements, a second concern is the migration of fish through the Santa Ynez River including anadromous fish that spent part of their lifecycle in the ocean. These fish need periods of sufficient surface flows to navigate the entire river. However, absent Bradbury Dam, these sporadic but important flows would only naturally occur during the wetter years during storm events.

To account for these sporadic flows, in Wet and Above Normal WYs Reclamation has additional release requirements in addition to what is necessary to meet the instream flows. During these years, Order WR 2019-0148 requires Reclamation to ensure at least fourteen continuous days of flow greater than 25 cfs at the Solvang gage. These fish passage supplementation releases typically occur during storm events.

SUMMARY OF LAKE CACHUMA RELEASES ON MANAGEMENT AREAS

The following table, **Table 9**, summarizes how Lake Cachuma releases, both water rights and fish water releases, affect each of the SGMA management areas.

Table 9 Summary of Lake Cachuma releases on Santa Ynez River Valley Groundwater Basin Groundwater Sustainability Agencies Areas

GSA	Concern	Details
	Geologic and Hydrogeologic Setting	River alluvium is within a known and defined channel. Bedrock between river alluvium and groundwater aquifer.
	ANA Water Rights Releases	ANA releases benefit surface water users along river.
	BNA Water Rights Releases	Outside of BNA area of benefit.
	Instream Flow Releases	Primary area of benefit for fish habitat.
	Primary Benefit	Benefits to surface water users and uses. Maintenance of surface flow and habitat via recharge to underflow alluvial storage (part of the surface water system).
	Geologic and Hydrogeologic Setting	River alluvium is within a known and defined channel. Below Buellton Bend: bedrock between river alluvium and groundwater aquifer; above: Buellton Aquifer is below alluvium.
	ANA Water Rights Releases	ANA releases benefit surface water users along river.
	BNA Water Rights Releases	Outside of BNA area of benefits.
	Instream Flow Releases	Benefit for fish habitat in Wet and Above Normal WY. Benefits from fish passage supplementation releases.
	Primary Benefits	Benefits to surface water users and uses. Maintenance of surface flow and habitat, recharge to underflow alluvial storage (part of the surface water system).
	Geologic and Hydrogeologic Setting	Upstream of Lompoc Narrows: River alluvium is within a known and defined channel. Bedrock between river alluvium and groundwater aquifer. Below Lompoc Narrows: River recharges the WMA Upper Aquifer.
	ANA Water Rights Releases	Upstream of Lompoc Narrows: ANA releases benefit surface water users.
	BNA Water Rights Releases	Below Lompoc Narrows: BNA releases for benefit of users including recharge to the WMA Upper Aquifer.
	Instream Flow Releases	Limited benefits. Some fish passage supplementation releases.
	Primary Benefit	Upstream of Lompoc Narrows: Surface water users and uses. Below Lompoc Narrows: Recharges the WMA Upper Aquifer through BNA water rights.

CONCLUSION

The Lake Cachuma releases that the GSAs can currently influence alone will not be sufficient to “effectively regulate” the Basin’s water. The GSAs do not directly regulate or manage releases from Lake Cachuma or other upstream operations. Certain member agencies of the GSAs have their own authorities to act or advocate on water rights, but these agencies ultimately act independently of the GSAs.

A majority of the precipitation of the Santa Ynez River Watershed is captured by the reservoirs on the Santa Ynez River, primarily by Lake Cachuma. Water is stored in these upstream reservoirs and exported through tunnel diversions for users in other watersheds. On average the amount of water that is lost to the basin through evaporations and tunnel diversions is roughly 47,000 AFY on average. This loss due to exports and evaporation is approximately 44% of all the water that flows through Lake Cachuma. The SGMA Joint Annual Report for Water Year 2024 indicated that total groundwater use in the Basin is about 39,000 AFY.¹⁵ The amount of water that diverted or evaporated from the Santa Ynez Watershed is more than all of the groundwater used in the Basin. If this Santa Ynez Watershed water was made available and used for recharge projects, it could offset all current groundwater pumping in the Santa Ynez River Groundwater Basin. In the big picture view of the Basin and Watershed, Lake Cachuma and its releases are the most important factors in the water system, both surface water and groundwater.

The direct influence of groundwater pumping on flows in the Santa Ynez River is limited upstream of the Lompoc Narrows. Consequently, changes in Lake Cachuma release schedules have minimal direct effects on the underlying groundwater aquifers in these reaches. The underflow of the Santa Ynez River occurs within a known and definite subterranean channel that is often hydraulically separated from the principal groundwater aquifers by substantial bedrock deposits. As a result, streamflow consists primarily of surface-water releases from Lake Cachuma and local tributary flows rather than groundwater contributions. Because of this limited hydraulic connection, groundwater pumping has relatively little potential to cause streamflow depletion upstream of the Narrows. Nevertheless, Lake Cachuma releases remain critical for maintaining riverine habitat and supporting aquatic species that depend on perennial flows. In addition, these releases provide recharge and groundwater-storage benefits within the shallow alluvial deposits that form part of the river's subterranean channel.

Releases from Lake Cachuma may help offset potential indirect effects of groundwater pumping on surface-water flows in upland tributaries and in the reach downstream of the Lompoc

¹⁵ Joint Table 4-1 WY 2024 Groundwater Extraction Data, by GSA, in Acre-Feet in Stetson and GSI (2025) SGMA Joint Annual Report, Water Year 2024. Santa Ynez River Valley Groundwater Basin.

Note: as most groundwater use results in return flows, which are not lost to the Basin, exports and evaporation mean a greater local impact.

Narrows, although the magnitude of these effects remains uncertain and represents an identified data gap. To address this uncertainty, the GSAs are installing shallow piezometers in tributaries and additional streamflow gages to improve understanding of groundwater–surface water interactions. While interconnected surface water depletion is the primary surface-water concern under SGMA, the available evidence suggests that the magnitude of such depletions is relatively small compared to other river outflows, including tunnel diversions, evaporation losses, and pumping from the river underflow system.

By reviewing the Santa Ynez River flows upstream and downstream of Lake Cachuma and the related operations, the GSAs highlight the complex surface water management and the limits of the GSAs' authority. While the GSAs continue to work to prevent overdraft, they do not directly regulate or manage releases from Lake Cachuma or other upstream operations. Although the GSAs do not control releases, they may coordinate with and request actions from the SYRWCD that manages water rights releases. Certain member agencies of the GSAs have their own authorities to act or advocate on water rights, but the GSAs understand that the agencies act independently of the GSAs.

The GSAs considered the potential for significant surface water depletions to occur and/or declining groundwater levels (indicative of potential lowering of the water table and thus driving surface water depletions). To address this potential, the WMA and CMA GSAs identified Lake Cachuma releases as a Project and Management Action (PMA) in the GSP. The accounts associated with these water rights already supplement Santa Ynez River flow, especially important during drought. These releases could potentially be increased if the groundwater levels are lowered, and if the GSAs determine it is appropriate to request releases to help mitigate surface water depletions caused by groundwater pumping. This pursuit would include requesting the SYRWCD to release additional water from these accounts if it is available. The status of the PMA is discussed in the WMA and CMA Periodic Evaluation.

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Section 7 – Undesirable Results and Sustainable Management Criteria

Appendix 7-A:

Groundwater Quality, Review of Sustainable Management Criteria and Selection Methodology

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**APPENDIX 7-A:
GROUNDWATER QUALITY,
REVIEW OF SUSTAINABLE MANAGEMENT CRITERIA AND
SELECTION METHODOLOGY**



This appendix includes a detailed discussion of the water quality constituents and concentrations identified for the Santa Ynez River Valley Groundwater Basin Central Management Area Groundwater Sustainability Agency (“CMA GSA”) to assess water quality sustainability in the Central Management Area (“CMA”). This is to specifically and directly address the Recommended Corrective Actions (“RCAs”) request 5.d:

Clearly convey the minimum threshold values for each representative monitoring well including explaining which methodology was used (i.e., WQO, MCL, current conditions) to derive the minimum threshold values. The GSAs should also provide more detail regarding how average concentrations (i.e., between 2015 and 2018), January 2015 baseline conditions, and “current conditions” were derived. The GSAs should compile this information – including the minimum thresholds; measurable objectives; and interim milestones – for each well in a tabular format indicating the minimum threshold value and any comparative averages and baseline conditions for the entire Basin.

Recommended Corrective Action 5. d. from GSP Assessment Staff Report, Santa Ynez River Valley Basin (No. 3-015), attachment to DWR (2024) Statement of Findings regarding the Approval of the Santa Ynez River Valley Basin Groundwater Sustainability Plan.

The appendix evaluates wells with criteria set in the 2022 Groundwater Sustainability Plan (“GSP”) and sets criteria for new wells identified in the Periodic Evaluation. New wells are indicated by bold font.

SUSTAINABLE MANAGEMENT CRITERIA METHODOLOGY

The ultimate methodology for all values used in evaluating sustainability in the basin is the deliberation and approval of the CMA GSA's Board of Directors following the local governance structure identified in the GSP (see GSP Section 1b.1-2). This includes minimum threshold values and any other comparison values used for the management of the basin.

This appendix identifies how these values relate to other criteria, and additional details for calculations used to summarize basin conditions. This information was presented in the CMA GSP as follows:

"With the exception of total dissolved solids and nitrate, the minimum thresholds applied to groundwater quality within the Buellton Upland are the Median Groundwater Quality Objectives from the CCWQCP. The minimum thresholds are the SMCL and MCL for total dissolved and nitrate, respectively (Section 3b.2-4)."

CMA 2022 GSP, Section 3b.3-4 Degraded Water Quality – Minimum Thresholds

The CMA GSP identified minimum thresholds ("MT"), measurable objectives ("MO"), and interim milestones (at 5 years (2027), 10 years (2032), and 15 years (2037)) for the assessment of groundwater quality. **Table 7-A-1** summarizes the constituents and concentrations identified for the CMA GSA to assess water quality sustainability.

Table 7-A-1
SGMA Assessment Criteria for Water Quality in the CMA GSA

Constituent	Minimum Thresholds (mg/L)	MT Reference	Measurable Objectives (mg/L)	Interim Milestones (mg/L)		
				5-year (2027)	10-year (2032)	15-year (2037)
Salinity as Total Dissolved Solids (TDS)	1,000	SMCL	1,000	1,000	1,000	1,000
Chloride (Cl)	150	WQO	150	150	150	150
Sulfate (SO ₄)	700	WQO	700	700	700	700
Sodium (Na)	100	WQO	100	100	100	100
Nitrate (N)	10	MCL	10	10	10	10

SMCL = Upper Secondary Maximum Contaminant Limit for Consumer Acceptance Contaminant Levels (see 22 CCR § 64449)

WQO = Water Quality Objective established in the Water Quality Control Plan for the Central Coastal Basin ("2019 Basin Plan")

MCL = Maximum Contaminant Limit for Consumer Acceptance Contaminant Levels (see 22 CCR § 64431).

AVERAGING METHODOLOGY

To represent the water quality conditions in the basin, the 2022 CMA GSP described the conditions within the basin in several ways.

Appendix 3b-C: Time Series Graphs for Assessing Degraded Groundwater Quality, Central Management Area

This 2022 CMA GSP appendix includes concentration time series graphs of groundwater quality for the representative wells in the monitoring network for degraded water quality as well as the established sustainable management criteria of the measurable objective, early warning, and minimum threshold. Organization is first by constituent, then by subarea, and then west to east within each subarea. Key reference criteria for each well and constituent were also posted to the graphs, and the entire period of record was included.

Section 2b.3-4: Groundwater Condition, Current Groundwater Quality (2015-2018)

This 2022 CMA GSP section provides both the range of values (maximum and minimum) for each constituent and an overall average for each of the subareas for the period 2015-2018. An average for each subarea was also calculated for these constituents: the simple arithmetic mean of concentrations for of each well with data was first calculated, and the average for each subarea was the mean of the well means. The following two formulas represent this:

Average concentration at each well, for the period was calculated as a simple arithmetic mean:

$$u_i = \frac{\sum_{j=1}^{n_i} x_{ij}}{n_i}$$

Where:

- i indexes the individual well
- j indexes the data points at the well

- n_i is the number of data points at the well i .
- The selected water quality constituents did not have non-numerical results (i.e. non-detect, or below detection limit) that would need additional interpretation.

The average for each subarea was calculated by the simple arithmetic mean of the wells within the subarea:

$$u = \frac{\sum_{i=1}^N u_i}{N}$$

Where:

- N is the number of wells in the subarea.

This approach was used as it was relatively simple calculation and deemed sufficient for a general characterization of a subarea, given the number of measurements that were available.

Section 3b.2-4 Sustainable Management Criteria, Degradation of Water Quality – Undesirable Results

This section provided, for each well, the range of concentration observed, and the most recent. The range was included as a more informative statistical indicator than average. The overall subarea concentration averages (as calculated for the groundwater conditions section) were also included in a separate table.

SALINITY

Salinity, as measured by total dissolved solids (“TDS”), is the dry mass of constituents dissolved in each volume of water. As described in the 2022 CMA GSP (Section 3b.2-4-2-1), the California SMCL¹ was selected as the minimum threshold value for all wells in the CMA GSA for the TDS constituent. **Table 7-A-3** identifies the TDS MT and related reference value for each well. As shown in this table, the salinity SMCs are based on SMCL.

CHLORIDE

Chloride (Cl^-) is a mineral anion and a major water-quality constituent in natural systems. Chloride is characteristically retained in a solution through most of the processes that tend to separate other ions. The circulation of chloride ions in the hydrologic cycle is through physical processes. **Table 7-A-4** identifies the chloride MT and related reference value for each well. As shown in this table, the chloride SMCs are based on the 2019 Basin Plan WQO.

SULFATE

Sulfate (SO_4^{2-}) is a naturally occurring anion and a major water quality constituent. **Table 7-A-5** identifies the sulfate MT and related reference value for each well. As shown in this table, the sulfate SMCs are based on the 2019 Basin Plan WQO.

SODIUM

Sodium (Na^+) is a mineral cation and a major water-quality constituent in natural systems. The 2019 Central Coast Basin Plan indicates the primary concern for sodium in irrigation water is the sodium absorption ratio (“SAR”). The SAR is the relative concentration of sodium to calcium and magnesium and is managed to maintain soil permeability. **Table 7-A-6** identifies the sodium MT and related reference value for each well. As shown in this table, the sodium SMCs are based on the 2019 Basin Plan WQO.

¹ 22 CCR § 64449 Secondary Maximum Contaminant Levels and Compliance

NITROGEN

Nitrogen is the primary atmospheric gas, however, its presence in water is related to the breakdown of organic waste. Total nitrogen in groundwater is the sum of organic nitrogen and the three inorganic forms: nitrate (NO_3^-), nitrite (NO_2^-), and ammonia (NH_3). Nitrate concentrations are reported either as nitrate (the full mass of the nitrate anion) or as nitrogen (the mass of the Nitrogen). In some cases, a combined nitrate-nitrite as nitrogen is reported. **Table 7-A-7** identifies the nitrate minimum threshold and related reference value at each well. As shown in this table, the nitrogen SMCs are based on MCL.

Table 7-A-2
Salinity as Total Dissolved Solids (TDS) in mg/L

DMS ID	Well ID	2026 Evaluation	Sustainable Management Criteria			Interim Milestones (mg/L)			Comparative Average (2015-2018)
			MT	MT Reference	MO	5-year (2027)	5-year (2027)	5-year (2027)	
Buellton Aquifer – Buellton Upland Subarea									
3337	AGL020014946	Not viable	1,000	SMCL	1,000	1,000	1,000	1,000	473
3220	AGL020036041	Not viable	1,000	SMCL	1,000	1,000	1,000	1,000	n/a
3173	AGL020021622	Viable	1,000	SMCL	1,000	1,000	1,000	1,000	310
3137	AGL020001355	Viable	1,000	SMCL	1,000	1,000	1,000	1,000	180
3139	AGL020028450	Not viable	1,000	SMCL	1,000	1,000	1,000	1,000	425
3179	AGL020023902	New	1,000	SMCL	1,000	1,000	1,000	1,000	380*
3006	AGL020003347	New	1,000	SMCL	1,000	1,000	1,000	1,000	407*
3252	AGL020003230	New	1,000	SMCL	1,000	1,000	1,000	1,000	609*
1401	Bobcat Springs Mutal Partner Well	New	1,000	SMCL	1,000	1,000	1,000	1,000	880*
1405	Bobcat Springs Mutual Well #5	New	1,000	SMCL	1,000	1,000	1,000	1,000	220*

DMS ID	Well ID	2026 Evaluation	Sustainable Management Criteria			Interim Milestones (mg/L)			Comparative Average (2015-2018)
			MT	MT Reference	MO	5-year (2027)	5-year (2027)	5-year (2027)	
Buellton Aquifer – Santa Ynez River Alluvium Subarea									
909	Buellton Well 09	Viable	1,000	SMCL	1,000	1,000	1,000	1,000	1050
3076	AGL020008330	Not viable	1,000	SMCL	1,000	1,000	1,000	1,000	970
-	Brick Barn Estate Winery Well #2 (CA4200970_002_002)	New	1,000	SMCL	1,000	1,000	1,000	1,000	380*

Notes: All concentrations are mg/L, n/a = not assessed, MT = Minimum Threshold,

TDS = Total Dissolved Solids

SMCL = Upper Secondary Maximum Contaminant Limit for Consumer Acceptance Contaminant Levels (see 22 CCR § 64449)

New wells indicated by bold font

Grey fill indicates wells no longer viable for this constituent.

*For new wells, data from 2010-2024 due to limits of data availability. Data from the Irrigated Lands Regulatory Program, Safe Drinking Water Information System, and USGS wells.

Table 7-A-3
Chloride (Cl) in mg/L

DMS ID	Well ID	2026 Evaluation	Sustainable Management Criteria			Interim Milestones (mg/L)			Comparative Average (2015-2018)
			MT	MT Reference	MO	5-year (2027)	5-year (2027)	5-year (2027)	
Buellton Aquifer – Buellton Upland Subarea									
3337	AGL020014946	Not viable	150	WQO	150	150	150	150	51
3220	AGL020036041	Not viable	150	WQO	150	150	150	150	n/a
3173	AGL020021622	Not viable	150	WQO	150	150	150	150	56
3137	AGL020001355	Not viable	150	WQO	150	150	150	150	32
3139	AGL020028450	Not viable	150	WQO	150	150	150	150	70
3179	AGL020023902	New	150	-	-	-	-	-	-
3006	AGL020003347	New	150	-	-	-	-	-	-
3252	AGL020003230	New	150	-	-	-	-	-	-
1401	Bobcat Springs Mutal Partner Well	New	150	WQO	150	150	150	150	89*
1405	Bobcat Springs Mutual Well #5	New	150	WQO	150	150	150	150	27*

DMS ID	Well ID	2026 Evaluation	Sustainable Management Criteria			Interim Milestones (mg/L)			Comparative Average (2015-2018)
			MT	MT Reference	MO	5-year (2027)	5-year (2027)	5-year (2027)	
Buellton Aquifer – Santa Ynez River Alluvium Subarea									
909	Buellton Well 09	Viable	150	WQO	150	150	150	150	100
3076	AGL020008330	Not viable	150	WQO	150	150	150	150	132
-	Brick Barn Estate Winery Well #2 (CA4200970_002_002)	New	150	WQO	150	150	150	150	50*

Notes: All concentrations are mg/L, n/a = not assessed, MT = Minimum Threshold,
Cl = Chloride

WQO = Water Quality Objective established in the Water Quality Control Plan for the Central Coastal Basin

New wells indicated by bold font

Grey fill indicates wells no longer viable for this constituent.

*For new wells, data from 2010-2024 due to limits of data availability. Data from the Irrigated Lands Regulatory Program, Safe Drinking Water Information System, and USGS wells.

Table 7-A-4
Sulfate (SO₄) in mg/L

DMS ID	Well ID	2026 Evaluation	Sustainable Management Criteria			Interim Milestones (mg/L)			Comparative Average (2015-2018)
			MT	MT Reference	MO	5-year (2027)	5-year (2027)	5-year (2027)	
Buellton Aquifer – Buellton Upland Subarea									
3337	AGL020014946	Not viable	700	WQO	700	700	700	700	139
3220	AGL020036041	Not viable	700	WQO	700	700	700	700	n/a
3173	AGL020021622	Not viable	700	WQO	700	700	700	700	62
3137	AGL020001355	Not viable	700	WQO	700	700	700	700	14
3139	AGL020028450	Not viable	700	WQO	700	700	700	700	64
3179	AGL020023902	New	700	WQO	-	-	-	-	-
3006	AGL020003347	New	700	WQO	-	-	-	-	-
3252	AGL020003230	New	700	WQO	-	-	-	-	-
1401	Bobcat Springs Mutal Partner Well	New	700	WQO	700	700	700	700	335*
1405	Bobcat Springs Mutual Well #5	New	700	WQO	700	700	700	700	20*

DMS ID	Well ID	2026 Evaluation	Sustainable Management Criteria			Interim Milestones (mg/L)			Comparative Average (2015-2018)
			MT	MT Reference	MO	5-year (2027)	5-year (2027)	5-year (2027)	
Buellton Aquifer – Santa Ynez River Alluvium Subarea									
909	Buellton Well 09	Viable	700	WQO	700	700	700	700	350
3076	AGL020008330	Not viable	700	WQO	700	700	700	700	210
-	Brick Barn Estate Winery Well #2 (CA4200970_002_002)	New	700	WQO	700	700	700	700	66*

Notes: All concentrations are mg/L, n/a = not assessed, MT = Minimum Threshold,
SO₄ = Sulfate

WQO = Water Quality Objective established in the Water Quality Control Plan for the Central Coastal Basin

New wells indicated by bold font

Grey fill indicates wells no longer viable for this constituent.

*For new wells, data from 2010-2024 due to limits of data availability. Data from the Irrigated Lands Regulatory Program, Safe Drinking Water Information System, and USGS wells.

Table 7-A-5
Sodium (Na) in mg/L

DMS ID	Well ID	2026 Evaluation	Sustainable Management Criteria			Interim Milestones (mg/L)			Comparative Average (2015-2018)
			MT	MT Reference	MO	5-year (2027)	5-year (2027)	5-year (2027)	
Buellton Aquifer – Buellton Upland Subarea									
3337	AGL020014946	Not viable	100	WQO	100	100	100	100	40
3220	AGL020036041	Not viable	100	WQO	100	100	100	100	n/a
3173	AGL020021622	Not viable	100	WQO	100	100	100	100	39
3137	AGL020001355	Not viable	100	WQO	100	100	100	100	31
3139	AGL020028450	Not viable	100	WQO	100	100	100	100	45
3179	AGL020023902	New	100	WQO	-	-	-	-	-
3006	AGL020003347	New	100	WQO	-	-	-	-	-
3252	AGL020003230	New	100	WQO	-	-	-	-	-
1401	Bobcat Springs Mutal Partner Well	New	100	WQO	100	100	100	100	84*
1405	Bobcat Springs Mutual Well #5	New	100	WQO	100	100	100	100	31*

DMS ID	Well ID	2026 Evaluation	Sustainable Management Criteria			Interim Milestones (mg/L)			Comparative Average (2015-2018)
			MT	MT Reference	MO	5-year (2027)	5-year (2027)	5-year (2027)	
Buellton Aquifer – Santa Ynez River Alluvium Subarea									
909	Buellton Well 09	Viable	100	WQO	100	100	100	100	91
3076	AGL020008330	Not viable	100	WQO	100	100	100	100	79
-	Brick Barn Estate Winery Well #2 (CA4200970_002_002)	New	100	WQO	100	100	100	100	41*

Notes: All concentrations are mg/L, n/a = not assessed, MT = Minimum Threshold,

Na = Sodium

WQO = Water Quality Objective established in the Water Quality Control Plan for the Central Coastal Basin

New wells indicated by bold font

Grey fill indicates wells no longer viable for this constituent.

*For new wells, data from 2010-2024 due to limits of data availability. Data from the Irrigated Lands Regulatory Program, Safe Drinking Water Information System, and USGS wells.

Table 7-A-6
Nitrate as Nitrogen (NO_3 as N) in mg/L

DMS ID	Well ID	2026 Evaluation	Sustainable Management Criteria			Interim Milestones (mg/L)			Comparative Average (2015-2018)
			MT	MT Reference	MO	5-year (2027)	5-year (2027)	5-year (2027)	
Buellton Aquifer – Buellton Upland Subarea									
3337	AGL020014946	Not viable	10	MCL	10	10	10	10	3.33
3220	AGL020036041	Not viable	10	MCL	10	10	10	10	n/a
3173	AGL020021622	Viable	10	MCL	10	10	10	10	3.43
3137	AGL020001355	Viable	10	MCL	10	10	10	10	2.50
3139	AGL020028450	Not viable	10	MCL	10	10	10	10	1.60
3179	AGL020023902	New	10	MCL	10	10	10	10	5.24*
3006	AGL020003347	New	10	MCL	10	10	10	10	0.9*
3252	AGL020003230	New	10	MCL	10	10	10	10	1.21*
1401	Bobcat Springs Mutal Partner Well	New	10	MCL	10	10	10	10	0.38*
1405	Bobcat Springs Mutual Well #5	New	10	MCL	10	10	10	10	0.16*

DMS ID	Well ID	2026 Evaluation	Sustainable Management Criteria			Interim Milestones (mg/L)			Comparative Average (2015-2018)
			MT	MT Reference	MO	5-year (2027)	5-year (2027)	5-year (2027)	
Buellton Aquifer – Santa Ynez River Alluvium Subarea									
909	Buellton Well 09	Viable	10	MCL	10	10	10	10	2.89
3076	AGL020008330	Not viable	10	MCL	10	10	10	10	1.24
-	Brick Barn Estate Winery Well #2 (CA4200970_002_002)	Not viable	10	MCL	10	10	10	10	3*

Notes: All concentrations are mg/L, n/a = not assessed, MT = Minimum Threshold,

NO₃ as N = Nitrate as Nitrogen

MCL = Maximum Contaminant Limit for Consumer Acceptance Contaminant Levels (see 22 CCR § 64431)

New wells indicated by bold font

Grey fill indicates wells no longer viable for this constituent.

*For new wells, data from 2010-2024 due to limits of data availability. Data from the Irrigated Lands Regulatory Program, Safe Drinking Water Information System, and USGS wells.

Section 7 – Undesirable Results and Sustainable Management Criteria

Appendix 7-B:

New Representative Monitoring Wells Assessing Surface Water Depletion

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APPENDIX 7-B:

**GROUNDWATER LEVEL HYDROGRAPHS
FOR NEW WELLS ASSESSING
SURFACE WATER DEPLETION,
CENTRAL MANAGEMENT AREA
THROUGH WATER YEAR 2025**



This appendix includes hydrographs, which are graphs of water levels in the new (added) wells. These are the added representative wells for monitoring potential surface water depletion. As per the SGMA regulations, this includes the period from January 1, 2015 through the end of the Water Year 2025. Shown on these graphs are key SGMA criteria: measurable objective, early warning, and minimum threshold.

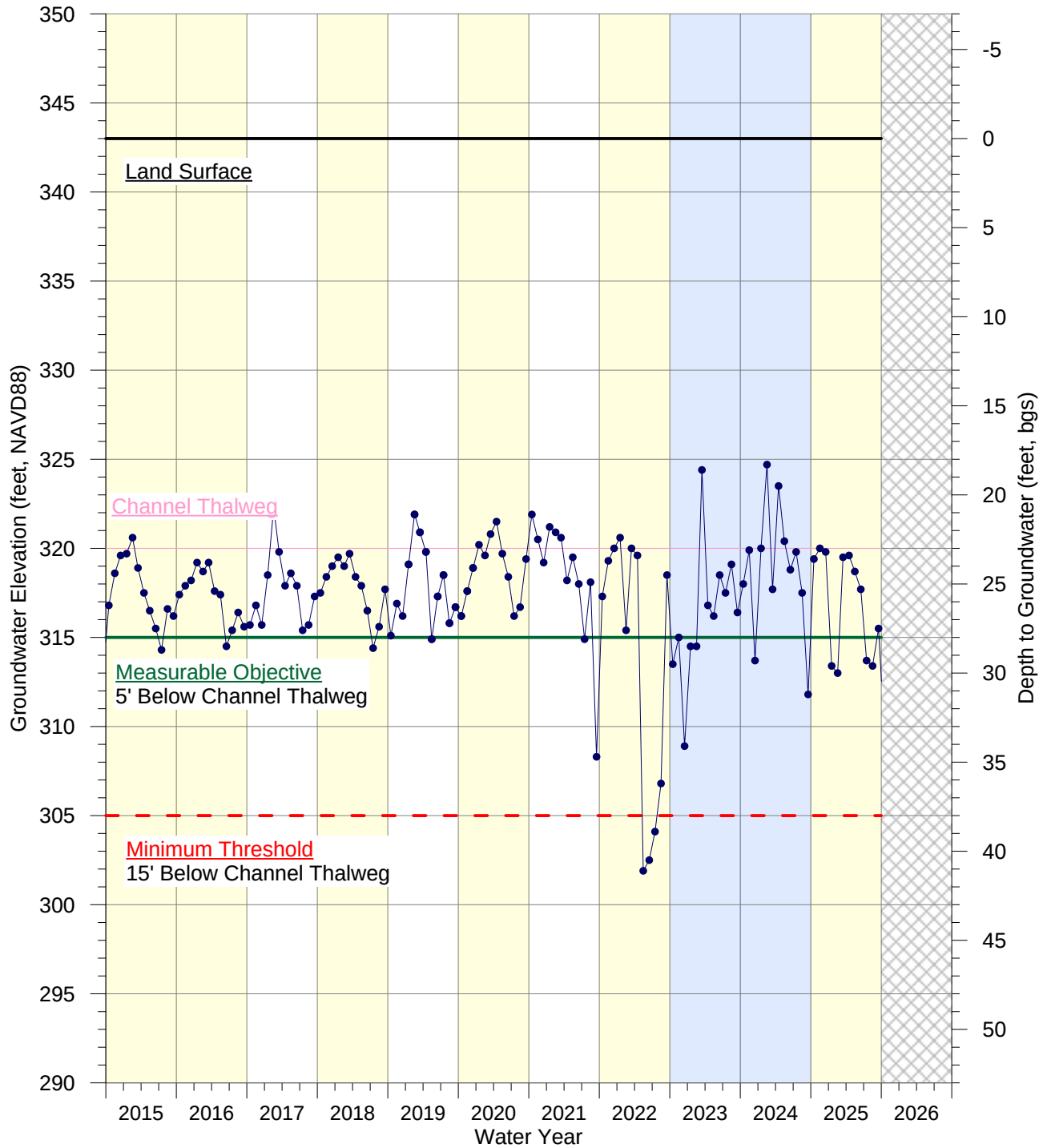
The Groundwater Sustainability Plan (GSP) includes hydrographs of the long-term period of record. A copy of the GSP, water level data and hydrographs are available at <https://sywater.info>.



LIST OF ACRONYMS AND ABBREVIATIONS

BGS	below-ground surface
CASGEM	California Statewide Groundwater Elevation Monitoring
CMA	Central Management Area
FT	feet
NAVD88	North American Vertical Datum of 1988
USBR	United States Bureau of Reclamation
USGS	United States Geologic Survey
WL	Water Level

**CMA Representative Monitoring Well for
Interconnected Surface Water and Groundwater Dependent Ecosystems
6N/31W-17D1 (USBR Node 16)**



— Land Surface (343.0 feet above mean sea level) ●—●—● US Bureau of Reclamation

— Depth of Well (68 feet); Perforations 15-68 feet

DBID
1113

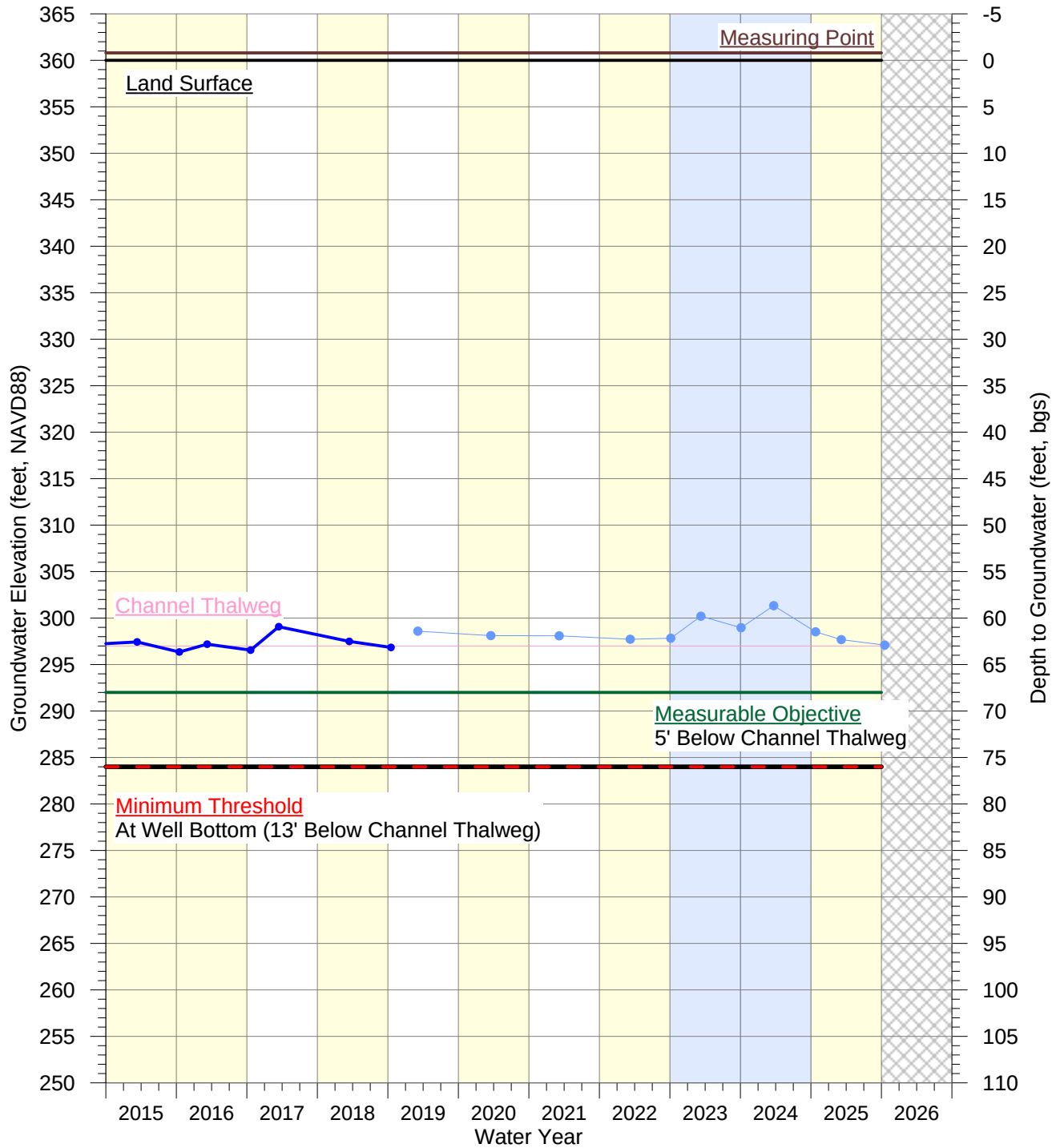


**NEW REPRESENTATIVE
MONITORING WELL
ASSESSING SURFACE WATER
DEPLETION**

Water Year Type (1942-2025)

Wet	No Data
Above/Below Normal	
Dry / Critically Dry	

**CMA Representative Monitoring Well for
Interconnected Surface Water and Groundwater Dependent Ecosystems
6N/32W-2Q1**



- Measuring Point (360.8 feet above mean sea level)
- Land Surface (360.0 feet above mean sea level)
- Depth of Well (76 feet); Perforations TBD
- USGS (343719120124901)
- County of Santa Barbara

DBID
91



**NEW REPRESENTATIVE
MONITORING WELL
ASSESSING SURFACE WATER
DEPLETION**

Water Year Type (1942-2025)

- Wet
- No Data
- Above/Below Normal
- Dry / Critically Dry

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Section 8 –GSA Authorities and Enforcement Actions

Appendix 8-A:

Joint Exercise of Powers Agreement Santa Ynez River Valley
Basin Central Management Area Groundwater Sustainability
Agency. September 25, 2023

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**JOINT EXERCISE OF POWERS AGREEMENT
SANTA YNEZ RIVER VALLEY BASIN CENTRAL MANAGEMENT AREA
GROUNDWATER SUSTAINABILITY AGENCY**

This Joint Exercise of Powers Agreement ("Agreement") is made and entered into this 28th day of Nov. 2023 by and between the City of Buellton ("Buellton"); Santa Ynez River Water Conservation District ("SYRWCD" or "District"), and the Santa Barbara County Water Agency ("Santa Barbara"), also each referred to individually as "Member" and collectively as "Members," for the purposes of forming a joint powers agency to serve as the Groundwater Sustainability Agency for the Central Management Area of the Santa Ynez River Valley Groundwater Basin. This joint powers agency shall hereinafter be known as the Santa Ynez River Valley Groundwater Basin Central Management Area Groundwater Sustainability Agency ("CMA GSA" or "GSA").

RECITALS

THIS AGREEMENT is made with reference to the following facts:

A. WHEREAS, the Sustainable Groundwater Management Act of 2014 ("SGMA"), including but not limited to Water Code section 10720 et seq., requires Groundwater Sustainability Agencies ("GSAs") to manage medium and high priority groundwater basins throughout the state through the adoption and implementation of Groundwater Sustainability Plans ("GSPs"). SGMA defines "basin" as a basin or sub-basin identified and defined in Bulletin 118, a publication of the California Department of Water Resources ("DWR").

B. WHEREAS, the Santa Ynez River Valley Groundwater Basin (also referred to as the "Santa Ynez Groundwater Basin" or "Basin"), identified and defined by DWR in Bulletin 118 as Basin 3-15, has been designated by DWR as a medium priority basin.

C. WHEREAS, Bulletin 118 describes the Basin as being in three portions, the eastern, central, and western. The western portion consists of the Lompoc Plain, Lompoc Terrace, and Lompoc Upland; the central portion consists of the Buellton Upland, and the eastern portion consists of the Santa Ynez Uplands. For the purpose of implementing SGMA, each portion of the Basin as described by DWR has been designated as a separate "Management Area" as authorized by SGMA, where the three Management Areas cover the entire Basin defined by Bulletin 118.

D. WHEREAS, for purposes of administering its groundwater usage program and other water management functions, the District also generally recognizes these hydrogeologic units.

E. WHEREAS, the map attached hereto as Exhibit A depicts the boundaries of the three Management Areas of the Basin.

F. WHEREAS, in 2016, local public agencies eligible to form a GSA or GSAs in the Basin determined that a separate GSA would be formed for each Management

Area of the Basin (see Memorandum of Understanding for Implementation of the Sustainable Groundwater Management Act in the Santa Ynez River Valley Groundwater Basin, dated May 23, 2016).

G. WHEREAS, effective January 11, 2017, the Members entered into a "Memorandum of Agreement for Formation of a Groundwater Sustainability Agency for the Central Management Area in the Santa Ynez River Valley Groundwater Basin under the Sustainable Groundwater Management Act" ("2017 MOA"), which established the Members as the participating agencies of the CMA GSA created by the 2017 MOA.

H. WHEREAS, the District covers approximately 99.95% of the CMA including the City of Buellton and the Bobcat Springs Mutual Water Company. The Santa Barbara County Water Agency ("County Water Agency") covers the remaining 0.05% of the CMA that is not within the District. The City of Buellton, the District and the County Water Agency represent all of the public agencies (as defined by the Act) that are eligible to form a GSA in the CMA. The formation of the CMA GSA is supported by the following:

- a. The District has monitored groundwater production and groundwater storage in the Basin, including the CMA, since 1979.
- b. The District and the City of Buellton prepared a Groundwater Basin Management Plan for the CMA in October 1995. The plan was approved under AB 3030.
- c. Buellton practices conjunctive use during wet and dry periods between the Santa Ynez River channel and the CMA in coordination with the Districts' water rights releases under SWRCB Order 89-18.
- d. Areas of the CMA represented by the County Water Agency have "de minimis" groundwater production, if any, and represent less than 0.05% of the total Management Area. Therefore, the County Water Agency is not a voting Committee member of the CMA GSA and will not be a voting Director of the CMA GSA when reorganized as a JPA, nor will it have any financial responsibility for funding the GSA or GSP activities for the CMA, except for the cost of its staff participation in meetings.
- e. In addition to the consideration of the interests of groundwater users in the CMA GSA, the Santa Barbara County Planning and Development Department, Bob Cat Springs Mutual Water Company, and members of the agricultural community, have been invited to participate on the GSA's Advisory Committee.

I. WHEREAS, pursuant to separate Memoranda of Understanding, the local public agencies in the Eastern Management Area ("EMA") and the Western Management Area ("WMA") of the Basin, respectively, formed an EMA GSA and a WMA GSA in the Basin.

J. WHEREAS, effective February 26, 2020, the local public agencies

participating in the EMA GSA, the WMA GSA, and the CMA GSA entered into the "Intra-Basin Administrative Agreement for Implementation of the Sustainable Groundwater Management Act in the Santa Ynez River Valley Groundwater Basin."

K. WHEREAS, in accordance with Water Code section 10727.6 and California Code of Regulations, title 23, section 357.4, the EMA GSA, the WMA GSA, and the CMA GSA entered into the Santa Ynez River Valley Groundwater Basin Coordination Agreement, effective January 1, 2022.

L. WHEREAS, the CMA GSA formed under the 2017 MOA has already developed, adopted, and submitted a Groundwater Sustainability Plan ("GSP") for the CMA to DWR as required by SGMA.

M. WHEREAS, each of the Members is duly organized and existing under the laws of the State of California and is a local agency qualified to become or form a GSA under the SGMA for the CMA of the Basin.

N. WHEREAS, pursuant to SGMA, specifically Water Code section 10723.6, and the Joint Exercise of Powers Act, Government Code section 6500 et seq., the Members are authorized to create a joint powers agency to jointly exercise any power common to the Members together with such powers as are expressly set forth in the Joint Exercise of Powers Act and in SGMA.

O. WHEREAS, the Members hereby intend to reform the existing CMA GSA established under the 2017 MOU as a separate entity under the Joint Exercise of Powers Act in order to implement the CMA GSP and sustainably manage the CMA under SGMA and intend for the CMA GSA as a JPA to act as the successor of the CMA GSA as a MOA.

NOW, THEREFORE, in consideration of the terms, conditions, and covenants contained herein, the Members hereby agree as follows:

ARTICLE 1 INCORPORATION OF RECITALS

1.1 The foregoing recitals are true and correct and are incorporated herein by reference.

ARTICLE 2 DEFINITIONS

The following terms shall have the following meanings for purposes of this Agreement:

2.1 "Agreement" means this Joint Exercise of Powers Agreement reforming the Santa Ynez River Valley Groundwater Basin Central Management Area Groundwater

Sustainability Agency.

2.2 "Basin" means the Santa Ynez River Valley Groundwater Basin, as identified and defined by DWR in Bulletin 118 (as Basin 3-15) as of the Effective Date of this Agreement or as modified pursuant to Water Code section 10722.2.

2.3 "Bulletin 118" means DWR's report entitled "California Groundwater: Bulletin 118" updated in 2016 and 2020, and as it may be subsequently updated or revised in accordance with Water Code section 12924.

2.4 "Board of Directors" or "Board" means the governing body of the CMA GSA as established by Article 7 of this Agreement.

2.5 "CMA" means the Central Management Area of the Basin, as defined and depicted in the GSP for the CMA, as amended from time to time pursuant to SGMA.

2.6 "CMA GSA" or "GSA" means the Santa Ynez River Valley Groundwater Basin Central Management Area Groundwater Sustainability Agency, formed under the 2017 MOA and reformed as a separate joint powers authority through this Agreement.

2.7 "Director(s)" and "Alternate Director(s)" means a Director or Alternate Director appointed by a Member or appointed by the Directors representing the Members pursuant to Articles 7.2 and 7.3 of this Agreement.

2.8 "DWR" means the California Department of Water Resources.

2.9 "GSP" means a Groundwater Sustainability Plan, as defined by SGMA in Water Code section 10727 et seq.

2.10 "Joint Exercise of Powers Act" means Government Code section 6500 et seq., as amended from time to time.

2.11 "Member" or "Members" means an entity or the entities authorized by SGMA and other applicable law to participate in the CMA GSA as reformed by this Agreement and included in Article 6.1 of this Agreement, or any entity that becomes a new Member of the CMA GSA pursuant to Article 6.2 of this Agreement.

2.12 "Officer(s)" means the Chair, Vice Chair, Secretary, or Treasurer of the CMA GSA to be appointed by the Board of Directors pursuant to Article 8.2 of this Agreement.

2.13 "SGMA" means the Sustainable Groundwater Management Act, including but not limited to Water Code section 10720 et seq., as SGMA may be amended from

time to time.

2.14 "State" means the State of California.

2.15 "Voluntary Contribution" means a payment to the CMA GSA at the sole discretion of the payor that is neither a grant nor a direct Member payment made pursuant to Article 14.2(e).

ARTICLE 3 CREATION OF THE CMA GSA

3.1 Creation of a Joint Powers Agency. There is hereby created, pursuant to the Joint Exercise of Powers Act and SGMA, a joint powers agency, which is a public entity separate from the Members, and shall be known as the Santa Ynez River Valley Groundwater Basin Central Management Area Groundwater Sustainability Agency ("CMA GSA" or "GSA"). The boundaries of the CMA GSA shall be coterminous with the boundaries of the CMA portion of the Basin as established by the CMA GSP and depicted in Exhibit A attached hereto and incorporated herein by reference, which may be amended from time to time pursuant to SGMA. It is the intent of the Members that this Agreement reforms the GSA currently existing under the 2017 MOA as a separate and distinct legal entity. In addition, the CMA GSA as a JPA shall act as the successor to the MOA.

3.2 Notices. Within 30 days after the Effective Date, and after any amendment hereto, the GSA shall cause a notice of this Agreement to be prepared and filed with the office of the California Secretary of State containing the information required by Government Code section 6503.5. Within 30 days after the Effective Date, the GSA shall cause a statement of the information concerning the GSA, required by Government Code section 53051, to be filed with the office of the California Secretary of State and with the County Clerk for the County of Santa Barbara, setting forth the facts required to be stated pursuant to Government Code section 53051(a). Within 30 days after the Effective Date, the GSA shall inform DWR of the Members' decision and intent to undertake sustainable groundwater management within the CMA in accordance with Water Code section 10723.8 through this JPA.

3.3 Purpose of the CMA GSA. The purpose of the CMA GSA is to implement and comply with SGMA in the CMA portion of the Basin by serving as the CMA's GSA, implementing the GSP for the CMA, and coordinating with the EMA GSA and WMA GSA in sustainably managing the Basin pursuant to SGMA.

ARTICLE 4 TERM

4.1 This Agreement shall become effective on the last date on which all of the Members listed in Article 6.1 sign this Agreement ("Effective Date"), after which notices

shall be filed in accordance with Article 3.2. This Agreement shall remain in effect until terminated pursuant to the provisions of Article 16 of this Agreement.

ARTICLE 5 POWERS

5.1 The CMA GSA shall possess the common powers set forth in this Agreement together with such other powers as are expressly set forth in the Joint Exercise of Powers Act and in SGMA, subject to the limitations set forth therein.

5.2 For purposes of Government Code section 6509 and Water Code section 10730.6(d), the powers of the CMA GSA shall be exercised subject to the restrictions upon the manner of exercising such powers as are imposed, and in the event of the withdrawal of Santa Barbara as a Member under this Agreement the manner of exercising the GSA's powers shall be exercised subject to those restrictions imposed on Buellton.

5.3 The CMA GSA shall have all powers that a GSA is authorized to exercise as provided by SGMA, including without limitation the power to implement the GSP, update the GSP every 5-years, and meet the requirements set forth in the Intra-Basin Coordination Agreement.

5.4 The CMA GSA shall have the power to impose fees under SGMA to fund the CMA GSA and GSP implementation.

5.5 The CMA GSA shall have the following additional powers:

- a) To make and enter contracts, including contracts with its Members;
- b) To employ agents, attorneys, consultants, and employees or to contract for personnel to fulfill its mission and purpose;
- c) To lease, acquire, construct, manage, maintain, or operate any building, works or improvements;
- d) To lease, acquire, hold, or dispose of real or personal property;
- e) To borrow money, issue bonds, and incur debts, liabilities, or obligations for the purpose of paying all or any part of the costs of any other authorized activity of the GSA, which debts, liabilities, and obligations shall not constitute debts, liabilities, or obligations of any Members;
- f) To receive gifts, contributions, and donations of property, funds, services, and other forms of assistance from persons, firms, corporations, and

governmental entities, provided that the CMA GSA consents to such gifts, contributions, and donations;

- g) To fix the compensation, if any, paid to the Plan Manager, Secretary, Treasurer, and Legal Counsel, in compliance with all applicable laws;
- h) To prescribe the duties, compensation, and other terms and conditions of employment of other agents, officers, and employees;
- i) To adopt reasonable rules and regulations for the conduct of the day-to-day operations of the CMA GSA and other rules and regulations as permitted by SGMA;
- j) To apply for, accept, receive, and disburse grants, loans, and other aid from any agency of the United States of America or of the State of California;
- k) To sue and be sued in its own name;
- l) To invest money in the treasury, pursuant to Government Code section 6505.5, that is not required for the immediate necessities of the CMA GSA;
- m) To contract and pay compensation for professional, financial, and other services;
- n) To carry out and enforce all provisions of this Agreement;
- o) To exercise any power necessary or incidental to the foregoing powers.

ARTICLE 6 MEMBERSHIP

6.1 Members. The Members of the CMA GSA shall be:

- (a) City of Buellton;
- (b) Santa Ynez River Water Conservation District; and
- (c) Santa Barbara County Water Agency;

as long as they have not, pursuant to the provisions hereof, withdrawn from this Agreement.

6.2 New Members. Any entity authorized by SGMA and other applicable law to participate in the CMA GSA, that is not a Member on the Effective Date of this Agreement,

may become a Member upon all of the following:

- (a) The approval of the Board of Directors as specified in Article 12.3;
- (b) Amendment of the Agreement in accordance with Article 18.2; and
- (c) Payment by the new Member of a pro rata share of all previously incurred costs that the Board of Directors determines are appropriate for assessment on the new Member.

ARTICLE 7 BOARD OF DIRECTORS

7.1 Formation of the Board of Directors. The CMA GSA shall be governed by a Board of Directors ("Board"). Directors shall include one representative from each of the Members identified in Article 6.1.

7.2 Appointment of Directors. Directors shall be appointed by the represented Member's governing body. Each Director representing a Member shall be an elected official or member of management of the appointing Member.

7.3 Alternate Directors. Each Director shall have one Alternate Director to act as a substitute Director for that Director in his or her absence. All Alternate Directors shall be appointed in the same manner as set forth in Article 7.2. Alternate Directors shall not vote or participate in any deliberations of the Board unless appearing as a substitute for a Director due to absence or conflict of interest. If a Director is not present, or if a Director has a conflict of interest which precludes participation by the Director in any decision-making process of the Board, the Alternate Director appointed to act in his/her place shall assume all roles of the Director, and shall have the authority to act on behalf of the absent Director, including but not limited to participating in open session and closed session deliberations and casting votes on matters before the Board. An Alternate Director representing a Member shall be an elected official or member of management of the appointing Member.

7.4 Requirements. Directors and Alternate Directors representing a Member shall serve at the pleasure of the governing body of the appointing Member. No individual Director or Alternate Director representing a Member may be removed except by the vote of the governing body of the Member that appointed him/her.

7.5 Vacancies. Upon the resignation or removal of a Director, the Alternate Director shall serve as Director until a new Director is appointed as set forth in Article 7.2. Upon the resignation or removal of an Alternate Director, a new Alternate Director shall be appointed as set forth in Articles 7.2 and 7.3. A Member shall submit any changes in

its Director or Alternate Director positions to the Board or Plan Manager.

7.6 Duties of the Board of Directors. The business and affairs of the CMA GSA, and all of its powers, including without limitation all powers set forth in Article 5, are reserved to and shall be exercised by and through the Board of Directors, except as may be expressly delegated to the Plan Manager or others pursuant to this Agreement, Bylaws of the GSA, the CMA GSP, or specific action of the Board of Directors.

7.7 Director and Alternate Compensation. No Director or Alternate Director shall be compensated by the CMA GSA in connection with any meetings or other activities undertaken as a representative of the GSA. Nothing in this Article is intended to prohibit a Member from compensating its Director or Alternate Director for compensable activities undertaken as a Director or Alternate Director of the GSA Board.

ARTICLE 8 OFFICERS

8.1 Officers. Officers of the CMA GSA shall be a Chair, Vice Chair, Secretary, and Treasurer. Additional officers may be appointed by the Board as it deems necessary.

- (a) Chair. The Chair shall preside at all meetings of the Board of Directors, and shall be a member of the Board.
- (b) Vice Chair. The Vice Chair shall exercise all powers of the Chair in the Chair's absence or inability to act, and shall be a member of the Board.
- (c) Secretary. The Secretary shall keep minutes of meetings of the Board of Directors and shall perform other duties and responsibilities as properly delegated by the Board. The Secretary may, but need not, be a member of the Board.
- (d) Treasurer. The Treasurer shall perform the duties and responsibilities specified in Government Code sections 6505.5 and 6505.6. The Treasurer may, but need not, be a member of the Board.

8.2 Appointment of Officers. Officers shall be appointed annually by, and serve at the pleasure of, the Board of Directors. Officers shall be appointed at the first Board meeting, and thereafter at the first Board meeting following January 1st of each year. The Director from SYRWCD shall be designated as the Chair Pro Tem to preside at the first meeting of the Board until a Chair is appointed by resolution of the Board. An Officer may serve for multiple consecutive terms, with no term limit. Any Officer may resign at any time upon written notice to the Board, and may be removed and replaced by a decision of the Board in accordance with Article 11.3(a). Notwithstanding the foregoing, the Treasurer shall be appointed in the manner specified in Government Code sections 6505.5 and 6505.6.

8.3 Principal Office. The principal office of the CMA GSA shall be established

by the Board of Directors, and may thereafter be changed by the Board.

ARTICLE 9 PLAN MANAGER & STAFF

9.1 Hiring. The Board may hire a Plan Manager or other designated manager of the CMA GSA, as well as any needed staff, consultants, and Legal Counsel, who may be hired as an employee of the CMA GSA or by contract with the CMA GSA. The Plan Manager and Legal Counsel may be, but need not be, officers, employees, or representatives of one of the Members.

9.2 Compensation. The Plan Manager, staff, consultants, and Legal Counsel's compensation shall be determined by the Board.

9.3 Duties. The Plan Manager, staff, consultant and Legal Counsel shall serve at the pleasure of the Board. The Plan Manager shall be responsible to the Board for the property and efficient administration of the GSA and act as a point of contact for the GSA. The Plan Manager shall have the powers designated by the Board, and otherwise as set forth in the GSA Bylaws.

9.4 Termination. The Plan Manager shall serve until his/her resignation or until the Board terminates the Plan Manager's employment or contract.

ARTICLE 10 GSA DIRECTOR MEETINGS

10.1 Initial Meeting. The initial meeting of the CMA GSA Board of Directors shall be called by the Chair Pro Tem and held within the boundaries of the CMA, within sixty (60) days of the Effective Date of this Agreement.

10.2 Time and Place. The Board of Directors shall meet at least quarterly, at a date, time, and place set by the Board, and at such other dates, times, and places as may be determined by the Board.

10.3 Special Meetings. Special meetings of the Board of Directors may be called by the Chair or by a simple majority of Directors, in accordance with the Ralph M. Brown Act (Government Code section 54950 et seq.).

10.4 Conduct. All meetings of the Board of Directors, including special meetings, and any meetings involving teleconferencing to the extent allowed by law, shall be noticed, held, and conducted in accordance with the Ralph M. Brown Act (Government Code section 54950 et seq.).

10.5 Local Conflict of Interest Code. The Board of Directors shall adopt a local conflict of interest code pursuant to the provisions of the Political Reform Act of 1974

(Government Code section 81000 et seq.).

ARTICLE 11 VOTING

11.1 Quorum. A quorum of any meeting of the Board of Directors shall consist of a majority of the Directors. In the absence of a quorum, any meeting of the Directors may be adjourned by a vote of the simple majority of Directors present, but no other business may be transacted.

11.2 Director Votes. Voting by the Board of Directors shall be weighted as follows:

- (a) The Director representing SYRWCD shall have one (1) vote; and
- (b) The Director representing Buellton shall have one (1) vote; and
- (c) The Director representing Santa Barbara shall be a non-voting member.

A Director, or an Alternate Director when acting in the absence of a Director, may vote on all matters of GSA business unless disqualified.

11.3 Decisions of the Board.

- (a) Majority Approval. Except as otherwise specified in Article 11.3(b), all decisions of the Board of Directors shall require the affirmative vote of more than 50 percent of the vote total in accordance with Article 11.2.
- (b) Supermajority Approval. Notwithstanding Article 11.3(a), a minimum 75 percent vote total in accordance with Article 11.2 shall be required to approve any of the following: (i) the annual budget; (ii) any substantive amendment to the CMA GSP; (iii) addition of new Members pursuant to Article 6.2; (iv) establishment and levying of any fee, charge, or assessment; (v) adoption or amendment of the GSA Bylaws; (vi) regulation, limitation, or suspension of extractions from groundwater wells; or (vii) issuance of bonds or other forms of indebtedness.

ARTICLE 12 BYLAWS

~~12.1~~ 12.1 The Board of Directors may approve and amend, as needed, Bylaws

for the CMA GSA.

ARTICLE 13 ACCOUNTING PRACTICES

13.1 General. The Board of Directors shall establish and maintain such funds and accounts as may be required by generally accepted public agency accounting practices. The CMA GSA shall maintain strict accountability of all funds and a report of all receipts and disbursements of the GSA. The GSA shall hire an independent auditor to audit its funds and accounts as required by law.

13.2 Fiscal Year. Unless the Board of Directors decides otherwise, the fiscal year for the CMA GSA shall run from July 1st to June 30th.

ARTICLE 14 BUDGET AND EXPENSES

14.1 Budget. The Board of Directors shall adopt an annual budget for the CMA GSA.

14.2 GSA Funding and Contributions.

- (a) For the purpose of funding the expenses and ongoing operations of the CMA GSA, the Board of Directors shall maintain a funding account in connection with the annual budget process.
- (b) The CMA GSA may apply for grants and/or loans to fund a portion of the cost of implementing the CMA GSP as the Board may direct.
- (c) The Board of Directors may accept Voluntary Contributions from Members or other persons or entities that are not subject to reimbursement by the GSA, and may accept Voluntary Contributions from Members or other persons or entities that are to be reimbursed by the GSA. The Board of Directors will execute a contract with any party making a Voluntary Contribution and such contract will contain the terms under which the CMA GSA accepts the Voluntary Contribution.
- (d) The Board of Directors may pursue funding through any means allowable by law, including but not limited to fees and/or charges pursuant to Water Code sections 10730, *et seq.*
- (e) To the extent other funds are not available to pay CMA GSA expenses set forth in the annual budget adopted pursuant to Article 14.1, each

Member will pay the following percentage of such expenses:

SYWRCD:	50%
Buellton:	50%
Santa Barbara:	0%

- (f) The GSA will apply funds available in the funding account to CMA GSA expenses identified in the annual budget adopted pursuant to Article 14.1, in the following order:
- (i) Voluntary Contributions not subject to reimbursement by the GSA
 - (ii) Grant funds
 - (iii) Revenue generated from fees/charges
 - (iv) Bond proceeds from any bonds issued pursuant to this Agreement
 - (v) Voluntary Contributions subject to reimbursement by the GSA
 - (vi) Direct payments from Members made pursuant to Article 14.2(e).

14.3 Issuance of Indebtedness. The GSA may issue bonds, notes, or other forms of indebtedness, provided such issuance is approved at a meeting of the Board of Directors by supermajority vote in accordance with Article 11.3(b).

ARTICLE 15 LIABILITIES

15.1 Liability. In accordance with Government Code section 6508.1, the debts, liabilities, and obligations of the CMA GSA, other than any retirement liabilities if it contracts with a public retirement system, shall be the debts, liabilities, and obligations of the GSA alone, and not of any of the Members individually or jointly.

15.2 Indemnity. The CMA GSA, and those persons, agencies, consultants, entities, and instrumentalities used by it to perform the functions authorized by this Agreement, SGMA, and other applicable law, whether by contract, employment, or otherwise, shall be exclusively liable for any and all injuries, costs, expenses, claims, suits, actions, proceedings, losses, liabilities, damages, judgments, or other obligations of whatever kind arising from or related to activities of the GSA. The GSA agrees to indemnify, defend, and hold harmless each Member, each Director and Alternate, and each Member's governing board, officers, officials, representatives, agents, and employees from and against any and all claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, liabilities, damages, judgments, expenses, costs, including but not limited to attorney's fees, consultant' fees, and expert fees, and/or other obligations of whatever kind arising from or related or

attributable to the GSA or this Agreement ("Claims").

In addition to the foregoing, funds of the CMA GSA may be used to defend, indemnify, and hold harmless the GSA, each Member, each Director and Alternate Director, and any officers, officials, agents, or employees of the GSA for their actions taken within the course and scope of their duties while acting on behalf of the GSA against any such Claims.

The Members do not intend hereby to be obligated either jointly or severally for any Claims or any other debts, liabilities, or obligations of the GSA, except as may be specifically provided for in Government Code section 895.2. Provided, however, if any Member(s) of the GSA are held liable for the acts or omissions of the GSA, such parties shall be entitled to contribution from the other Members pursuant to Government Code section 895.4 so that after said contributions each Member shall bear such liability in the proportions set forth in Article 14.2(e).

15.3 Insurance. The CMA GSA may procure appropriate policies of insurance providing coverage to the GSA and its Directors, Alternate Directors, officers, officials, agents, and employees for general liability, errors and omissions, property, workers compensation, and any other coverage the Board deems appropriate. Such policies shall, if feasible, name the Members as additional insureds.

ARTICLE 16 WITHDRAWAL OF MEMBERS

16.1 Unilateral Withdrawal. Any Member may unilaterally withdraw from this Agreement without causing or requiring termination of this Agreement, effective upon thirty (30) days written notice to the Board of Directors and all other Members.

16.2 Termination of Agreement and GSA. This Agreement and the CMA GSA established under this Agreement may be terminated by unanimous written consent of all Members, except during the outstanding term of any CMA GSA indebtedness.

16.3 Effect of Withdrawal or Termination. After the effective date of withdrawal, any Member who withdraws from the GSA shall have no right to participate in the business and affairs of the GSA, except through public participation, and shall have no right to exercise any rights of a Member under this Agreement. Provided, however, that nothing contained in this Article 16.3 shall be construed as affecting a withdrawing Member's right to reimbursement from the GSA in accordance with Article 14 or any agreement between the GSA and the withdrawing Member. Provided further, that notwithstanding the foregoing, nothing contained in this Article 16.3 shall be construed as prohibiting a Member that has withdrawn from the GSA to become a separate groundwater sustainability agency within its jurisdiction in accordance with SGMA. Nothing in this section shall be construed as obligating the CMA GSA to consent to

formation or designation of another GSA for any portion of the Basin.

16.4 Return of Contribution. Upon termination of this Agreement, and to the extent a successor public entity is established which will carry on the functions of the CMA GSA and assume its assets, the assets of the GSA shall be transferred to the successor public entity. If there is no successor public entity which will carry on the functions of the GSA, then, subject to the requirements of Article 14, any assets on-hand shall be returned to the Members in proportion to their payment obligations in Article 14.2(e) and the Board of Directors shall first offer any property, works, rights, and interests of the GSA for sale to the Members on terms and conditions determined by the Board of Directors. If any property, works, rights, and interests of the GSA remain after first being offered for sale to the Members, the Board of Directors shall then offer the property, works, rights, and interests of the GSA for sale to any non-Member for good and adequate consideration. Subject to the requirements of Article 14, the net proceeds from any such sales shall be distributed among the Members in proportion to their payment obligations in Article 14.2(e). The Board of Directors may, in its sole discretion, determine whether an entity constitutes a successor public entity under this paragraph.

ARTICLE 17 MISCELLANEOUS PROVISIONS

17.1 Notices. Notices to a Member shall be sufficient if delivered to the clerk or secretary of the respective Member's governing body and addressed to the Member at the address noted on the signature page or at such other address or to such other person that the Member may designate in accordance with this Article. Delivery may be accomplished by personal delivery, with postage prepaid by first class mail, registered or certified mail, express courier, facsimile, or electronic mail (email). The date of receipt of the notice shall be the date of actual personal service or three days after the postmark on certified mail.

17.2 Amendments to Agreement. This Agreement may be amended or modified at any time only by subsequent written agreement approved and executed by all of the Members.

17.3 Agreement Complete. This Agreement constitutes the full and complete agreement of the Members with respect to the matters set forth by this Agreement. This Agreement supersedes all prior agreements and understandings, whether in writing or oral, related to the subject matter of this Agreement that are not set forth in writing. Notwithstanding this paragraph, this Agreement does not alter the parties' obligations under the Intra-Basin Administrative Agreement for Implementation of the Sustainable Groundwater Management Act in the Santa Ynez River Valley Groundwater Basin, dated February 26, 2020. In regards to the 2017 MOA, as soon as DWR accepts this Agreement and the CMA GSA formed hereunder as the governing GSA for the Central Management Area of the Basin, then this Agreement will supersede the 2017 MOA in its entirety and this Agreement and the CMA GSA formed hereunder will take over all activities as the governing GSA for the Central Management Area of the Basin.

17.4 Severability. Should any part, term, or provision of this Agreement be decided by a court of competent jurisdiction to be illegal or in conflict with any applicable federal law or any law of the State of California, or otherwise be rendered unenforceable or ineffectual, the validity of the remaining parts, terms, or provisions hereof shall not be affected thereby, provided however, that if the remaining parts, terms, or provisions do not comply with the Joint Exercise of Powers Act, this Agreement shall terminate.

17.5 Withdrawal by Operation of Law. Should the participation of any Member to this Agreement be decided by a court of competent jurisdiction to be illegal or in excess of that Member's authority or in conflict with any law, resulting in the withdrawal of such Member from this Agreement, the validity of this Agreement as to the remaining Members shall not be affected thereby.

17.6 Assignment. The rights and duties of the Members may not be assigned or delegated without the written consent of all other Members. Any attempt to assign or

delegate such rights or duties in contravention of this Agreement shall be null and void.

17.7 Binding on Successors. Subject to Article 17.6, this Agreement shall inure to the benefit of, and be binding upon, the successor of any Member.

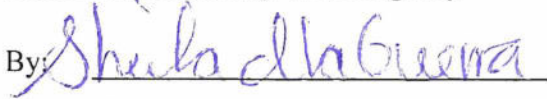
17.8 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original and together shall constitute one and the same instrument.

17.9 Member Authorization. The governing bodies of the Members have each authorized execution of this Agreement and all signatories to this Agreement warrant and represent that they have the power and authority to enter into this Agreement in the names, titles, and capacities stated herein and on behalf of the respective Members.

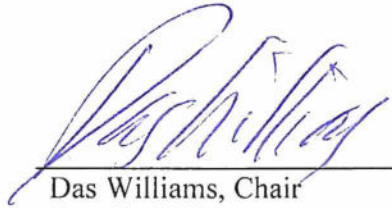
17.10 No Third Party Beneficiary. Except as expressly set forth herein, this Agreement is not intended to benefit any person or entity not a party hereto.

ATTEST:

Mona Miyasato
County Executive Officer
Clerk of the Board, Ex Officio Clerk of the
Santa Barbara County Water Agency

By: 
Deputy Clerk

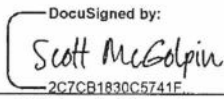
**SANTA BARBARA COUNTY WATER
AGENCY:**

By: 
Das Williams, Chair
Board of Directors

Date:

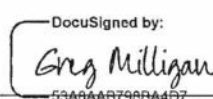
RECOMMENDED FOR APPROVAL:

Santa Barbara County Water Agency

By: 
Scott D. McGolpin
Public Works Director

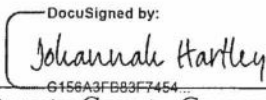
APPROVED AS TO FORM:

Greg Milligan, ARM
Risk Manager

By: 
Risk Management

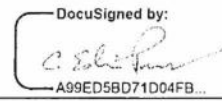
APPROVED AS TO FORM:

Rachel Van Mullem
County Counsel

By: 
Deputy County Counsel

**APPROVED AS TO ACCOUNTING
FORM:**

Betsy M. Schaffer, CPA
Auditor-Controller

By: 
Deputy

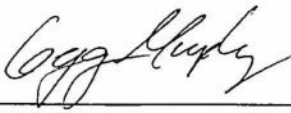
IN WITNESS WHEREOF, the Members have executed this Agreement to be effective on the date executed by the last Member as set forth in Article 4.1.

CITY OF BUELLTON
A California Municipal Corporation
3745 Constellation Road
Lompoc, California 93436-1401

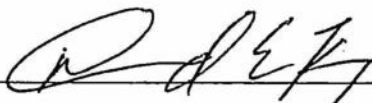
**SANTA YNEZ RIVER WATER
CONSERVATION DISTRICT**
P.O. Box 719
Santa Ynez, CA 93460

APPROVED AS TO FORM:

APPROVED AS TO FORM:

By: 
(Print name) Gregory Murphy
City Attorney, City of Buellton
Date: October 31, 2023

By: _____
(Print name) _____
(Title) _____
Date: _____

By: 
(Print name) Dave King
Mayor, City of Buellton
Date: 10-26-23

ATTEST:

By: 
(Print name) Linda Reid
City Clerk, City of Buellton
Date: 10-26-23

SANTA BARBARA COUNTY WATER AGENCY
By: (Signature on following page)

IN WITNESS WHEREOF, the Members have executed this Agreement to be effective on the date executed by the last Member as set forth in Article 4.1.

CITY OF BUELLTON
A California Municipal Corporation
3745 Constellation Road
Lompoc, California 93436-1401

**SANTA YNEZ RIVER WATER
CONSERVATION DISTRICT**
P.O. Box 719
Santa Ynez, CA 93460

APPROVED AS TO FORM:

By: _____

(Print name) _____

City Attorney, City of Buellton

Date: _____

By: William J. Buelow

(Print name) William J. Buelow

(Title) Assistant General Manager

Date: October 19, 2023

By: _____

(Print name) _____

Mayor, City of Buellton

Date: _____

ATTEST:

By: _____

(Print name) _____

City Clerk, City of Buellton

Date: _____

SANTA BARBARA COUNTY WATER AGENCY

By: (Signature on following page)

Section 8 –GSA Authorities and Enforcement Actions

Appendix 8-B:

First Amendment to Joint Exercise of Powers Agreement for
Santa Ynez River Valley Basin Central Management Area
Groundwater Sustainability Agency. January 7, 2025

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FIRST AMENDMENT
TO JOINT EXERCISE OF POWERS AGREEMENT FOR
SANTA YNEZ RIVER VALLEY BASIN CENTRAL MANAGEMENT
AREA GROUNDWATER SUSTAINABILITY AGENCY

This Agreement is made and effective as of Jan. 7, 202~~4~~²⁵ (Effective Date), pursuant to the California Joint Exercise of Powers Act (Govt. Code, §§ 6500, et seq.) by and among the City of Buellton (“Buellton”); Santa Ynez River Water Conservation District (“SYRWD” or “District”); and Santa Barbara County Water Agency (“Santa Barbara”), and is the First Amendment of that certain “Joint Exercise of Powers Agreement Santa Ynez River Valley Basin Central Management Area Groundwater Sustainability Agency dated November 28, 2023 (“JPA”).

The JPA is amended in the following:

A. Article 2.7 is amended to read as follows:

“Article 2.7 “Director(s)” and “Alternate Director(s)” means a Director, Alternate Director, or Agricultural Representative appointed by a Member or appointed by the Directors representing the Members pursuant to Articles 7.2, 7.3, and 7.8.”

B. Article 2.16 is added to read as follows:

“Article 2.16 “Agricultural Representative” means an individual appointed pursuant to Article 7.8 to serve on the Board of Directors as a non-voting member for the purpose of representing the agricultural interests within the CMA.”

C. Article 6.2(a) and (b) are amended to read as follows:

- (a) "The approval of the Board of Directors as specified in Article 11.3;"
- (b) "Amendment of the Agreement in accordance with Article 17.2; and"

D. Article 7.1 is amended to read as follows:

"Article 7.1 Formation of the Board of Directors. The CMA GSA shall be governed by a Board of Directors ("Board"). Directors shall include one representative from each of the Members identified in Article 6.1, and one Agricultural Representative appointed pursuant to Article 7.8."

E. Article 7.2 is amended to read as follows:

"Article 7.2 Appointment of Directors. Directors shall be appointed by the representative Member's governing body. Each Director representing a Member shall be an elected official or member of management of the appointing Member. This provision shall not be applicable to the Agricultural Representative Director position which shall be filled pursuant to Article 7.8 and subject to Article 7.9."

F. Article 7.8 is added to read as follows:

"Article 7.8 Appointment of Agricultural Representative Director. The Agricultural Representative Director shall be appointed by the voting Directors serving pursuant to Article 7.2. Said appointment shall be made by a majority of the Board as provided for in Article 11.3(a). Upon such

an appointment, the Agricultural Representative shall serve as a non-voting member of the Board.”

G. Article 7.9 is added to read as follows:

“Article 7.9 Requirements for Agricultural Representative. The Agricultural Representative Director shall be appointed as set forth in Article 7.8 and shall serve until resignation or removal by a Supermajority Approval of the Board per Article 11.3(b). The Agricultural Representative shall serve on the Board for the purpose of representing the agricultural interests within the CMA and should be adequately qualified to represent said interests.”

G. Article 11.2 (d) is added to read as follows:

“(d) The Agricultural Representative Director position shall be non-voting.”

This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.

IN WITNESS WHEREOF, the parties have executed this First Amendment as of the day and year first above written.

CITY OF BUELLTON
A California Municipal Corporation
107 West Highway 246
Buellton, California 93427

**SANTA YNEZ RIVER WATER
CONSERVATION DISTRICT**
P.O. Box 719
Santa Ynez, CA 93460

By: _____
(Print name) _____
City Attorney, City of Buellton
Date: _____

By: 
(Print name) Larry Lahr
(Title) President
Date: September 18, 2024

By: _____
(Print name) _____
Mayor, City of Buellton
Date: _____

ATTEST:

By: _____
(Print name) _____
City Clerk, City of Buellton
Date: _____

(Signatures Continued on the Following Page)

CITY OF BUELLTON
A California Municipal Corporation
107 West Highway 246
Buellton, California 93427

**SANTA YNEZ RIVER WATER
CONSERVATION DISTRICT**
P.O. Box 719
Santa Ynez, CA 93460

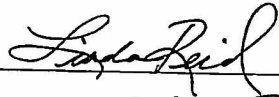
By: 
(Print name) Gregory Murphy
City Attorney, City of Buellton

Date: 10/10/24

By: 
(Print name) DAVID E. KIMB
Mayor, City of Buellton

Date: 10/10/24

ATTEST:

By: 
(Print name) Linda Reid
City Clerk, City of Buellton

Date: 10/10/2024

By: _____
(Print name) _____
(Title) _____
Date: _____

(Signatures Continued on the Following Page)

SANTA BARBARA COUNTY WATER AGENCY

By: 
Laura Capps, Chair, Board of Directors
Date: 1-7-25

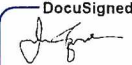
ATTEST:
MONA MIYASATO
COUNTY EXECUTIVE OFFICER
EX OFFICIO CLERK OF THE BOARD
OF DIRECTORS OF THE SANTA BARBARA
COUNTY WATER AGENCY

BY: 
Deputy

APPROVED AS TO FORM:
RACHEL VAN MULLEM
COUNTY COUNSEL

Signed by:
BY: 
C156A3FB83E7454
Deputy

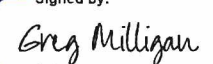
APPROVE AS TO ACCOUNTING FORM:
BETSY M. SCHAFER, CPA
AUDITOR-CONTROLLER

DocuSigned by:
BY: 
6BAAEA15901943F...
Deputy

RECOMMENDED FOR APPROVAL:
CHRIS SNEDDON
PUBLIC WORKS DIRECTOR

DocuSigned by:
BY: 
67CEC4EE68B848C

APPROVE AS TO FORM:
GREG MILLIGAN, ARM
RISK MANAGER

Signed by:
BY: 
53A8AAB798BA4D7
Risk Manager

Section 9 –Coordination, Outreach and Engagement

Appendix 9-A:

Placeholder for 2027 Update to the Santa Ynez River Valley
Groundwater Basin Coordination Agreement.

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APPENDIX 9-A:
PLACEHOLDER FOR
2027 UPDATE TO
THE SANTA YNEZ RIVER VALLEY GROUNDWATER BASIN
COORDINATION AGREEMENT

The Santa Ynez River Valley Groundwater Basin Coordination Agreement is being revised by staff and legal counsel from the three Basin GSAs in compliance with the SGMA regulation 23 CCR § 357.4 (i). This Appendix will hold a copy of this when it is completed.

23 CCR § 357.4 (i) Coordination agreements shall be reviewed as part of the five-year assessment, revised as necessary, dated, and signed by all parties

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Section 9 –Coordination, Outreach and Engagement

Appendix 9-B:

Mailed communications from the CMA

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Chapter 9 – Coordination, Outreach, and Engagement

Appendix 9-B:

Mailed Communications from the CMA

- Guidance Documents for Groundwater Production Statements from the Santa Ynez River Water Conservation District
- Mailed Notice of Public Hearing from the CMA GSA
- (DRAFT) Mailed Notice of Workshop Related to Action Plan from the CMA GSA

STEPS TO COMPLETING GROUNDWATER FORMS

1. START WITH THE METHOD C WORKSHEET AND THE INSTRUCTIONS & INFORMATION PAMPHLET:

- a. **Section C-1 (Crop or Turf Water):** Use this section when crops are produced for either market or personal use. If no crops are produced, line through Section C-1 and proceed to Section C-2.

For each crop produced: List the crop in Column A, record the appropriate factor in Column B and the number of acres in Column C. Multiply the factor by the acres to determine the total acre-feet of water used for that crop and record that number in the **appropriate** Acre-Feet Used Column D, E **or** F. *Refer to Water Definitions at the top of the Method C form.* Repeat for each type of crop.

Total the number of acres farmed and the acre-feet used for Columns D, E and F.

→ **Transfer C-1 Column D or E Totals to the Statement, Column A, Line 1 or 2 as appropriate.**

→ **Transfer C-1 Column F Total to Section C-2, Line 8, at the bottom of the Method C form.**

- b. **Section C-2 (Other Water - Non-Ag):** Use this section for domestic water use (including landscaping and livestock).

List each residence, office, shop, winery, etc. and the number of occupants and circle the type of landscaping. Based on that information, find the appropriate factor in the pamphlet. Repeat as needed for each structure.

For pool, pond, reservoir or acreage for larger areas, record the factor for evaporation of pumped water.

For extensive landscaping water use beyond what is reported above, briefly describe and record the associated acre-feet used in the "Report Other Water" area.

Report the number of head of livestock and record the associated factor from the pamphlet.

Total the number of Acre-Feet Used for Other Water.

→ **Transfer the C-2 Total Acre-Feet Used for Other (Non-Ag) Water to the Statement, Line 3, Column A.**

2. COMPLETE THE GROUNDWATER STATEMENT:

- a. Verify name, address, property information and number of wells we recorded in the heading area. Make necessary changes. Record your telephone number.
- b. Calculate the groundwater fees due on Lines 1, 2 and 3 and record the results in the appropriate Column C line.
- c. Total both Columns A and C and record the results in the appropriate space on Line 4.
- d. If delinquent, calculate 10% of Line 4 and record the penalty on Line 5.
- e. If delinquent, calculate 1% of Line 4 for each month delinquent and record the interest on Line 6.
- f. Prior charges: For office use only.
- g. Total Column C Lines 4 through 7 and record the result on Line 8. **This is the total amount due.**
- h. Complete the bottom section: Print and sign your name, title, date and email address.
- i. **Return the original Statement and Method C forms to the District with your payment by the due date shown on the Statement. Retain the yellow copies for your records.**

If you would like assistance completing your groundwater forms, please call us at 805-693-1156 ext 406 or email us at gwdept@syrrwcd.com. We are here to help.

TABLE OF IRRIGATION WATER USE FACTORS

The following factors are for principal crops grown in the District. They are based on the amount of water applied under normal cultural practices with average rainfall. *These factors must be applied as published and are not to be altered for wet or dry reporting periods or irrigation methods.*

For perennial crops, these factors apply for each six-month period. For others, they apply to the life of the crop. For each six-month period, report any crop started during the period. All crops in a multi-crop operation should be reported.

<u>CROP</u>	<u>ACRE-FEET PER ACRE</u>
Tree Crops*	
Avocados	1.05
Citrus	1.00
Deciduous Fruits	1.05
Olives	0.75
Walnuts	1.30
Vineyards*	0.80
Field Crops	
Alfalfa*	2.00
Beans, dry (0.35/set)	1.05
Corn	2.00
Grain	0.30
Forage Crops*	
Pasture	1.75
Sudan Grass	0.55
Vegetable Crops	
Asparagus*	1.25
Broccoli, Cabbage & Cauliflower	1.55
Carrots	2.00
Celery	2.00
Lettuce	1.40
Peppers	2.00
Spinach, Cilantro	1.00
Squash, Pumpkins	1.20
Strawberries (Annual)	1.50
Tomatoes	1.70
Ornamentals	
Cut Flowers	1.40
Flower Seed	1.60
Turf Grass*	1.50

*Perennial

TABLE OF OTHER WATER USE FACTORS

The following factors are for water use during a six-month reporting period (one-half year).

Residences/Offices/Shops/Wine Tasting Rooms, Etc.

If the size of your lot is greater than an average city lot, refer to Additional Landscaping below and use this factor in addition to the factors listed immediately below.

<u>No. of Persons Occupying</u>	<u>Avg. Landscaping (Acre-Feet)</u>	<u>No Outside Water Use (Acre-Feet)</u>
Vacant	0.15	0
1	0.20	0.05
2	0.25	0.10
3	0.30	0.15
4	0.35	0.20
5	0.40	0.25
6	0.45	0.30
7	0.50	0.35
8	0.55	0.40
9	0.60	0.45
10	0.65	0.50

For part-time use, take the percentage of time used for No Outside Water Use and multiply by the factor given for the number of persons occupying. Add 0.15 for any outside landscaping.

<u>Livestock</u>		<u>Additional Landscaping</u>	
<u>Domestic Livestock</u>		<u>Watered Land</u>	
<u>No. of Head</u>	<u>Acre-Feet</u>	<u>100 Sq. Ft. Units</u>	<u>Acre-Feet</u>
1	0.01	1	0.005
2	0.01	2	0.010
3	0.02	3	0.015
4	0.02	4	0.020
5	0.03	5	0.020
6	0.03	10	0.040
7	0.04	50	0.200
8	0.05	100	0.400
9	0.05	200	0.750
10	0.06	500	1.750

Ponds, Reservoirs (Factor for Evaporation of Pumped Water)

<u>Type</u>	<u>Acre-Feet Per Acre</u>
Lined	1.85
Unlined	2.35

SANTA YNEZ RIVER *WATER CONSERVATION DISTRICT*

GROUNDWATER PRODUCTION INFORMATION AND INSTRUCTIONS

PURPOSE OF THE DISTRICT AND THESE REQUIREMENTS

The District encompasses most of the Santa Ynez River watershed and was formed in 1939 to protect local water rights and to replenish and/or augment local water supplies. The water well registration and groundwater reporting program was initiated in 1979 for water management purposes and to raise supplemental revenue for District purposes. It is authorized and implemented in accordance with California Water Code Section 75500 et seq.

Water users in the Santa Ynez-Solvang-Los Olivos area should not confuse this District with Improvement District No. 1 by the same name, which is a separate District formed by this District many years ago to acquire and serve water in the aforementioned area.

WHO MUST FILE?

Every owner or operator of a water producing facility (water well) within the Santa Ynez River Water Conservation District must register the well and file Semi-Annual Water Production Statements setting forth total production, in acre feet, of water used for the preceding six-month period. If no water was produced, Statements still must be filed stating "No Production" until such time as the well has been permanently abandoned and a Notice of Abandonment has been filed with the District.

Each Semi-Annual Water Production Statement must be accompanied by a Methods Worksheet and payment of any groundwater charges. Lessees may file as the owner's agent, but well owners are the responsible parties.

WHAT HAPPENS IF WELLS ARE NOT REGISTERED. STATEMENTS ARE NOT FILED OR CHARGES ARE NOT PAID WHEN DUE?

The California Water Code provides penalties for failing to register a well and failing to file Water Production Statements as required. The District may, in addition to charging interest at the rate of 1% per month on any delinquent groundwater charge, assess a penalty in the amount of 10% of the amount found by the District to be due.

If the District determines that production of water is greater than that disclosed by a sworn Statement, or if no Statements are filed covering any water producing facility, the District may fix the amount of water production from the well at an amount not to exceed the maximum production capacity of the facility and bring legal action against the operator for charges, penalties and interest on this amount. Use of the well may also be halted.

Water Code §75640 makes it a misdemeanor to fail to register a well. Each day of operation in violation of this section is a separate offense. In accordance with §75642 it is also a misdemeanor to tamper with a water measuring device or to file a false or fraudulent Water Production Statement.

TIME PERIOD COVERED

The first Semi-Annual Statement includes water produced from midnight June 30 through midnight December 31 each year. The second Statement covers the period from midnight December 31 through midnight June 30 each year.

FILING DATES

The first Semi-Annual Statement must be filed on or before January 31 each year. The second is due on or before July 31 each year. The requirement of reporting twice a year is dictated by Water Code §75611.

IF YOU HAVE MORE THAN ONE WELL

If you own or operate more than one well, prepare a separate Method Worksheet for each well. The total water produced from all wells should then be entered on a single Semi-Annual Water Production Statement. Report production by water use type as described below.

WATER USE TYPES

“Agricultural Water” means water first used on lands in the production of plant crops or livestock for market. Essentially, this is crop and pasture irrigation. “Special Irrigation Water” is irrigation applied on parks, golf courses, schools, cemeteries, and publicly owned historical sites. “Other Water” includes all other uses, including drinking water for livestock.

SIGNING THE WATER PRODUCTION STATEMENT

The Water Production Statement must be signed and dated by the owner or operator. The Statement is made under penalty of perjury. Before signing, be certain that the information is correct to the best of your knowledge and belief.

ASSISTANCE IN FILING

If you have questions or need assistance in preparing the forms or calculating your water production or the charge, please call the District for assistance.

DETERMINING THE METHOD OF CALCULATING WATER PRODUCED

Select the most appropriate method for your use. The methods below are listed with the most accurate ones first. However, you need a water flow meter, a separate power meter, or an elapsed time meter and other information to use Methods A, B-1 or B-2. Method C is based on your land use and applicable crop, livestock, and domestic water use factors to estimate production. Method C also is used with the methods for metered water if both Ag and Other Water use are reported from the same meter; in this case, Method C is used to separate Other Water from the total metered water. Method D may be used in other applications.

METHOD A – WATER METER

If the water well is equipped with a water meter, the meter readings should be used as the basis for computing water production unless it can be shown that the meter is not accurate. If you have a water meter, complete Method A.

METHOD B-1 – SEPARATE ELECTRIC METER

If the well is equipped with a separate power meter and you have the information described below, you may use Method B-1. To convert power meter readings to acre-feet produced, you can use one of the two different methods outlined in the worksheet. You will first need to determine the electric meter factor, which can be found on the meter plate or on your electric utility bill. You multiply the amount of power used (from meter readings) by the power meter factor to obtain the kilowatt hours used. You can then convert the kilowatt hours used to water produced in one of two different ways.

(1) The Efficiency Test Method requires you to have had an efficiency “test report” from the power company. If you have this information, you divide the kilowatt hours used by the kilowatt hours per acre-feet shown in your “test report” to get the number of acre-feet pumped.

(2) If you have not had an efficiency test, you may use the Power Meter Method, which requires you to determine the height in feet between the level at which the groundwater is located (the pumping level) and the highest outlet point. To this is added the “pressure head”, which is determined by multiplying 2.31 feet of head times the pounds per square inch (PSI) produced at the highest outlet point. This then equals the total “head in feet” which can be divided into the total kilowatt hours used to calculate water produced. This must then be converted by multiplying the result by a factor of .391 to obtain an answer in “acre-feet.”

METHOD B-2 – TOTAL ELAPSED TIME METER

If you have a time meter, the total elapsed time the pump operates can be obtained from meter readings and multiplied by the flow rate of the well. A pump test is needed to determine the flow rate.

METHOD C – IRRIGATION AND OTHER WATER USE FACTORS

If Methods A, B-1 and B-2 are not suitable, you may estimate your water production by reporting your land use and using the irrigation and other water use factors found in these Instructions. For irrigated crops or turf, multiply the number of acres irrigated times the factor. For other water uses, select or select and add the appropriate factors. ***These factors must be applied as published and are not to be altered for wet or dry reporting periods or irrigation methods.***

METHOD D – ESTIMATION BY OTHER MEANS

If, for any reason, you are unable to use Methods A, B-1, B-2 or C, you should then use Method D. Un-metered commercial or industrial uses should be reported here. Describe the type of use, estimate the water production, and show all calculations to support the results. These are subject to review and approval of the District engineer.

WELLS PRODUCING BOTH AGRICULTURAL AND OTHER WATER

If you are estimating Agricultural Water use by using Method C(1), then estimated Other Water use from Method C(2) would be added to the Agricultural Water use for the total production. If you use Method A, B-1 or B-2, and both Ag Water and Other Water are reported from the same meter, it will be necessary to calculate Other Water production by using Method C(2) for Other Water use and then subtracting that amount from the total metered production. Separating the Ag Water and Other Water is necessary as each water type is reported on separate lines on the Semi-Annual Groundwater Production Statement.

TABLE OF EQUIVALENTS FOR MEASUREMENTS OF WATER

1 acre-foot equals the amount of water required to cover 1 acre to a depth of 1 foot.

1 acre-foot equals 325,851 gallons.

For flow in gallons:

_____ gallons ÷ 325,851 = _____ acre-feet

1 acre-foot equals 43,560 cubic feet.

For flow in cubic feet:

_____ cubic feet ÷ 43,560 = _____ acre-feet

1 cubic foot equals 7.48 gallons

1 cubic foot per second for 12 hours equals 0.991 acre-feet, or for 24 hours equals 1.983 acre-feet.

NOTICE OF PUBLIC HEARING

To Consider a Proposed Groundwater Management Fee Within the Central Management Area (CMA) Groundwater Sustainability Agency (GSA)



Nojoqui Falls Park

En
español

Hearing Date:	Monday, June 23, 2025
Hearing Time:	10 a.m.
Location:	Buellton City Council Chambers 140 W Hwy 246 Buellton, CA 93427

This Notice is being provided to you by the **Central Management Area Groundwater Sustainability Agency** (CMA; CMA-GSA; Agency) in accordance with Article XIII D, Section 6 of the California Constitution (Proposition 218), which requires the Agency to notify property owners of record of a proposed property-related fee and their right to protest. ***This Notice is available on the website in English and Spanish. The printed notice is also available at the local library.***

El Aviso está disponible en español en el sitio web www.CMA-SantaYnezWater.org. El aviso impreso está disponible en la biblioteca local.



CMA@SantaYnezWater.org



www.cma-santaynezwater.org/

NOTICE TO PROPERTY OWNERS

This serves as notice that the Central Management Area (CMA) Groundwater Sustainability Agency (GSA) Board of Directors (Board) will conduct a Public Hearing to consider a proposed groundwater management fee on Monday, June 23, 2025, at 10 a.m. at the Buellton City Council Chambers, 140 W Hwy 246, Buellton, CA 93427.

All those interested are invited to appear at the Public Hearing to give oral or written testimony or to submit written protests regarding the proposed fee. The CMA-GSA Board of Directors will hear and consider all oral testimony and written materials submitted at the Public Hearing. The Board has the authority to adjust the proposed groundwater management fee in response to oral testimony and written materials submitted for consideration, provided the fee is not increased beyond what is proposed in this Notice. If adopted by the CMA-GSA Board of Directors, the proposed fee would take effect July 1, 2025, and each July 1 thereafter. Property owners would see the fee on their next and future property tax bills.

BACKGROUND - California's Sustainable Groundwater Management Act (SGMA)

The California Sustainable Groundwater Management Act (SGMA), passed in 2014, created a statewide framework to help protect groundwater resources over the long-term. SGMA requires local agencies to form Groundwater Sustainability Agencies (GSAs) for high and medium priority basins and develop and implement Groundwater Sustainability Plans (GSPs) to avoid undesirable results and mitigate overdraft, ensuring sustainable conditions by 2042 for non-critically overdrafted basins.

The California Department of Water Resources (DWR) supports local SGMA implementation through regulatory oversight and the evaluation and assessment of GSPs. Prudent groundwater management will contribute to a reliable source of water supplies for future generations. A lack of proactive management could result in failure of public and/or private water wells and jeopardize supply.

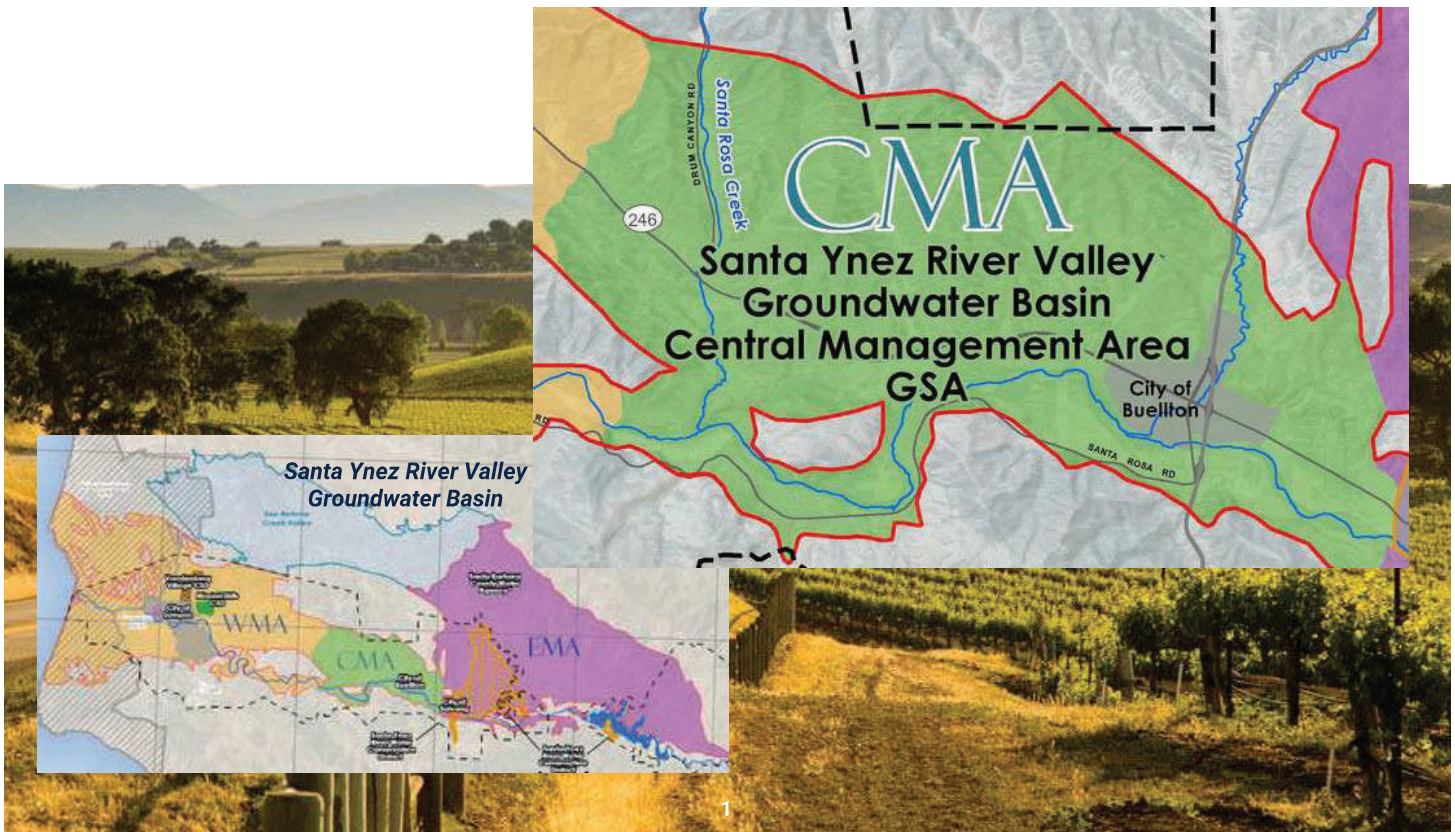
Sustainable Groundwater Management in the Santa Ynez River Valley Groundwater Basin

The CMA is one of three GSAs (Western, Eastern, and Central Management Areas) within the Santa Ynez River Valley Groundwater Basin (Basin), as shown in the map below. The Basin encompasses approximately 317 square miles (203,100 acres). Each GSA is independent regarding management decisions and responsibility for collecting groundwater and related data within their respective area.

The CMA-GSA covers 32.8 square miles including the Santa Ynez River alluvium east of Santa Rosa Park to just west of the City of Solvang and the Buellton Aquifer.

CMA-GSA Board Member Agencies:

- City of Buellton
- Santa Ynez River Water Conservation District
- Santa Barbara County Water Agency (non-voting member)



REASONS FOR PROPOSED GROUNDWATER MANAGEMENT FEE

In January 2022, the CMA-GSA submitted its Groundwater Sustainability Plan (GSP) to the Department of Water Resources (DWR), which was approved in 2024, marking a significant milestone for the Member Agencies and landowners by allowing the CMA-GSA to locally carry out sustainability efforts.

The value of GSP approval cannot be overstated. It means the GSA can continue to be a locally run agency, managed with direct stakeholder input. Although GSP approval was received, funding is required to implement GSP activities and programs essential to keep the CMA-GSA's good standing with DWR. Failure to act locally will result in state intervention and additional fees.

The CMA-GSA is required by state law to manage its portion of the Basin and must collect revenue sufficient to cover the costs of operating the GSA and funding the groundwater sustainability program, including a prudent reserve.

Costs that must be recovered through rate or fee revenue include GSA and program administration, professional services, monitoring groundwater conditions in the CMA, preparing and adopting GSP updates and annual reports required by DWR, investigations, inspections, compliance assistance, and enforcement.

Based upon the analysis in the Fee Study, the CMA-GSA is proposing to establish an annual groundwater

management fee applicable to the parcel(s) for which you are listed as the official property owner in the county property records.

As proposed, the fee would be collected through the County of Santa Barbara property tax roll to ensure ongoing local control and management of groundwater and prevent expensive and intrusive state intervention that may otherwise result. This will be a new fee in addition any other fees you may currently be paying.

The fee proposed herein was developed through a comprehensive Fee Study that is available for review on the CMA-GSA website at www.cma-santaynezwater.org/.

PROPOSED GROUNDWATER MANAGEMENT FEE

The proposed Groundwater Management Fee includes two components: a per-acre charge on all land within the CMA and a per-acre-foot charge on all groundwater extraction within the CMA (excluding extractions from the alluvial aquifer, which is not "groundwater" as defined in SGMA). The five-year schedule of proposed maximum charges is based on the Fee Study, which relies on the County's tax roll and the minimum historical reported groundwater extraction data for fiscal years 2020 through 2024.

If adopted, the fee will be billed to landowners on their Santa Barbara County tax bill for the next five years beginning on July 1, 2025, through July 1, 2029, except for fees applicable to municipalities, community services districts, mutual water companies and other entities, including but not limited to, entities that own property tax exempt parcels, which will be directly billed as determined appropriate by the GSA. In the first year, the fee will be based on the total acre-foot of groundwater production in Fiscal Year End (FYE) 2024 for each parcel. In the second year, it will be the average of production in FYE 2024 and FYE 2025. This will continue until there is a five-year running average. After that time, the fee will be calculated using a rolling five-year running average.

Table 1. Proposed Five-Year Schedule of an Annual Groundwater Management Fee

	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30
Proposed Acreage Charge (\$/Acre) Component	\$2.08	\$2.16	\$2.25	\$2.34	\$2.43
Proposed Groundwater Extraction Charge (\$/AF) Component	\$63.32	\$65.85	\$68.48	\$71.22	\$74.07

Santa Ynez River Valley GSAs Awarded \$5.5 Million Grant from DWR in 2024

In January 2024, representatives of the three Santa Ynez River Valley Management Area GSAs (Central, Western, Eastern) accepted an award of \$5.5 million from DWR's SGMA Grant Program. The \$5.5 million grant will be used to implement projects and management actions outlined in the Groundwater Sustainability Plans approved for each GSA. The projects and actions include:

- Well extraction measurement and reporting.
- Infrastructure and monitoring improvements to fill gaps in the available data.
- Identify strategies and performance tracking procedures that improve water utilization and save groundwater.
- Recycled Water Feasibility Study to investigate potential uses and users of surplus recycled water and reduce the demand for groundwater.
- Capture rainfall runoff from urban areas and creek and river flows to provide aquifer recharge.
- Fee studies to identify revenue needs and rate alternatives.
- Annual reporting to DWR and periodic update of the three GSPs as required by the State of California.



HOW TO SUBMIT A PROTEST OR OBJECTION

Any objection OR protest must: (1) be in writing identifying the name of the property owner and the street address or other clear identification of the property subject to the fee; (2) be signed by the property owner; and (3) comply with the relevant requirements for a written protest or written objection as outlined below.

The main differences between a protest and an objection are, a) the deadline for timely submission; b) the additional information required; and c) a timely written objection is required to subsequently bring a legal challenge to the proposed fee.

ADDITIONAL REQUIREMENTS: Timely Written PROTEST

A written protest must clearly state that the property owner opposes the GSA groundwater management fee. To be considered timely, a written protest must be received by the CMA-GSA via a "SUBMITTAL LOCATION" listed herein, **prior to the close of the public testimony portion of the Public Hearing on June 23**. Any timely written objection submitted will also be considered to be a timely written protest.

Only one protest will be counted per parcel. Owners of multiple parcels may file one protest for each parcel owned within the CMA-GSA jurisdictional area. If timely written protests are received from owners of a majority of parcels (50%+1) within the CMA-GSA's jurisdictional area, the proposed fee will not be implemented.

ADDITIONAL REQUIREMENTS: Timely Written OBJECTION

Under Government Code section 53759.1, a timely written objection must specify the grounds for alleging that the proposed fee does not comply with Prop 218. The Central Management Area GSA has documented how the proposed fee complies with Prop 218 in the Groundwater Fee Setting Procedures Resolution posted at www.cma-santaynezwater.org/. **The deadline for written objections is 5 p.m. on June 12**. To be considered timely, such objection must be received by the CMA-GSA via a "SUBMITTAL LOCATION" listed herein prior to the deadline.

Failure to submit a timely written objection bars any right to challenge the proposed fee through a legal proceeding. (Gov. Code, § 53759.1, subd. (c).)



SUBMITTAL LOCATIONS:

Mail: P.O. BOX 719, SANTA YNEZ, CA 93460

Email: CMA@SantaYnezWater.org

In Person: 3669 Sagunto St., Suite 101, Santa Ynez

Landowners are invited to attend the Public Hearing and provide comments. Written objections are due by 5 p.m. on June 12. Written protests may be submitted in person at the Hearing before the close of the Hearing on June 23.

If adopted, the proposed fee will take effect beginning July 1, 2025.

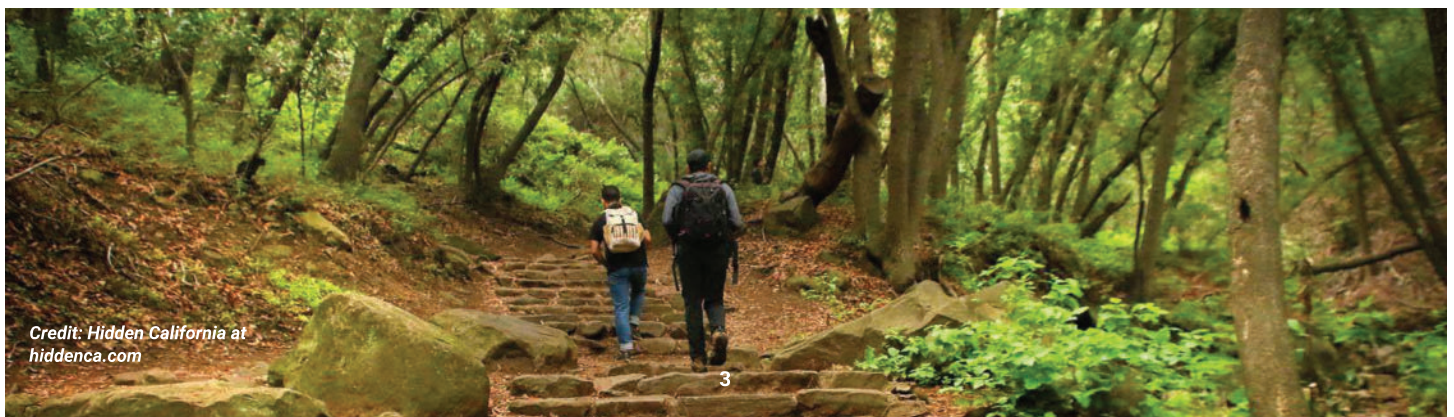
The reasons for the fee, the basis upon which it was calculated, and the amount of the proposed fee are described in more detail in the Fee Study Report posted at www.cma-santaynezwater.org/.



Scan this code to be taken directly to the webpage.

Statute of Limitations for Challenging the Proposed Fee:

Please note that pursuant to California Government Code section 53759, there is a 120-day statute of limitations for judicially challenging the fee set forth in this Notice that runs from the effective date of or the date of the final passage, adoption, or approval of the Resolution approving the fee, whichever is later.



Credit: Hidden California at
hiddenca.com

Santa Ynez River Valley Groundwater Basin

Action Plan for Management of All Well Production in the Santa Ynez River Alluvium Area, Above the Lompoc Narrows

Join the three Santa Ynez Valley Groundwater Sustainability Agencies (GSAs) to learn about the requirements for you to register your well. Avoid extra fees by registering your well correctly!

Purpose of workshops:

- Help well owners understand applicable requirements for well registration and production reporting
- Explain the well registration and reporting programs, the importance of regular measuring and reporting for each subsurface diversion, and filing of Statements of Water Diversion and Use with the State Water Resources Control Board (State Board).
- Provide information on how to prepare and file Statements of Water Diversion and Use with the State Board.
- Explain the consequences of not reporting subsurface diversions, including potential management and/or investigation by a GSA, the State Board, or the Santa Ynez River Water Conservation District, and other potential penalties and enforcement actions.

Who Should Attend:

- Well owners and well users along the Santa Ynez River, from Bradbury Dam to Lompoc.

Why Attend:

- Learn about the requirements to register your well with the correct agency. All well production in the Santa Ynez River Groundwater Basin and the Santa Ynez River Alluvium Area is required to be reported to the applicable GSA, State Board, and the Santa Ynez River Water Conservation District.

Workshop Schedule (September 2025)

For your convenience, the three GSAs will hold four community workshops across the Western (WMA), Central (CMA), and Eastern (EMA) Management Areas.

Please find the workshop location, date, and time that best suits your schedule. The meetings are anticipated to last up to 2 hours.

**Friday
September 12**
9 am

Vandenberg Village Community Services District
3745 Constellation Road,
Lompoc, CA 93436

**Friday
September 12**
1 pm

Buellton City Council Chambers
140 West Highway 246
Buellton, California 93427

**Friday
September 12**
4 pm

Santa Ynez Community Services District
1070 Faraday St,
Santa Ynez, CA 93460

**Friday
September 19**
1 pm

Buellton City Council Chambers
140 West Highway 246
Buellton, California 93427

Remote participation options will be available for all workshops.
See details at www.SantaYnezWater.org



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Section 9 –Coordination, Outreach and Engagement

Appendix 9-C:

Press Releases, Published Newspaper Notices, and Announcements

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Chapter 9 – Coordination, Outreach, and Engagement

Appendix 9-C:

Press Releases, Published Newspaper Notices, and Announcements

- Legal Notice – Executive Order N-7-22 on Well Permitting, August 2022
- Press Release – DWR Grant for SYRVGB, February 2024
- Press Release – Fee Study Participation, March 2025
- Newspaper Notice – Public Hearing on Groundwater Management Fee (Lompoc Record), May & June 2025
- Newspaper Notice – Public Hearing on Groundwater Management Fee (Santa Ynez Valley News), May & June 2025

Please take notice that on Monday, August 22, 2022, at 10:00 a.m., at the Buellton City Council Chambers, at 140 West Highway 246, Buellton, California, the Santa Ynez River Valley Groundwater Basin Central Management Area (CMA) Groundwater Sustainability Agency (GSA) will hold a special meeting at which it will consider a Resolution to impose a fee under Water Code section 10730. In addition, if the meeting is conducted by remote teleconference pursuant to AB 361 due to the COVID-19 State of Emergency, the posted agenda for the meeting will provide a remote teleconference option for public participation in the meeting. Oral or written presentations may be made as part of the meeting. Persons wishing to present comments to the CMA GSA Committee may do so in person at the public meeting, and those not able to attend in person are encouraged to provide comments they may have prior to the public meeting to Bill Buelow, bbuelow@syrwcd.com no later than 5:00 p.m. August 19, 2022.

Under Executive Order N-7-22 and Santa Barbara County Urgency Ordinance No. 5158, applications for water well permits in the CMA will not be approved by Santa Barbara County Environmental Health Services without written verification of certain matters from the CMA GSA. In order for the CMA GSA to provide such written verification, the CMA GSA's technical consultant will review the well permit application and other materials as needed. The fee to be considered at the above-referenced meeting would be an hourly fee of \$200.00 per hour for the consultant to undertake such review. The fee would be charged on a time and materials basis, drawn on a deposit in an amount to be approved and adjusted from time to time by the CMA GSA. Pursuant to Water Code section 10730(b), any data on which this fee is based are available and have been made available for review at SantaYnezWater.org

AUG 8, 15 / 2022 -- 58569

SANTA YNEZ RIVER VALLEY GROUNDWATER BASIN AWARDED MORE THAN \$5.5 MILLION BY CALIFORNIA DEPARTMENT OF WATER RESOURCES

January 24, 2024: Representatives from the California Department of Water Resources (DWR) will present a \$5.5 million check to representatives of the three Santa Ynez River Valley Groundwater Sustainability Agencies (GSAs) on **February 8, 2024, at 11:30 am PST at River View Park, 151 Sycamore Dr., in Buellton.**

The public is welcome to attend. If inclement weather, the event will take place at an indoor location in the City of Buellton area and will be announced on **SantaYnezWater.org**.

DWR's Sustainable Groundwater Management Grant Program

The Sustainable Groundwater Management Act (SGMA) Grant Program awards funds to GSAs for implementation of their Groundwater Sustainability Plans which will promote healthy and sustainable groundwater basins, reduce and eliminate undesirable results, and promote actions and projects that provide multiple benefits while also improving long-term groundwater supply and quality in California groundwater basins.

The Santa Ynez River Valley Groundwater Basin GSAs' \$5.5 million grant award will be used to implement projects and management actions that ensure groundwater sustainability is achieved and produce positive impacts for the communities and agricultural lands of the Santa Ynez and Lompoc Valleys. These activities are described in the three Groundwater Sustainability Plans (GSPs) prepared by the three GSAs.

The projects and management actions eligible to be reimbursed under this grant include the following:

- Well extraction measurement and reporting.
- Rate Study to recommend fee and rate alternatives.
- Annual reporting to DWR and periodic update of the three GSPs as required by the State of California.
- Infrastructure and monitoring improvements to fill gaps in the available data.
- Capture rainfall runoff from urban areas and creek and river flows to provide aquifer recharge.
- Identify strategies and performance tracking procedures that improve water utilization and save groundwater.
- Recycled Water Feasibility Study to investigate potential uses and users of surplus recycled water and reduce the demand for groundwater.

The eight agencies that participate to implement SGMA in the Santa Ynez Basin include the Santa Barbara County Water Agency, the Santa Ynez River Water Conservation District, Santa Ynez River Water Conservation District-Improvement District No. 1, City of Solvang, City of Buellton, City of Lompoc, Mission Hills Community Services District, and Vandenberg Village Community Services District. These agencies in collaboration with various other stakeholder groups will continue to work collaboratively to implement these projects and management actions. For more information visit **SantaYnezWater.org**.

Media Contact: Amber Thompson, Santa Ynez River Water Conservation District

Phone: 805-693-1156, ext. 405

email: athompson@syrwcd.com

Request for Public Participation

The Santa Ynez River Valley Groundwater Basin Central Management Area Groundwater Sustainability Agency (CMA GSA) Board of Directors seeks input from members of the public and interested persons, including groundwater users and landowners within the boundaries of the CMA GSA, during a public meeting/workshop while the Board evaluates a fee study and considers setting groundwater pumping charges or other fees or charges to fund the CMA GSA in accordance with the Sustainable Groundwater Management Act. This will be a new fee in addition any other fees you may currently be paying.

When: Tuesday, March 25, 2025, 10 a.m.

Where: Buellton City Council Chambers, 140 W. Hwy 246, Buellton.

For more information, go to **CMA-SantaYnezWater.org**

Pub dates: Mar 13, 2025

Legal #####

SANTA YNEZ VALLEY NEWS

AFFIDAVIT OF PUBLICATION

CCP § 2015.5

Santa Ynez Valley News
3200 Skyway Drive
(805) 688-5522

I, Ankit Sachdeva, of lawful age, being duly sworn upon oath depose and say that I am an agent of Column Software, PBC, duly appointed and authorized agent of the Publisher of Santa Ynez Valley News, a publication that is a "legal newspaper" as that phrase is defined for the city of Santa Maria, for the County of Santa Barbara, in the state of California, that this affidavit is Page 1 of 1 with the full text of the sworn-to notice set forth on the pages that follow, and that the attachment hereto contains the correct copy of what was published in said legal newspaper in consecutive issues on the following dates:

PUBLICATION DATES:

May. 29, 2025

Jun. 5, 2025

Notice ID: Xu0Gz32iqJ6loQraSPJb

Publisher ID: 477190

Notice Name: CMA Public Hearing June 23, 2025

PUBLICATION FEE: \$166.77

I certify (or declare) under penalty of perjury under the laws of the State of California that the foregoing is true and correct

Ankit Sachdeva

Agent

VERIFICATION

State of Florida
County of Orange

Signed or attested before me on this: 06/06/2025



Notary Public
Notarized remotely online using communication technology via Proof.

SANTA YNEZ RIVER VALLEY
GROUNDWATER BASIN
CENTRAL MANAGEMENT AREA
GROUNDWATER SUSTAINABILITY AGENCY

NOTICE OF PUBLIC HEARING

Notice is hereby given, pursuant to Water Code section 10730 and Government Code section 6066, that the Santa Ynez River Valley Groundwater Basin Central Management Area Groundwater Sustainability Agency (CMA GSA) will hold a Public Hearing on Monday, June 23, 2025, at 10:00 a.m. (PST) at the special meeting of the CMA GSA's Board of Directors to be held at the Buellton City Council Chambers, 140 West Highway 246, Buellton, California, to consider adoption of a proposed Groundwater Management Fee within the Central Management Area (CMA) Groundwater Sustainability Agency (GSA) consisting of a per acre-foot groundwater extraction charge component and a per-acre charge component. The Public Hearing and consideration of the Proposed Groundwater Management Fee within the CMA GSA may be continued to one or more subsequent meetings of the CMA GSA's Board of Directors. The purpose of the fee is to raise revenue to pay for the costs of the CMA GSA locally managing the CMA portion of the groundwater basin as required by Sustainable Groundwater Management Act, including Water Code section 10720, et seq., ("SGMA"). If adopted, the proposed fee will take effect beginning July 1, 2025. The reasons for the fee, the basis upon which it was calculated including the data required by Water Code section 10730, the amount of the proposed fee, and the groundwater extractions and parcels within the CMA subject to the fee and how it will be collected, are described in more detail in the Fee Study Report and the Notice of Public Hearing posted at www.cma-santaynezwater.org/.
Pub dates: May 29, Jun 5, 2025
Legal 477190

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